

Dr Jan Pająk
"THE OSCILLATORY CHAMBER, ARKWAY TO THE STARS"
(The propulsion and energy storage for Magnocraft and UFOs)"
Monograph, Dunedin, New Zealand, 1994
ISBN 0-9583380-0-0

Copyright © 1994 by Dr Jan Pająk.

All rights reserved. No part of this treatise may be reproduced, stored in a database or retrieval system, transmitted, or distributed in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission from the author or a person legally authorized to act on his behalf. From the obligation of getting a written permission are only released those who would like to prepare a single copy of this treatise for their personal use oriented towards the increase of their knowledge and who fulfil the condition that they will not use the copy prepared for any professional purpose or for accomplishing material gains, and also that they copy the entire treatise - including the title page, the content pages, all chapters, all Figures, and all enclosures.

National Library of New Zealand Legal Deposit number PO # 00-039706, dated 13 September 1994.

Published in Dunedin, New Zealand, September 1994. A private edition by the author.
The date of printing out this copy: 10 November 2000.

This monograph is available on Internet from the following Web pages: <<http://ufo.zakopane.top.pl>>, <www.ufo.hg.pl>, <totalism.50megs.com>. It can also be accessed via links from the following Web pages: <www.kki.net.pl/ufo-album>, <<http://republika.pl/northpoint>>, <<http://www.hkpm.org.pl>>.

This monograph discloses a super-magnet of the author's invention named the "Oscillatory Chamber" which is able to store an unlimited amount of energy or operate as a propulsor for interstellar vehicles. Explanations provided here are to clarify, extend, and update the descriptions of this chamber from the previous treatise by the author on the same topic, entitled:

"The Oscillatory Chamber - a breakthrough in the principles of magnetic field production" (Second New Zealand edition, augmented, Invercargill, October 1985, ISBN 0-9597698-4-6);

and complement the publications listed in the reference section of this monograph. Copies of these can be obtained directly from the author.

This particular publication is a scientific report from results of the author's research. For this reason all parts which have documentary or evidential value are presented accordingly to standards applicable for scientific publications (reports). Special attention is given to the requirement of repetitiveness, i.e. that on the basis of this monograph any professional scientist or hobby investigator who would like to verify, repeat, or extend the author's research should be able to recreate his work and arrive at very similar results and conclusions.

All correspondence to the author of this monograph can be either directed to his temporary address in Malaysia (valid until May 1996):

Profesor Madya Jan Pająk

No. 36D, Lorong Universiti
59100 Kuala Lumpur
Selangor Darul Ehsan
MALAYSIA

(Home tel.: -60 (3) 758-77-31);

or, after May 1996, at his address in New Zealand, i.e.:

P.O. Box 284

Timaru 8615

NEW ZEALAND

Cellular ph: +64 (25) 6058446; E-mails: <jpajak@zfree.co.nz> or
<jpajak@poczta.wp.pl>.

ABSTRACT

The "Oscillatory Chamber" can be described as a transparent cube of perfect form which represents a new device for producing a super-powerful magnetic field. It looks like "a crystal" of a regular shape made of some transparent mineral, or like a cube cut beautifully from shiny glass and showing its content through transparent walls. For dimensions not larger than those of a Rubik's cube it could produce a magnetic field exceeding the power of fields able to be produced on Earth thousands of times, including fields from the most powerful magnetic cranes and fields from the largest electromagnets in leading scientific laboratories. If we took this cube in our hands, it would demonstrate extraordinary properties. For example, in spite of its small dimensions it would be unusually "heavy" and at its full magnetic output even the strongest athlete would not be able to lift it. Its "heaviness" results from the fact that the magnetic field it produces would attract the cube in the direction of Earth's centre, thus the force of the magnetic attraction created would add to its real weight. The cube would also oppose our attempts to rotate it, and similarly like a magnetic needle it would always try to point into the same direction coinciding with the magnetic north-south meridian. However, if we somehow could manage to turn it into orientation exactly opposite to this natural alignment like a magnetic needle, then to our surprise it would take off and begin lifting us into space. In this way just on its own this "crystal" would be capable of propelling our space vehicles.

The Oscillatory Chamber may soon become one of the most important technical devices of our civilization. Its application could be universal. It can accumulate an unimaginably vast amount of energy (e.g. the chamber of the dimensions of a dice is capable of satisfying the energy needs of even the largest cities or factories). It can be used as a propulsion system enabling vehicles, people, furniture, and even buildings to glide into space. It can also function as any device presently used for handling or converting energy, such as engines, motors, thermal or solar cells, generators, transformers, magnets, heaters, torches, etc. The future significance of the Oscillatory Chamber to our material sphere could be likened to the present impact computers made in our intellectual sphere.

The Oscillatory Chamber was invented on the 3rd January 1984. Immediately after publishing its principles of operation, a number of hobbyists in several countries initiated experiments aimed at its completion. Unfortunately it is a device rather difficult to build. So far hobbyists have produced only a model of the chamber, but they have been unable to obtain a technically useful prototype. But their undisputable achievement is independent confirmation that the principles of the chamber's operation are correct and can be technically implemented.

Independently from these attempts of practical completion, the author also initiated theoretical research aimed at confirmation that the idea of this device is correct and able to be implemented. This research has re-confirmed the correctness of the chamber's idea before a program for its completion could even be started.

This monograph contains basic information regarding the Oscillatory Chamber. It describes the design, operation, and the progress to-date regarding the completion of this device. It reviews all major applications of the chamber, although it mainly concentrates on the applications for propelling purposes (which represents only a small fraction of its total application). It also reveals facts which document that this device has already been built and sometimes even used on Earth. Thus this monograph represents a resource publication for all those who wish to familiarize themselves with the Oscillatory Chamber for research and invention purposes, or simply to extend their horizons.

CONTENT of monograph "The Oscillatory Chamber, arkway to the stars" (ISBN 0-9583380-0-0)

Page Chapter

--

A-1	A.INTRODUCTION
B-1	B.THE PERIODIC PRINCIPLE IN THE DEVELOPMENT OF PROPULSION SYSTEMS
B-2	B1. Everything in our environment, including the formulation of inventions, is governed by appropriate laws
B-3	B2. The basics of propulsion
B-4	B2.1. The working medium
B-4	B2.2. The primary requirement for building a controllable propulsion system
B-5	B3. Application of the Periodic Principle to propulsion systems
B-7	B4. The first generation of the magnetic propulsion systems
B-8	B4.1. The Magnocraft
B-8	B4.1.1. The general design and components of the Magnocraft
B-10	B4.1.2. Flight control
B-11	B4.1.3. The specifications of the Magnocraft
B-12	B4.2. The second motor-propulsor pair in the first generation of magnetic propulsion systems
B-13	B5. How the "omnibus trend" should culminate in three conventions of the Magnocraft's operation
B-14	B6. Three successive generations of magnetic propulsion systems
C-1	C.THE TELEKINETIC EFFECT
C-2	C1. History of the Telekinetic Effect's discovery
C-2	C2. Action of the Telekinetic Effect explained by the Concept of Dipolar Gravity
C-11	C3. Experimental confirmation of the Telekinetic Effect
C-15	C4. Technological activation of the Telekinetic Effect
C-17	C5. Technical utilization of the Telekinetic Effect
C-17	C5.1. Utilization of the Telekinetic Effect for the production of energy
C-20	C5.1.1. Review of the main types of telekinetic power-stations built so far
C-29	C5.2. Utilization of the Telekinetic Effect for the transportation purposes
D-1	D.THE CONCEPT OF DIPOLAR GRAVITY
D-3	D1. Why the Concept of Dipolar Gravity was formulated
D-6	D2. The operation of our Universe ruled by dipolar gravity
D-11	D2.1. Ether - the thinking substance

- from the counter-world
- D-13 D2.2. Software models (registers) of material objects
- D-15 D2.3. Possible gains from the mastery
of the counter-world
- D-16 D3. The interpretation of time
in the Concept of Dipolar gravity
- D-17 D4. The interpretation of electromagnetic phenomena
in the Concept of Dipolar Gravity
- D-18 D4.1. What is a magnetic field?
- D-20 D5. Why, according to the Concept of Dipolar Gravity,
paranormal phenomena must display
electromagnetic character
- D-21 D6. Telekinesis - a power source for free energy devices
and a principle of operation for Teleportation Vehicles
- D-24 D7. The model of the brain as an input-output device
- D-29 D8. ESP - a key to instant benefits from the counter-world
- D-33 D8.1. Perfect Data Base (PDB)
as a theoretical model of ESP
- D-35 D8.2. How to develop a simplest
pendulum assisted ESP technique
- D-37 D9. How the Concept of Dipolar Gravity
explains some mysterious phenomena
- D-40 D10. How the Concept of Dipolar Gravity
merges science with religion
- D-40 D10.1. The Universe as a whole
possesses its own intellect
- D-42 D10.2. Moral laws
- D-46 D10.3. Consistency - the measure
of intellectual perfection
- D-46 D11. An experimental confirmation of the
existence of the counter-world
- D-49 D12. To conclude
- E-1 E. PHILOSOPHICAL REQUIREMENTS FOR GIVING RECOGNITION TO NEW IDEAS
- E-2 E1. Everything is possible: we only need
to find out how to achieve it
- E-4 E2. What is totalism?
- F-1 F. THE OSCILLATORY CHAMBER
- F-3 F1. Why there is a necessity to replace the electromagnet
by the Oscillatory Chamber
- F-5 F2. The principle of operation of the Oscillatory Chamber
- F-5 F2.1. The electrical inertia of an inductor as the
motive force for oscillations in a conventional
oscillatory circuit with a spark gap
- F-7 F2.2. In the modified oscillatory circuit with
a spark gap, the inductance of a stream
of sparks replaces the electrical inertia
of an inductor

- F-9 F2.3. The combining of two modified circuits forms an "Oscillatory Chamber" producing a bipolar magnetic field
- F-10 F3. The future appearance of the Oscillatory Chamber
- F-11 F3.1. Three generations of the Oscillatory Chambers
- F-13 F4. Mathematical model of the Oscillatory Chamber
- F-13 F4.1. Resistance of the Oscillatory Chamber
- F-13 F4.2. Inductance of the Oscillatory Chamber
- F-15 F4.3. Capacitance of the Oscillatory Chamber
- F-15 F4.4. The "sparks' motivity factor" and its interpretation
- F-16 F4.5. Condition for the oscillatory response
- F-16 F4.6. The period of pulsation of the chamber's field
- F-17 F5. How the Oscillatory Chamber eliminates the drawbacks of electromagnets
- F-17 F5.1. Mutual neutralization of the two opposite electro-magnetic forces
- F-19 F5.2. Independence of the magnetic field production from the continuity and efficiency of the energy supply
- F-19 F5.3. Elimination of energy loss
- F-21 F5.3.1. Premises for the recovery of all heat dissipated by sparks
- F-23 F5.4. Releasing the structure of the chamber from the destructive action of electric potentials
- F-23 F5.5. Amplifying control of the period of field pulsation
- F-24 F6. Advantages of the Oscillatory Chamber over electromagnets
- F-25 F6.1. Formation of the "twin-chamber capsule" able to control the output without altering the energy involved
- F-28 F6.2. Formation of the "spider configuration"
- F-29 F6.3. The non-attraction of ferromagnetic objects
- F-31 F6.4. Multidimensional transformation of energy
- F-31 F6.5. Continuous oscillating - a unique electromagnetic phenomenon allowing the Oscillatory Chamber to absorb unlimited amounts of energy
- F-33 F6.6. Function as an enormously capacious accumulator of energy
- F-34 F6.7. Simplicity of production
- F-34 F7. Advancements in the practical completion of the Oscillatory Chamber
- F-35 F7.1. Experimental devices
- F-38 F7.2. Stages, goals, and ways of their achieving in the experimental building of the Oscillatory Chamber
- F-45 F7.3. An invitation to take part in the development of the Oscillatory Chamber
- F-46 F7.4. The author's policy of the public ownership

- of the Oscillatory Chamber principles
- F-47 F8. Future applications of the Oscillatory Chamber
- F-51 F9. Monographs describing the Oscillatory Chamber
- F-53 F10. Symbols, notation, and units used in this chapter
- G-1 G. THE (DISCOIDAL) MAGNOCRAFT
- G-2 G1. The magnetic propulsor
- G-4 G1.1. The principle of tilting the magnetic axis
in a Magnocraft's propulsor
- G-5 G1.2. The propulsion unit
- G-6 G1.3. Using propulsors as searchlights
- G-6 G2. The shell of the Magnocraft
- G-7 G2.1. Terminology describing various parts
of the Magnocraft's shell
- G-9 G2.2. The Magnocraft's compartments
- G-9 G2.3. The Magnocraft's facilities
- G-10 G2.4. Materials for the Magnocraft's shell
- G-10 G2.4.1. The electrodynamic model
of magnetorefectiveness
- G-11 G3. Shapes of the coupled Magnocraft
- G-12 G3.1. The six classes of the Magnocraft arrangements
- G-13 G3.1.1. Flying complexes
- G-15 G3.1.2. Semi-attached configurations
- G-16 G3.1.3. Detached configurations
- G-16 G3.1.4. Carrier platforms
- G-16 G3.1.5. Flying systems
- G-17 G3.1.6. Flying clusters
- G-19 G3.2. The principles of coupling and decoupling
- G-21 G3.3. The hydraulic substance filling the space
between the craft ("angel's hair")
- G-21 G3.4. The black bars of the magnetic field
- G-22 G4. The conditions defining the
shape of the Magnocraft's shell
- G-23 G4.1. The condition of equilibrium between
the thrust and stabilization forces
- G-24 G4.2. The condition that the number of side propulsors
to be a multiple of four
- G-24 G4.3. The basic condition for the
force stability of the structure
of a craft which uses magnetic propulsors
- G-26 G4.4. The condition for expressing the "K" factor
by the ratio of outer dimensions
- G-26 G4.5. The condition for optimum coupling
into flying systems
- G-27 G4.6. The condition under which the flanges coincide
- G-27 G4.7. Types of Magnocraft
- G-28 G4.8. Identifying the types of Magnocraft
- G-29 G4.9. The magnetic framework

- G-30 G5. The magnetic field of the Magnocraft
- G-30 G5.1. The starting flux
- G-31 G5.2. The naming of the magnetic poles
- G-32 G5.3. The effective length of the Oscillatory Chamber and the net magnetic force
- G-33 G5.4. The determination of the value for the "starting flux"
- G-35 G5.5. The energy of the Magnocraft's field
- G-36 G5.6. The energy of the Magnocraft's field is self-rechargeable
- G-36 G5.7. Why the Earth's magnetic field should not be called "weak"
- G-37 G5.8. The Earth's magnetic field is able to carry out technically useful work
- G-37 G6. The manoeuvring of the Magnocraft
- G-38 G6.1. Ascent, hovering, and descent
- G-39 G6.2. Meridional flights
- G-39 G6.3. Latitudinal flights
- G-39 G6.3.1. An experiment showing the existence of the latitudinal thrust force
- G-40 G6.3.2. The deduction that explains the principles of the latitudinal thrust force formation
- G-41 G6.3.3. How to determine the direction of the thrust force created by the magnetic whirl (the "rolling sphere rule")
- G-41 G6.4. The rotation of the Magnocraft
- G-42 G7. The magnetic whirl
- G-43 G7.1. The magnetic circuits in the Magnocraft
- G-44 G7.2. Creation of a magnetic whirl
- G-46 G7.3. The ionic picture of a whirl
- G-46 G8. Three modes of the Magnocraft's operation
- G-48 G8.1. Visual recognition of the mode
- G-49 G8.2. The SUB system for indicating the Magnocraft's mode of operation
- G-50 G9. The properties of the Magnocraft
- G-50 G9.1. The properties of the Magnocraft during the magnetic whirl mode of operation
- G-52 G9.1.1. Properties of the tunnels made in rocks by the Magnocraft
- G-54 G9.2. The properties of the Magnocraft during the throbbing mode of operation
- G-54 G9.3. Humming noises appearing in both the magnetic whirl and throbbing modes of operation
- G-55 G9.4. The properties of the Magnocraft during the magnetic lens mode of operation

- G-56 G9.4.1.The magnetic lens action
in ascending Magnocraft
- G-57 G10.The landing sites of the Magnocraft
- G-57 G10.1. Environmental damage
caused by the landed Magnocraft
- G-61 G10.2. Three main cases of the Magnocraft's landings
- G-62 G10.3. The landing sites for the magnetic circuits
looped under the ground
- G-63 G10.3.1.Determination of the
Magnocraft's dimensions
from the scorch marks
left at landing sites
- G-65 G10.4. The landing sites with magnetic circuits
looped along the surface of the ground
- G-66 G10.5. The landing sites for circuits looped in the air
- G-66 G10.6. The landing sites formed by
arrangements of the Magnocraft
- G-68 G11.Explosion sites of the Magnocraft
- G-71 G12.Summary of the attributes of the Magnocraft
- G-75 G13.Military aspects of the Magnocraft
- G-76 G13.1. Use of the Magnocraft as
a weapons platform
or transportation facility
- G-77 G13.2. Use of the Magnocraft
as a selectively acting weapon
- H-1 H.THE FOUR-PROPULSOR SPACECRAFT
- H-1 H1. The general design of the Four-Propulsor Spacecraft
- H-2 H2. The operation of the Four-Propulsor Spacecraft
- H-4 H3. The properties of the Four-Propulsor Spacecraft
- H-5 H4. The external appearance of the Four-Propulsor Spacecraft
- H-6 H5. Identification of the type of Four-Propulsor Spacecraft
- I-1 I.MAGNETIC PERSONAL PROPULSION
- I-2 I1. The standard garment of personal propulsion
- I-3 I2. Principles of operation of magnetic personal propulsion
- I-5 I3. The garment with main propulsors in epaulettes
- I-5 I4. A special version of personal propulsion
with cushions around the hips
- I-6 I5. Capabilities of personal propulsion
- I-6 I6. Summary of the attributes of personal propulsion
- J-1 J.MAGNOCRAFT OF THE SECOND AND THIRD GENERATIONS
- J-2 J1. Teleportation Vehicle as the Magnocraft of
the second generation
- J-9 J2. The Magnocraft of the third generation
(called also "Time Vehicles")
- J-14 J3. Three generations of the Magnocraft
and their identification
- K-1 K.EVIDENCE THAT MAGNOCRAFT-LIKE UFOs ALREADY OPERATE ON EARTH

- K-2 K1. Summary of the formal proof that "UFOs are Magnocraft which are already operational"
- K-7 K2. Permanent evidence for the continuous UFO activity on Earth
- K-8 K2.1. UFO explosion sites
- K-14 K2.2. Long, straight tunnels evaporated during underground flights of UFOs
- K-17 K2.3. UFO landing sites
- K-26 K2.4. Fragments of UFO shells
- K-27 K2.5. Other material evidence for UFO activity
- K-28 K3. Chapter K reference material
- L-1 L.EVIDENCE CONFIRMING THE USE OF THE OSCILLATORY CHAMBER ON UFOs
- L-2 L1. Contemporary observations and photographs of Oscillatory Chambers used in UFO propulsors
- L-2 L1.1. Columns of magnetic field yield from UFO propulsors are square in the cross-section
- L-4 L1.2. Outlets of UFO propulsors are square and reveal gold or yellow bands of electric sparks rotating inside
- L-5 L1.3. Twin-chamber capsules formed from two Oscillatory Chambers are frequently observed in UFOs and even photographed
- L-8 L1.4. Oscillatory Chambers have been seen on the decks of UFOs as described by numerous abductees
- L-11 L2. Indirect confirmations that UFOs use Oscillatory Chambers
- L-12 L3. Material (hard) evidence left by UFO Oscillatory Chambers
- L-12 L4. Mythological descriptions of the Oscillatory Chamber
- L-14 L5. Historical descriptions of the Oscillatory Chamber
- L-18 L6. To conclude this chapter
- M-1 M.CONTEMPORARY OBSERVATIONS OF FOUR-PROPULSOR UFOs
- M-1 M1. Classic sightings of four-propulsor UFOs
- M-4 M2. Photographs of four-propulsor UFOs
- M-4 M3. Concluding this chapter
- N-1 N.OBSERVATIONS OF UFONAUTS WHO USE MAGNETIC PERSONAL PROPULSION
- N-1 N1. The characteristic appearance of the wearers of personal propulsion
- N-2 N2. The extraordinary abilities of UFOnauts wearing personal propulsion garments
- N-4 N3. Scorched footprints left by personal propulsion of a UFOnaut
- N-6 N4. Mythological descriptions of the use of magnetic personal propulsion
- N-11 N5. The consequences of the observation of personal propulsion of UFOnauts
- O-1 O.OBSERVATIONS OF UFOs OF THE SECOND AND THIRD GENERATIONS
- O-1 O1. Observations of Teleportation Vehicles in operation
- O-4 O2. The evidence confirming the existence of Time Vehicles
- P-1 P.UFO ABDUCTEES

- P-4 P1. How to identify UFO abductees
- P-14 P2. How to confirm objectively
that someone is repetitively taken onto the deck of a UFO
- P-18 P3. Some implications of UFO abductions
- P-21 P4. Research of UFO abductees
- P-22 P4.1. Research which could be completed by
UFO abductees themselves
- P-23 P4.2. Examples of research topics for
students and scientists
- P-25 P5. To conclude
- R-1 R.SUMMARY
- S-1 S.LITERATURE COMPLEMENTING THIS MONOGRAPH
- S-2 ABOUT THE AUTHOR
 - Tables (B1, C1, F1, G1, G2, G3, and H1)
 - 104 Illustrations (B1 to O1)
- Z-1 Z.APPENDIXes (e.g. Abduction of Miss Nosbocaj
onto the deck of a UFO)

LIST OF TABLES AND ILLUSTRATIONS
(ISBN 0-9583380-0-0)

- Table B1. The Periodic Table completed for the propulsion systems.
 Table C1. Periodic Table showing power producing devices
 Table F1. The utilization of Oscillatory Chamber.
 Table G1. Construction parameters for 8 basic types of crew-carrying Magnocraft.
 Table G2. The correlation between the K factor and D/h for the coupled Magnocraft.
 Table G3. The colour changes in the lights of the SUB system of lamps
 Table H1. Construction parameters for eight basic types of four-propulsor vehicles.
- Fig. B1. A side view of the smallest Magnocraft, type K3,
 Fig. B2. The Magnocraft's orientation during flight above the equator.
- Fig. C1. A photograph showing the "extraction glow" from a V-shaped divining rod.
 Fig. C2. The temperature change (drop) in the hands of a healer,
 Fig. C3. An elementary Telekinetic Effect (P)
 Fig. C4. The operation of the Johnson telekinetic motor.
 Fig. C5. A photograph of the prototype of a telekinetic generator "N-Machine".
 Fig. C6. The design and operation of the N-Machine.
 Fig. C7. Photographs of the telekinetic aggregate INFLUENZMASCHINE
 Fig. C8. The operation of the INFLUENZMASCHINE with two discs,
 Fig. C9. The evolution of a technical idea, from a formulation to implementation.
- Fig. D1. Mr Alan Plank with his pump
 Fig. D2. A technique for developing YES/NO answers in the pendulum-assisted ESP.
 Fig. D3. A three-dimensional map showing a wedge of the Universe.
 Fig. D4. Photographs of tables levitated by a medium Eusapia Palladino.
 Fig. D5. The photograph of a table levitated by members of SORRAT.
- Fig. E1. Blenkinsop's engine built in 1811.
- Fig. F1. The evolution of the Oscillatory Chamber.
 Fig. F2. The assumed appearance of the Oscillatory Chamber
 Fig. F3. The mutual neutralization of the electro-magnetic forces
 Fig. F4. The "twin-chamber capsule".
 Fig. F5. Differences in visual appearance of twin-chamber capsules.
 Fig. F6. Combining the outputs from both chambers of twin-chamber capsule.
 Fig. F7. An arrangement of the Oscillatory Chambers into a "spider configuration".
 Fig. F8. The curve of the "interactions in equilibrium"
 Fig. F9. Experimental devices of a Polish hobbyist, Ryszard Zudzin of Bydgoszcz.
 Fig. F10. The illustration that justifies the use of needle-shaped electrodes.
- Fig. G1. The principle of tilting a column of the magnetic field from a propulsor.
 Fig. G2. The magnetic propulsion unit of the Magnocraft.
 Fig. G3. Two alternative positions of the Magnocraft: upright and inverted.
 Fig. G4. The appearance of the Magnocraft type K3.
 Fig. G5. The internal design of the Magnocraft and the main features of its shell.
 Fig. G6. Examples of six classes of arrangements of the Magnocraft.
 Fig. G7. A spherical flying complex formed from K3 type Magnocraft.
 Fig. G8. A stacked cigar-shaped flying complex formed from K6 type Magnocraft.
 Fig. G9. Cut-away view of a double-ended cigar-shaped flying complex.
 Fig. G10. An example of a "fir-tree" shaped flying complex.
 Fig. G11. An example of the simplest semi-attached configuration.

Fig. G12. An example of a "flying necklace" semi-attached configuration.
 Fig. G13. An example of a K7 detached configuration.
 Fig. G14. An example of a carrier platform.
 Fig. G15. The "zig-zag" carrier configuration.
 Fig. G16. Examples of flying systems.
 Fig. G17. An example of a flying cluster.
 Fig. G18. Coupling a spherical complex through a detached configuration.
 Fig. G19. Coupling two Magnocraft through a semi-attached configuration.
 Fig. G20. The forces of mutual interactions acting between Magnocraft's propulsors.
 Fig. G21. An overhead view of one cell of the flying system from K3 Magnocraft.
 Fig. G22. The principles involved in the meshing of flanges in flying systems.
 Fig. G23. Basic equations which describe the shape and dimensions of a Magnocraft.
 Fig. G24. Side outlines of eight basic types of Magnocraft.
 Fig. G25. Methods of identifying the type of Magnocraft through its "K" factor.
 Fig. G26. The creation of a latitudinal thrust force by a magnetic whirl.
 Fig. G27. The "rolling sphere rule" for determining the direction of propelling.
 Fig. G28. The principle of counteracting the magnetic whirl.
 Fig. G29. The magnetic circuits in a K6 Magnocraft with a stationary field.
 Fig. G30. The spinning magnetic circuits of a K6 type Magnocraft.
 Fig. G31. Converting field pulses from propulsors into a vehicle's magnetic whirl.
 Fig. G32. An example of the "ionic picture of a whirl".
 Fig. G33. Looking upward at a K3 type Magnocraft with a stationary field.
 Fig. G34. The principle of forming multiple images of glowing magnetic circuits.
 Fig. G35. The SUB system of lamps that indicate the Magnocraft's mode of operation.
 Fig. G36. Tunnels formed during underground flights of the Magnocraft.
 Fig. G37. A magnetic-lens effect produced by an ascending Magnocraft.
 Fig. G38. Shapes and dimensions of scorch marks left by a single Magnocraft.
 Fig. G39. Typical landing marks left by a Magnocraft hovering close to the ground.
 Fig. G40. Landings of an inverted Magnocraft with circuits parallel to the ground.
 Fig. G41. Plants swirled by a single Magnocraft with circuits whirling in the air.
 Fig. G42. Examples of landing patterns scorched on the ground by flying systems.

Fig. H1. A Four-Propulsor Magnocraft
 Fig. H2. Propulsors utilized in the Four-Propulsor Magnocraft.

Fig. I1. Similarities of the Magnocraft and magnetic personal propulsion system.
 Fig. I2. Components of the standard personal propulsion garment.
 Fig. I3. External and internal magnetic forces within the personal propulsion
 Fig. I4. Examples of two useful modifications of the standard personal propulsion.

Fig. K1. Comparison of the Magnocraft to the shape of a UFO.
 Fig. K2. A spherical flying complex of two UFOs type K6,
 Fig. K3. A photograph of a cigar-shaped flying complex formed from several UFOs.
 Fig. K4. The location of propulsors in UFOs is identical to that in the Magnocraft.
 Fig. K5. Photographs of UFOs which document that their magnetic field pulsates.
 Fig. K6. The formation of magnetic circuits and magnetic whirl by UFOs.
 Fig. K7. A section of the Tapanui Crater
 Fig. K8. Similarities between the Tapanui Crater and the Tunguska blast site.
 Fig. K9. Tunnels made during underground flights of UFOs.
 Fig. K10. Photographs of landing sites formed by single UFOs,
 Fig. K11. UFO landing sites made by flying clusters.
 Fig. K12. Mathematical relationships existing in crop circles.

Fig. L1. Detached configuration of two UFOs,

Fig. L2. "Black bars" in a UFO.

Fig. L3. Outlines of a UFO's twin-chamber capsule scorched in grass.

Fig. L4. A drawing of a main twin-chamber capsule from an ascending UFO.

Fig. L5. Photographs of twin-chamber capsules from UFOs.

Fig. L6. A reconstruction of the Oscillatory Chamber seen on a UFO.

Fig. L7. Probably an ancient plan for an Oscillatory Chamber.

Fig. M1. A reconstruction of a four-propulsor UFO which abducted Jan Wolski.

Fig. M2. The night appearance of a motionless four-propulsor UFO.

Fig. M3. A photograph of a four-propulsor UFO taken near Albiosc in France,

Fig. N1. Three UFOonauts and their vehicle drawn by 9 year-old Stanisław Masłowski

Fig. N2. A reconstruction of the appearance of a UFOonaut with a glowing belt.

Fig. N3. One of four flash pictures of a very fast-moving UFOonaut by Jeff Greenhaw,

Fig. N4. A UFOonaut calling himself "Ausso".

Fig. N5. A UFOonaut climbing a wall.

Fig. N6. Footprint of an UFOonaut.

Fig. O1. Teleportative UFOs.

Chapter A.

INTRODUCTION

When analysing the history of the development of important vehicles completed on Earth to-date, such as trains, cars, or space rockets, a conclusion can be derived which may be expressed in the following recommendation for future inventors: "build firstly a new 'motor' and you will be able to build a whole new vehicle".

In the above recommendation the term 'motor' is used, because in a popular terminology this term describes a device which according to common belief propels a vehicle such as a car or a helicopter. However, as this will be explained with more detail in chapter B, in precise technical terminology this term is inadequate. A device which causes the "absolute" motion of a whole vehicle in the surrounding environment should rather be called a 'propulsor', not a 'motor'. How much better the name 'propulsor' expresses the function of such a device, one may discover if he/she examines for example the name 'motor' being applied to a propeller which makes a boat move, or to nozzles which make a hovercraft float. Thus the term 'propulsor' allows us to distinguish between the device which propels a whole vehicle (such as a wheel in a car or rotor blades in a helicopter), from a functionally different device called 'motor', which serves just to produce a "relative" motion of one part of a given machine in relation to other parts of the same machine (such as a motor in a washing machine or a motor in a lathe). Of course motors may sometimes supply the mechanical energy to propulsors, but they only produce the motion of these propulsors in relation to the rest of a given vehicle and itself, they are unable to cause the motion of the whole vehicle in the surrounding environment which must be produced by propulsors (e.g. see the motor in a car which only rotates wheels, whereas the motion of the whole car is caused by these wheels not by the motor). Thus if the initial recommendation for future inventors is expressed in the terminology from this monograph, it reads: **"build firstly a new 'propulsor' and you will be able to build a whole new vehicle"**.

Some readers of this monograph have perhaps already had the opportunity to hear about the development of the theory concerning a new vehicle with magnetic propulsion invented by the author and called the "Magnocraft". The Magnocraft is a completely new space vehicle, the concept, principle of operation, and the design of which were newly invented and totally unknown to previous researchers. Because the completion of this vehicle will open for humanity the access to interstellar travel, it can be stated that its idea represents an intellectual contribution of XXth century to the future generations of our planet. Up until now the theory behind the Magnocraft has reached such a level of crystallization that the first practical developments aimed at the completion of this vehicle could be initiated. Thus the question arises what should be done next. Well, the answer to this question is provided by the recommendation from beginning of this chapter: in order to initiate the development of the whole Magnocraft, we need firstly to initiate the completion of the device which represents the propulsor for this space vehicle. Thus the discussed recommendation provides a kind of "direction pointer" for young and ambitious people who had just initiated their careers at universities and in industry. If they seek a totally "virgin" research topic, which simultaneously would give them a chance for providing a significant contribution to the technical development of our civilization, here is the goal for such a project: to build a propulsor for the Magnocraft.

Let us now explain what the Magnocraft is. We start this explanation from reviewing a

brief history of the invention of this space vehicle. In 1972 the author was conducting a series of lectures on "selected aspects of propulsion systems" for students of the Technical University of Wrocław in Poland. During preparation for these lectures he discovered that the inventions of subsequent propelling devices are subjected to an astonishing regularity. Because this regularity depends on the periodic repetition of the same characteristics in subsequent propelling devices, the author called it the "Periodic Principle". The best illustration of the Periodic Principle takes the shape of a table, called the "periodic table", an example of which is shown here as table B1. In 1976, i.e. soon after discovering the Periodic Principle, the author published his first periodic table (the most recent version of which is shown as table B1) in the article **[1A]** "Teoria rozwoju napędów" (i.e. "The theory of propulsion development") that appeared in the Polish journal *Astronautyka* (PKiN, 00-012 Warszawa, Poland), no. 5/1976, pages 16 to 21. In this treatise the preparation of periodic tables is additionally explained in chapters B and C to follow. The further elaboration on the construction of these tables is provided in monographs numbered [1] and [6] at the list provided in chapter S.

Periodic tables are similar to the "Mendelèev Table" (also called the "Periodic Table of the Elements"), only that instead of chemical elements they illustrate propelling devices - see **table B1**. Similarly as Mendelèev Table did it to the elements, periodic tables also reveal propelling devices still waiting for their inventors, and indicate principles and phenomena which will be employed in the future operation of these devices. These new tables are constructed by placing subsequently invented propelling devices in the appropriate rows and columns. The positioning of each device in these tables is such that it must meet the conditions of horizontal and vertical symmetry. The horizontal symmetry (i.e. the belongings of a given device to a particular row of the table) defines a type of working medium and phenomena utilized in the operation of this device, whereas the vertical symmetry (i.e. the belongings of this device to a specific column of the table) describes the general class of a propulsion system to which this device is qualified. Fields of periodic tables, which have no any device as yet assigned to them, indicate propelling devices still awaiting invention. The position of these empty fields (i.e. their row and column) defines the future principles employed in the operation of these devices yet to be invented. It also defines how these new devices will operate and what will be their properties and specifications. Through the examining of time gaps between the dates of completion of devices which are already invented, periodic tables show the average length of time required for a new invention of this type of device to take place. In turn, this enables us to determine the most probable year of completion of the next generation of these devices.

Through the analyses of his first periodic table (in this monograph shown as table B1), the author discovered that before 2036 a completely new type of flying vehicle should be constructed on Earth. Later he called it the "Magnocraft". According to the table, the operation of this vehicle is to represent an advanced modification of the asynchronous electric motors currently in use. This operation should employ extremely powerful "magnets" to perform the function of propulsors. These propulsors are to produce propelling forces due to the principles of magnetic interactions. The powerful fields produced by these propulsors should interact with the environmental magnetic field (i.e. the field produced by Earth, Sun, or Galaxy), thus forming magnetic attraction and repulsion which is to be utilized for the propelling purposes. Thus the general principle of the formation of these propelling forces is almost identical to that from electric motors, except that instead of the magnetic field produced by a stator the Magnocraft utilizes the planetary field always present in our environment. Through

the subsequent processing clues provided by the periodic table B1 the author worked out the design and operation of this new vehicle. The first publication of this design and operation appeared in 1980 in the article [2A] "Budowa i działanie statków kosmicznych z napędem magnetycznym" (i.e. "Spaceships with magnetic propulsion design and principles of operation") which was published in the Polish journal, Przegląd Techniczny Innowacje (ul. Mazowiecka 12, 00-048 Warszawa, Poland), no 16/1980, pages 21 to 23.

The operation of the Magnocraft summarized above explains also what a magnetic propulsor is. Thus, if we would like to define the propulsor just on the basis of this summary of the Magnocraft's operation, this definition could read something along the lines: **"the magnetic propulsor is a source of a powerful magnetic field (i.e. a 'magnet') capable of yielding an output which exceeds the threshold value called the 'starting flux'"**. For the practical reasons in this definition instead of including lengthy explanations that the propulsor must be able to lift a spaceship due to a repulsive interaction with the environmental magnetic field, it is much better to just introduce a new term 'starting flux'. This of course means that we still need to provide a further part of the definition in which the term "starting flux" is explained. So let us now try to define this new term as well. **The starting flux "Fs" is such a threshold value of the magnetic output produced by an extremely powerful source of magnetic field, which after the repulsive orientation of this source in relation to the environmental magnetic field would be capable of lifting the source in space.** This second definition revealed that the theory behind the Magnocraft introduces a new magnetic constant "Fs" representing an equivalent to the "escape velocity" (also called the "second cosmic velocity" in inertial space travel), and that this new constant is named the "starting flux". Every magnet the output of which is to exceed the value of this particular flux will be capable of lifting itself into space if only someone orients it repulsively in the relation to the Earth's magnetic field. (Such a repulsive orientation towards the environmental magnetic field depends on the positioning a given magnet in the position being exactly opposite to the position this magnet would be inclined to assume itself if it is given the freedom of movement similar to that displayed by needles of magnetic compasses.) Of course Theory of the Magnocraft allows for the precise calculation of the starting flux. In subsection G5.4 the author completed such calculations and determined that the value of this flux applied to the boundaries of Poland is **Fs = 3.45 Wb/kg**.

The knowledge of the starting flux reveals to us the smallest value of the output which is able to turn a given source of magnetic field into a magnetic propulsor. Thus the exceeding of this value is the **primary condition** for building the first magnetic propulsor on Earth. From the very beginning of his developmental works on the Magnocraft the author was fully aware of this basic requirement. It was even presented mathematically in the first publication [1A] devoted to the advanced magnetic propulsion systems. Unfortunately, in the initial stage of his research he did not know what type of device would be capable of producing the required flux. It is a rather well known secret that electromagnets currently used for the production of the most powerful magnetic fields available to our civilization, have numerous drawbacks which make it impossible to even come near to the starting flux (these drawbacks inherited in the constructions of electromagnets are discussed in subsections F1 and F5). Only as late as in 1984 the author synthesized in his mind the concept of a new device which would be able to yield the output in excess of the starting flux, without disintegrating during the process. This extraordinary device he called the "Oscillatory Chamber". Its more detailed description will be given in chapter F of this monograph.

The history of the Oscillatory Chamber's invention is rather interesting, because it

shines some light at the manner in which our mind completes a goal-oriented synthesis of a new device. The vital aspect of this goal-oriented synthesis is that the final product which our mind needs to give out is strictly defined and described with numerous operational conditions. Thus, such synthesizing is a higher level of the inventive activity, because in the normal circumstances new inventions depend on having some ideas which sometimes are totally unconnected with the direction in which the inventor is going, or with the solution he is seeking (according to the popular saying "we now have the medicine, so let us find a suitable illness"). Furthermore, the reader's awareness of the background behind this invention will realize that behind technical descriptions of a device and impersonal mathematics of chapter F an interesting story of the human struggle and intellectual challenge is hidden. So let us briefly summarize the history of the Oscillatory Chamber's invention.

From the first moment the concept of the Magnocraft was crystallized, the author was aware that the present devices for the production of magnetic fields would not be able to produce the output in excess of the starting flux. The fact of our ignorance of such a device was also the excuse for vigorous attacks directed at the Magnocraft by various critics of this vehicle. Therefore the finding of a concept for a device capable to produce the required level of magnetic output was the problem awaiting the most urgent solution. The author was thinking of it almost continually. Thus, parallel to the research on the development of the whole Magnocraft, he also conducted an intensive search for the principle of magnetic field production that would allow for an unlimited increase of the output. The aim here was extremely difficult to achieve, and during the last two centuries numerous other scientists had already failed to find such a principle. Shortly before leaving Poland the author was visiting the small mountain township named Karpacz. He saw there an extremely heavy truck which - with visible difficulty, rolled onto a steep slope of a hill. During watching this truck he realized that the operation of the device he is seeking must be based on some form of conversion of the electric oscillations into a magnetic field (similarly like in the truck's engine the oscillative motion of its piston is converted into the continuous rotation of its wheels), instead of being based on the conversion of the continuous flow of electric energy into a magnetic field (like this is the case in electromagnets). However, his mind still was imprisoned by the presently prevailing stereotypes which suggest that the devices producing magnetic field must take the form of a circular coil or a ring. Because of these stereotypes, to get ideas for his device the author was seeking amongst various existing devices which create the circular rotation of electric charges, such as TOKAMAK. Working on various possible concepts he analysed a vast number of different devices, the operation of which involved electric oscillations, plasma, sparks, motion of the electrically charged particles, etc. In that manner he gradually accumulated in his mind all the elements of a 'jigsaw puzzle' called the Oscillatory Chamber. Only that these elements still remained in the form of small pieces randomly mixed together. There was a need for some kind of their fitting into a complete picture. This fitting occurred on the night from 2nd to 3rd January 1984 during a state of mind we could call a half-sleep. Taking an advantage of summer vacations in New Zealand the author was visiting Christchurch to advance his library research and to develop further the Magnocraft's concept. All the time his mind was working on the problem of a propulsor. Slightly after midnight, when the author was lying in a bed and thinking about the problem, the solution unexpectedly was synthesized in his mind. The key turned to be the fact that the device sought must take the shape of a cube, not a coil or a ring. The author clearly remembers that the final finding of a solution for this extremely difficult and long awaited problem turned to be such an exciting event, that in spite of getting dressed in order to make some instant notes, drawings, and

checking, he was unable to hold a pen in his hand.

To comment on the above history of the Oscillatory Chamber's invention, and on the previous invention of the Magnocraft, it should be highlighted here that both these devices (as well as all other devices worked out by the author and described in his monographs) were invented in the effect of the author's professional interests and resulted from his job involvements as a lecturer at a technical institute. All these inventions were earned with great effort, during painstaking research, required long-term thinking them over, numerous verifications, modifications, and improvements. Their present formulation required the author continually familiarizing himself with the actual level of science and technology in relevant areas, and is the result of a long-term research effort extending for almost his entire productive life (i.e. from 1972 until the time of writing this monograph, that means already for more than 20 years). Thus it is **not true**, as some people would be inclined to believe, that these numerous inventions appeared instantly in a final form inspired in some miraculous manner or being given to the author by some kind of superior beings.

All the ideas, devices, phenomena and laws presented in this treatise, including the Oscillatory Chamber, the Magnocraft, the Periodic Principle, and the Telekinetic Effect, have been formulated by one person only, i.e. the author. Although some of their elementary components have been commonly known for a long time, no-one has synthesized them before in the form of the inventions and theories presented in this publication. As the author is only a human, from the definition ("humans make errors") other people reading the descriptions of his inventions may suspect that these devices may have inherited the error which can make their technical completion impossible. In turn, even a slight doubt about the conceptual correctness of the devices postulated by the author, may cause the delay or even the total denial of their completion. For these reasons, to make possible the not-too-distant undertaking of their development, it is necessary to reassure the readers that the idea of these devices is correct and implementable in a technical manner. Providing such a reassurance, together with the presentation of these devices, is the goal of this monograph. Thus this goal could be formulated as follows:

"To present the description of the Oscillatory Chamber, the Magnocraft, and the evidence which documents that both these devices are implementable in a technical manner, in a way sufficiently detailed for a reader of this monograph to be able to reach his/her own opinion about their conceptual correctness."

Of course, attaining the above goal is only possible if the Oscillatory Chamber and the Magnocraft are in fact ideas conceptually correct and implementable in a technical manner. Therefore the main thesis of this monograph, which will be proven gradually in the content of subsequent chapters, must be as follows:

"The principles of operation of the Magnocraft and the Oscillatory Chamber are correct and implementable in a technical manner."

In order to make possible the proving of this main thesis, it is necessary to apply some kind of scientific method which would enable us to verify the conceptual correctness of the Magnocraft and the Oscillatory Chamber before any technical completion of these two devices is undertaken. The author believes that he has found such a method and he intends to demonstrate it to the reader. In order to highlight the existence of this new method and its high usefulness, the additional complementary thesis of this monograph is proposed. This complementary thesis is as follows:

"There is a possibility to work out a theoretical proof that the technical concept of the Oscillatory Chamber and the Magnocraft are correct. This proof can be completed

before both these devices are even started to be built."

The truth of this complementary thesis will be proven in a very simple manner. For each of the devices invented by the author and described in chapters F, G, H, I & J of this monograph, the wealth of evidence will be presented in subsequent chapters K, L, M, N & O that this particular device was already built by some other civilizations which reached the higher from us level of advancement. In turn such a documenting that someone already built and use the devices which are described in this monograph is synonymous with the formal proving that the idea of these devices must be correct.

Thus if the complementary thesis is proven, this will simultaneously prove the truth of the main thesis of this monograph. In the effect, the conceptual correctness of the two major ideas of this monograph become formally certified before any completion of the Oscillatory Chamber and the Magnocraft is started. So at this very early stage of the development of both devices we already obtained a kind of guarantee that in the final count the eventual undertaking of their completion must be finished with a success. Therefore the main task left for the builders of the Oscillatory Chamber and the Magnocraft is just to find the way for the technical implementation of both these devices, and later to lead their completion to a final success.

Readers reviewing this monograph will probably take notice of its unconventional organization. It is structured as a set of individual chapters, each of them marked consecutively by a letter of the alphabet: A, B, C, D, ..., Z. In this way the first (present) chapter is labelled as "A", the second as "B", next as "C", etc. Every item that concerns a particular chapter, i.e. pages, diagrams, tables, equations; is labelled with the letter assigned to this chapter, which is then followed by the consecutive number of this item in the chapter. In this way for example the third vital equation in chapter F is labelled as (F3), the first Figure in chapter G is labelled as Figure G1, whereas the second subsection in the chapter L is labelled as subsection L2. For scientific exactitude, each time the deductions contained in this treatise are supported by some data originating from other publications, the author has also provided the reference to the resource material. Such a reference is given in square brackets that contains the number of a particular publication followed by the label of the chapter or subsection in which this publication is detailed. For example all references contained in subsection L1.4 are marked with the symbol [L1.4]. However, because in subsection L1.4 there is more than one such reference, the subsequent number of this reference proceeds the label of the subsection. In this way the symbol [1L1.4] means the first reference contained in subsection L1.4, whereas the symbol [3L1.4] indicates the third reference in subsection L1.4. Notice that this monograph refers to two kinds of resource publications, i.e. rare use and frequent use. Reference to rare use publications appears only once or a few times in the entire treatise. For this reason the details of these publications are given "on the spot" when the reference to them appears. The label of these rare use publications consists also of the number of subsection in which they are listed, e.g. [3J2] means: the third publication listed within the subsection J2. Frequent use publications are listed at the end of this monograph (e.g. [1]), or at the end of the chapter which contains the most references to these particular publications (e.g. [6F]). The system of labelling used in this monograph has numerous advantages in comparison to traditional systems, which decided for its application here. The most important of these is that it allows for a fast finding a part of the text which describes a given element. For example if someone wishes to find the description of Figure N6, it is sufficient he/she shifts to the chapter N and seek near the end.

In order to achieve the ambitious goal of this monograph and to prove the truth of its

main thesis, the author subdivided its content into three parts having different purposes. The first part is presented in chapters A, B, C, D, and E. It can be called the "philosophical foundations" and its purpose is to furnish the reader with the justification for the need of our civilization to invent and to complete the Magnocraft and the Oscillatory Chamber. The second part is presented in chapters F, G, H, I and J. It can be called the "Theory of the Magnocraft" and its main purpose is to outline the theoretical foundations behind the operation of the Magnocraft, the Oscillatory Chamber, and other related devices. It should be stressed here that this second part is a closed entity and in normal circumstances it should suffice for undertaking the efforts to complete the devices it discloses. However, because of the immense importance that the completion of the Oscillatory Chamber and the Magnocraft will have for our civilization, and also because of the significant resistance that undertaking this completion meets at the moment, the author decided to also include to this monograph a third part which can be called "proving the correctness of the Magnocraft's idea". This third part is to fulfil the complementary thesis proposed before.

Of course no theory is able to implement itself. It is people who turn ideas into reality. Therefore the treatise that follows can only present goals and potentials, but their actual achievement will depend on the good will and the determination of all of us. It can not be denied that the introduction of a breakthrough is an extremely difficult task, for it not only requires titanic effort to make important discoveries, but it later takes also numerous great men to follow through with the implementation of them.

Chapter B.

THE "PERIODIC PRINCIPLE" IN THE DEVELOPMENT OF PROPULSION SYSTEMS

The name "Periodic Principle" is given to the general regularity, or symmetry, which governs the invention of subsequent devices that belong to the same category (e.g. the invention of all propelling devices), or which can be found in subsequent discoveries relating to the same type of phenomena (e.g. in discoveries concerning the conversion of energy). The essence of this Principle can be expressed by the following condensed recommendation for everyday use:

"Identify patterns of the past to disclose directions of the future."

This condensed form of the Periodic Principle says in simply words that:

"Subjects (e.g. devices or phenomena) belonging to the same category are always mutually interlinked by various repetitive relationships and symmetries. These repetitive relationships and symmetries, amongst others define the principles, properties, and the order of subsequent inventions or discoveries concerning a given subject category. By identifying some of them it is possible to reason about properties of subjects which are as yet unknown by the extrapolation of properties of subjects already known. This in turn allows the process of gradual inventions or discoveries of individual subjects to be replaced by a single disclosure of all subjects constituting a given category."

The Periodic Principle has the effect that every new device built (or every new phenomenon utilized) follows the same universal pattern which is repetitive, predictable and valid for all possible devices (or phenomena) of a given category. Knowing the pattern that this Principle reveals, it is possible to predict the order of completion of future inventions (or discoveries), their principles, implementation, and also the approximate year when they will become utilized.

The Periodic Principle represents the operation of a more general law, called the "Principle of the Symmetry of Nature" (see description contained in subsection C1), after it is related specifically to inventions and discoveries. The example of the first historically famous application of the Periodic Principle was the formulation of the "Mendeléeev Table" (also called the "Periodic Table of the Elements"). The discovery of the Periodic Principle has already been described in chapter A. One of the consequences of this discovery was that the author realized that the electric motor, built by Jacobie around 1836, must have a follow-up in the form of a magnetic propulsor. This propulsor should become operational within 200 years since the electric motor was completed, i.e. before the year 2036. It will be utilized in a vehicle called the Magnocraft, and its operation will employ the same interactions between magnetic fields which are the basis for the principles of the electric motor. In this way the discovery of the Periodic Principle triggered a sequence of inventions which over 20 years later enabled the formulation of this monograph.

The discovery of the Periodic Principle introduces revolutionary consequences for our future progress. This is because it completely eliminates the random factor in the process of invention, i.e. the personality of an inventor. From now on, a formal methodology (or even a computer program) can be developed which, by utilizing the Periodic Principle, will be able to determine with high accuracy not only the principles of operation of future devices, but also their design and specifications. Therefore, the Periodic Principle is able to close the previous

period of inventions, and open a completely different period of systematic synthesizing of subsequent new devices that fulfils the "general plan" defined by the laws of the universe.

The operation of the Periodic Principle was initially worked out from the example of the development of propelling devices - see Table B1. However, evidence already gathered confirms that a version of this Principle also operates in every other field of our technical development (e.g. see Table C1). Therefore, after appropriate modification, the Periodic Principle may allow for the introduction of a strict methodology into every area which until now advanced through subsequent inventions or discoveries.

B1. Everything in our environment, including the formulation of inventions, is governed by appropriate laws

We are ready to accept the fact that everything around us is governed by natural laws. No one is surprised that scientists create new technologies and design new machines making use of these laws. Some of us complain about economists who overlook some economic laws, thereby making our life more difficult. We criticize weather forecasting, while at the same time realizing that it is done when not all the atmospheric and climate laws are known or understood. But we are surprised by the statement that scientific discoveries and the creation of new ideas are also governed by particular laws.

The discovery of the Periodic Principle reveals that the process of inventing is not a spontaneous activity that happens at random. It seems rather to be a controlled and predictable consequence of the intellectual state that our civilization reaches at a particular level in its development. It seems that inventions and ideas are always ready and waiting in the "counter-world" (explained in subsection D2) and more sensitive individuals have the ability to view and extract them continually. But in order to recognize their meaning and to crystallize their final shape, it is necessary for the civilization in which inventors live to achieve an appropriate level of awareness.

There seem to be two separate components of the Periodic Principle. In the case of the Magnocraft and the Oscillatory Chamber only their conjunction would culminate in the creation of a new propelling device. These are:

1. The conceptual crystallization of an idea,
2. The physical completion of a device.

Both of these components are governed by different types of laws. The conceptual crystallization is ruled with an iron hand by the set of laws related to physics and mathematics. They determine the operation of subsequent devices, the order of their appearance, and also the approximate time when our civilization will be mature enough to complete them. Moreover, they ensure that statistically in each generation there are a few individuals who can sense a future device and crystallize in their minds its concept.

But as we may realize from the content of this treatise, possessing the final concept of a new device does not automatically guarantee its future construction. This is because the physical completion of a new propulsion is governed by different, sociological laws. The author has not worked out yet their content completely, but he has noticed that they impose a set of very restrictive social, moral, educational and philosophical requirements on the nation which is first able to complete a new propulsion system. Subsequent chapters from this part of the treatise try to identify some of these requirements (especially chapter E). It appears that the laws of the universe prevent unsound nations from overtaking others in the

race for the most powerful propelling devices.

B2. The basics of propulsion

In this treatise the term "propulsion" is used to describe a device which is able to produce a controllable motion. In turn the controllable motion is the motion whose parameters, form, and timing have been previously defined or can be maintained at a desired level. Therefore the characteristic attribute of all propulsion systems is that every aspect of the motion produced by them allows for their use as the source of motion. Examples of propulsion are: the electric motor, the wheel of a car, or helicopter blades.

There are two main types of propulsion that are currently in use. The first of these is called here a "motor", whereas the second is called a "propulsor". The "**motor**" is a type of propulsion which produces **relative** movement of one of its parts in relation to another of its parts. An example of a motor is an internal combustion engine in which the movement of a piston occurs in relation to its cylinder, or an electric motor which causes the turning of its rotor relative to its housing.

When a motor is joined with elements from another machine, it causes a movement of the combined parts, but it is still a relative movement. For example, a motor in a car forces rotation of the wheels relative to the body, a motor in a ventilator causes rotation of the airscrew relative to the base, and a motor in a washing machine causes rotation of the drum relative to the housing. Motors by themselves never create motion of objects relative to their surroundings, although they can supply the mechanical energy necessary for this movement. For example, the movement of a car relative to the ground is caused by the wheels, not by a motor, and we still could make a car to move if the motor is replaced with pedals.

The "**propulsor**" is the second main type of propelling device, which produces motion of whole objects in their surrounding. Propulsors are completely different from motors because they produce an **absolute** movement, such as the floating of a boat, the flying of an aeroplane, or the thrust of a rocket. Examples of propulsors are the wheels of a car, treads of a tank, a boat propeller, a hovercraft's outlet, helicopter blades, etc.

It should be noted here that propulsors are always able to operate in the natural environment for which they are created. If, for the operation of a particular propelling device, any man-made rail, bar, duct, channel or transmission pipe is necessary, this device represents the linear motor only (not a propulsor) in which one stationary part is lengthened to the required distance. For example railways represent linear motors, not propulsors. This can be better realized when we look at Blenkinsop's engine (see Figure E1) which for the purpose of propulsion utilized a cog wheel that slotted into teeth on a track.

In every propulsion system three different components must be present. These are: (1) a working medium, (2) an energy transferor and (3) a working space.

The **working medium** is an agent applied in a particular propulsion, whose function is to absorb one kind of energy and then to return this energy in the form of a force interaction creating the motion. Examples of working medium are: the force of mechanical elasticity (in a bow), running water (in a water wheel), steam (in a steam engine), combustion gases (in a space rocket) or a magnetic field (in an electric motor).

The **energy transferor** is a space or a device within the propulsion system, where the working medium is produced and where this medium absorbs the energy that is later released for the creation of a type of motion. Examples of energy transferors are: the boiler in

a steam engine, or coils of electromagnets within an electric motor.

The **working space** is a space or a device in a propulsion system, where the actual creation of motion occurs. In this space the energy contained within the working medium is transformed into the work of providing the motion for a propelled object. Examples of working spaces are: the space between the cylinder and the piston in a steam engine, the outlet in a space rocket, or a gap between the rotor and the stator in an electric motor.

B2.1. The working medium

From the analysis of the propulsion systems completed so far, it becomes evident that only three types of circulating agents can provide usable working mediums. These are: (1) a circulation of forces, (2) a circulation of matter (masses), and (3) a circulation of magnetic field force lines. Thus, all the known working mediums can be classified into one of three general types (see the first column in Table B1), depending on which of the above agents the particular medium represents. Because during the development of our civilization these three consecutive types of working medium were discovered and utilized in sequence, we may talk about three eras in our history when a particular general type of medium was dominant. And so in ancient and medieval times the era of media based on the **circulation of forces** prevailed (e.g. wheel and axle, flywheel, spring). Since the invention of the steam engine (1769) until now, the era of media based on the **circulation of matter** has been prevalent (e.g. those used in a windmill, watermill, airscrew, boat propeller, jet propulsion). At present we are approaching the third era, where the **circulation of magnetic field force lines** will be employed. Up to now we have completed only the first and the most primitive device, the electric motor, which utilizes the circulation of magnetic field force lines. But soon a number of more advanced propulsion systems of this kind will become operational.

For every type of working medium three different generations of propulsion systems are completed (see Table B1). In each subsequent generation further attributes of the working medium are utilized as energy carriers. The first generation always uses **force interactions** only (e.g. pushing, pulling, pressure, suction, repulsion, attraction) created by the working medium. The second generation, in addition to these force interactions, also employs **inertia-related actions**. The third generation of propulsion systems utilizing a particular general type of working medium makes use of force interactions, inertia-related actions, and in addition the impact of **internal energy** (e.g. elasticity, heat).

B2.2. The primary requirement for building a controllable propulsion system

One of the primary principles of physics, called the "Conservation of Momentum Principle", states that when a system of masses is subjected only to internal forces which the masses of the system exert on one another, the total vector momentum of the system is constant. The consequence of applying this Principle to propulsion systems is that the working medium must always be forced to circulate along closed circuits which also pass through the environment (in propulsors) or through the part (in motors) in relation to which the motion should be created. The above condition represents the primary "requirement to circulate a working medium through the environment to achieve the controllability of a propulsion system". This requirement is met in all commercially useful propulsion systems

completed by man to-date, even if sometimes it takes an indirect form (e.g. in space rockets, where the propellant is taken first from the environment and placed in the rockets' tanks, and then during flight it is burned and rejected {circulated} back into the environment).

Sometimes the designer of a propelling device ignores the requirement to circulate a working medium through the environment. In effect the motion produced is uncontrollable and therefore can not be utilized to provide useful work. The device producing such uncontrolled motion will be called here a semi-propulsion system (i.e. semi-motor or semi-propulsor). Semi-propulsion can easily be transformed into propulsion, if the appropriate circulation of a working medium is organized. An example of the semi-propulsor so modified is a parachute which, after circulating its working medium (air), takes the form of a hang-glider. The other semi-propulsor still waiting modification is a balloon. If a controllable jet outlet is placed on a side surface of a balloon propelled by hot air, then this very old flying device can also move horizontally in the desired direction and with the speed required. Such a minor modification may transform hot-air balloons into the most simple, inexpensive, pleasant, and at the same time effective means of transportation. The transformation of semi-propulsion into propulsion does not usually require any major change in construction, principles, and the working medium used. Therefore in the light of the Periodic Principle, we will assume that a particular propulsion is completed, independently of whether its final or semi-final form has been obtained.

B3. Application of the Periodic Principle to propulsion systems

The Periodic Principle recommends to "disclose directions of the future by identifying patterns of the past". The application of this recommendation to the development of propulsion systems allowed the author to identify the repetitive regularity governing the inventions of subsequent propelling devices. This regularity can be expressed in a definition which has a short and a long version. Let us first write this definition, and then explain its meaning. The short version states that:

"Each motor must have a corresponding propulsor".

The long version states that (see also Table B1):

"All known forms of propulsion are invented in pairs. Each such pair consists of a motor and a corresponding propulsor. Both, the motor and the propulsor, utilize exactly the same working medium and operate in a very similar manner. For each level of utilization of a particular working medium two subsequent motor-propulsor pairs are built. These two pairs form a single generation of a particular propulsion system. After key devices of one such generation are built, the path becomes cleared for inventing devices of the next generation. This next generation incorporates propulsion systems of a higher level of advancement."

To explain the above in simple terms, the appearance on Earth of a new generation of propulsion systems is preceded by the invention of a motor, then (by a different inventor) a corresponding propulsor is built, which forms a pair with this motor. The completion of the propulsor usually occurs no later than 200 years after the completion of the motor's technology. Both - the motor and the propulsor - utilize the same working medium, are based on the same physical phenomena, and demonstrate a close analogy in construction and principles of operation. To realize how striking the similarities between both propelling devices of each pair are, let us consider, as an example, the internal combustion engine (which is a motor of the second pair in the third generation of matter circulating propulsion

systems - see Table B1) and the space rocket (which is a propulsor from the same pair). If one removes a piston from the cylinder of an internal combustion engine, he/she obtains an outlet for the space rocket jet. The fuel supply, the process of combustion, and the phenomena involved in the creation of motion remain unchanged for both the above propelling devices. The other examples of similarly corresponding pairs are: the windmill and the sailing boat, aneroid (formerly used to propel clocks - an example of such "Atmospheric Clock" is still exhibited in Clapham's Clock Museum, Whangarei, New Zealand; the French makers of this clock claimed it was "as close to perpetual motion as you'll ever get") and balloon, pneumatic motor and hovercraft, etc. - compare two consecutive columns from Table B1.

The action of the Periodic Principle for the propulsion systems is illustrated by the Periodic Table B1. Each row from this Table presents four subsequent propelling devices constituting one complete generation of propulsion systems. Inventions of all four propelling devices that belong to the same generation form a single cycle of development of propulsion systems. Within each generation, two subsequent pairs of a motor and a corresponding propulsor are invented. Each of these pairs occupies a separate column in which two additional sub-columns are distinguished for each single propelling device. At the bottom part of each column and sub-column the descriptions of the devices presented therein are provided. On the left side of each row the characteristic attributes of the generation of propulsion systems presented in this row are specified. These attributes describe:

(a) the general type of working medium applied by this generation (this medium can be either based on a circulation of (1) force, (2) matter (mass), or (3) magnetic field force lines);

(b) the subsequent number of this generation within the general type of working medium under consideration (i.e. 1, 2, or 3); and

(c) the energy carriers exploited by this generation of propulsion systems (e.g. (1) pressure, (2) inertia and pressure, or (3) internal energy, inertia, and pressure).

Note that Table B1 also shows the general direction in which the subsequent working media develop (top arrow), as well as the direction of the development of individual propelling devices built for any one of these media (bottom/right arrow).

We have learned that particular principles of operation can be applied to a number of different technical versions of the same propelling device. For example the internal combustion engine can be built as: a Diesel engine or a petrol engine, a two-stroke or four-stroke engine, a piston engine or a turbo-engine. If we analyze each of these versions we will find that all of them employ exactly the same properties of the working medium and utilize exactly the same set of phenomena. The only differences appear in the technical implementation of the device that releases these phenomena. Therefore from the point of view of the Periodic Principle all such versions represent the same propulsion which, however, is built in different technical implementations. No matter how many of these different implementations of a particular propulsion are completed, they still belong to the same stage of our development and are not able to lift our civilization to a higher level. In order **to progress and advance we must complete different propulsion systems, not different technical versions of the same propulsion** (e.g. the Magnocraft instead of magnetic railways which represent only a linear version of the electric motor). Notice that Table B1 always lists the first or the most representative technical version of every subsequent propulsion system, no matter how many versions of this propulsion were completed. For example, the sail in Table B1 shown as the first propulsor employing the pressure of the circulating stream of matter

(air), is only the first one of many possible propulsion systems operating on this principle. The other propulsors utilizing the same principle are: an aeroplane wing, a parachute, and a hang-glider.

Table B1 illustrates also the difference between the first and second pairs in each generation of propulsion systems. The essence of this difference is that the first pair uses a special device (energy transferor) to produce a working medium (e.g. a steam generator in a steam engine, or a combustion chamber in a jet propulsor) physically separated from the working space where the motion is created, whereas the second pair of propulsion produces a working medium inside the working space (e.g. combustion gases in a cylinder of the internal combustion engine, or in the outlet of a space rocket).

The analysis of Table B1 reveals that each next generation of propulsion systems repeats the technology already utilized in the lower generation built for the same type of working medium, but this technology achieves a higher level of efficiency and employs more advanced energy carriers. In this way, the development of propulsion systems takes the shape of an ascending helix (spiral), where each coil symmetrically repeats the general pattern of a previous invention, but on a higher level of efficiency. This helix carries on a number of key attributes from one propulsion to another. Therefore the characteristics of propulsion systems discovered so far define very strictly the details of the propelling devices to be completed in the future. The key information about future propulsion systems, which the Periodic Principle reveals, is: (1) the working medium utilized in a subsequent propulsion, (2) the employed attributes of this working medium (e.g. energy carrier such as force, inertia, or internal energy, and the kinds of phenomena involved), (3) the principles of operation of a new device, (4) the general design and the similarities to the other propulsion systems already completed, (5) the approximate date when our civilization will attain the level required for the completion of this device.

Knowing all the above, the synthesizing of the final shape of a new propulsion system is just a matter of ordinary design routine and development procedures.

B4. The first generation of the magnetic propulsion systems

Having knowledge of the Periodic Principle, we can state that if there exists a "single" motor of the first kind, a propulsor that will form a pair with this motor must also be completed in the near future (i.e. within around 200 years since the invention of this motor). Moreover, two further propulsion devices, which complete a full generation to which this motor belong, will also soon be developed.

We are all aware of such a "single" motor: it is the common electric motor invented by Jacobie around 1836. In this motor the motion is created because of repulsive and attractive interactions between magnetic fields. The name "electric" (instead of "magnetic") for this motor is derived from the flow of an electric current through the motor's coils which is applied to produce magnetic fields. Because Jacobie built the first such motor around 1836, the Periodic Principle predicts that no later than by the year 2036 humanity will create the Magnocraft, i.e. a spacecraft that will utilize the same type of magnetic interactions for flying in space. Moreover, as the first generation of the devices that utilize magnetic field is just beginning, a motor of the second pair, which can be called the "pulsatory motor", may be built about the year 2040. Around 2140 the pulsatory motor may be followed by the creation of a most powerful vehicle to operate on the principle of physical dislocation of objects in space,

which is called here the "star-shaped space ship" from its similarity to an eight-pointed star.

The first generation of propulsion systems utilizing magnetic interactions (i.e. electric motor, Magnocraft, pulsatory motor, and star-shaped space ship) will close the present era of human development during which our means of transportation has operated on the principle of the physical dislocation of objects in space. Beyond this era there are only propulsion systems operating on other principles, i.e. teleportation and time travel. It seems to be a repetitive pattern that every first generation should bring about the close of some longer period in our development. Also the first generation of matter circulating propulsion systems (i.e. windmill, sail, aneroid and balloon) closed the period when sources of energy provided in a ready form by untamed nature were utilized for the purpose of propulsion.

The Periodic Principle also explains the operation of these future propulsion devices, and as a result, their construction. This is because all necessary information is contained in the symmetry and analogies reflected by the Periodic Table B1. For example, the operation of the Magnocraft is an analogy for the operation of a multiphase asynchronous electric motor from one side, and the sail, hovercraft and jet propulsor from the other. Thus, when the operation and the construction is known, we may initiate research more promptly in the right direction and expedite the completion of the propulsion systems indicated. Consequently, the utilization of the clues provided by the Periodic Principle may cause the acceleration of our progress.

Just in order to demonstrate the predictive capabilities of Periodic Tables, in the subsection to follow the Magnocraft will be briefly presented the invention of which was firstly suggested by the content of the first such table prepared by the author.

B4.1. The Magnocraft

The Magnocraft is a much more advanced space vehicle than the present space shuttles. Thus a complete description of its construction and operation requires lengthy elaboration and is contained in chapter G. However, for consistency of presentation, the most basic of its characteristics are summarized below.

B4.1.1. The general design and components of the Magnocraft

The general design of the Magnocraft is presented in **Figure B1**. The shape of this vehicle resembles an inverted saucer. Its propulsion system is composed of the devices called "Oscillatory Chambers", which take the shape of transparent cubical boxes assembled inside spherical casings. Each chamber is simply a super powerful source of a pulsating magnetic field. For the purposes of better controllability, the Magnocraft uses special arrangements of Oscillatory Chambers, called "twin-chamber capsules" (described in subsection F6.1). The output of such capsules is capable of lifting a spaceship attached to it, because of the repulsive interaction with the magnetic field of the Earth, Sun or galaxy. A **propulsor** for the Magnocraft is obtained by placing a single twin-chamber capsule inside of a spherical casing, and furnishing these with appropriate control devices.

The Magnocraft consists of two kinds of propulsors: main (M) and side (U). The single **main propulsor** (M) is suspended in the centre of the vehicle. The magnetic poles of this propulsor are oriented so as to repel the environmental magnetic field (which could be the

field of the Earth, a planet, the Sun or a galaxy). By this means, (M) produces a lifting force (R) which supports the craft. The magnetic axis of (M) is usually kept tangential to the force lines of the environmental magnetic field existing in the craft's area of operation. Therefore the most effective orientation of the Magnocraft during flight is while its base is perpendicular to the local direction of the Earth's magnetic field. Sometimes, however, this orientation must be slightly altered to enable it to manoeuvre and land.

The Magnocraft also consists of numerous **side propulsors** (U). Their magnetic poles are oriented so as to attract the environmental field. Therefore side propulsors produce attraction forces (A) which stabilize the craft and fix its orientation in space. To increase the vehicle's stability, the side propulsors are located below the main propulsor, together forming a kind of bell configuration which in physics is known for its greatest stability. All the side propulsors are located at regular intervals in the horizontal flange surrounding the spacecraft and covered with material penetrable by a magnetic field.

The number "n" of side propulsors in the Magnocraft is strictly defined by the design condition described in subsection G4.2, and it characterizes a particular type of this spacecraft. This number "n" depends on the design factor marked as "K", and is expressed by the equation:

$$n=4 \cdot (K-1) \quad (B1)$$

The symbol "K" originates from the word "Krotność" which in the Polish language means: ratio of the vehicle's diameter "D" to its height "H" (base to top), i.e.:

$$K=D/H \quad (B2)$$

This is because the value of "K" shows how many times the Magnocraft's height is aliquot in the outer diameter of this vehicle.

The **"K" factor** may take any integer value in a range from K=3 to K=10. Because of the value that this factor has, the consecutive types of the Magnocraft are called K3, K4, K5, ..., K10. For example, the Magnocraft type K3 has this factor equal to K=3 (thus, according to equation B1, such K3 vehicle has n=8 side propulsors), the Magnocraft type K4 has this factor equal to K=4 (and thus n=12), whereas the Magnocraft type K10 has this factor equal to K=10 (thus n=36). The "K" factor is extremely important for the Magnocraft. It defines all the design parameters of this vehicle, including its shape and dimensions. These parameters are described by the set of equations which express the relationship between this "K" factor and some important dimensions of the Magnocraft, such as: D - outer diameter of the vehicle (i.e. the maximal diameter of its flange), d - nominal diameter of the circle on which the centres of the side propulsors are located (note that this "d" diameter also describes the mean dimension of the ring of scorched marks left on the ground by a landed Magnocraft), H - height, D_M - outer diameter of the spherical casing of the main propulsor, and L - width of the flange containing side propulsors. The most important of these equations are as follows: $D=0.5486 \cdot 2^K$, $d=D/\sqrt{2}$, $H=D/K$, $D_M=H(2-\sqrt{2})$, $L=0.5(D-d)=0.25 \cdot K \cdot D_M$. The deductions of the above equations are contained in subsection G4 of this treatise. Because the "K" factor can easily be determined from the Magnocraft's outline or photographs, it provides an extremely important identification parameter which enables anyone to quickly establish many details about a vehicle being observed (see Figure G25).

The **crew cabin** (1) is located between the main (M) and side (U) propulsors, and is in the shape of a parallel-piped ring. This cabin looks similar to the side walls of an inverted saucer and is covered by a material which is impenetrable by the magnetic flux. Along the interior (slanted) wall of the crew cabin lie the telescopic legs (2) of the craft, which are extended at the moment of landing.

B4.1.2. Flight control

Manoeuvring the Magnocraft is achieved as a result of a combination of the three following actions:

1. The change in the relation between the output from the propulsors which produce attracting (A) and repelling (R) forces; this causes the ascent, hovering and descent of the craft.

2. The slant at an angle (I) of the magnetic axes of the vehicle's propulsors from their parallel orientation towards the local course of the force lines of the environmental magnetic field. This produces the meridian component of the thrust force, causing the horizontal flight of the Magnocraft from south to north or north to south. Above the magnetic equator, where the field's force lines are parallel to the ground, such a component is produced when the magnetic axes of the vehicle's propulsors are slanted from a horizontal orientation - see **Figure B2**.

3. The production of a magnetic whirl spinning around the Magnocraft and the control of the direction and power of the whirl. This whirl (in a principle similar to the rotation of a cylinder in the "Magnus Effect" already known in hydromechanics), produces a horizontal thrust force perpendicular to the force lines of the Earth's magnetic field. If this magnetic whirl rotates in such a way that the landing Magnocraft causes a counter-clockwise flattening of plants in the Southern hemisphere (or clockwise in the Northern hemisphere), the longitudinal component of the thrust force created will propel the craft in a direction from west-to-east. The whirl rotating in an opposite direction will propel the craft from east-to-west. The magnetic whirl is produced by the 90° phase shifts in the pulsation of a magnetic field produced by the subsequent side propulsors.

The propulsion of the Magnocraft, which combines together the three magnetic actions listed above, causes the flight of this vehicle to have a magnetic character that drastically differs from aerodynamic (smooth) flights of aeroplanes and the inertial thrusts of rockets. Apart from silent flights and enormous speeds (around 70,000 km/h in the atmosphere and near the speed of light in free space), the following attributes characterize the magnetic movements of the Magnocraft: (a) always having the same orientation of the vehicle, independently of the direction in which it flies (i.e. its base is always kept almost perpendicular to the local course of the Earth's magnetic field force lines), (b) flying mainly along straight lines that in many cases correspond to the force lines of the Earth's magnetic field, or to the Earth's magnetic meridians (flights in east-west or west-east directions require the switching on of the magnetic whirl, which frequently is undesirable), (c) motionless hovering terminated by a rapid acceleration along one of the above straight lines, (d) sharp turns at 90 degrees (without benefit of a radius), (e) zigzag or jerky motion, (f) slowly rotating around the vehicle's central axis while hovering motionless.

From the above explanation it is evident that all flight control activities can be achieved without the relative mechanical movement of any part of the Magnocraft, but only by slanting the whole spacecraft and controlling the outputs from its propulsors. Therefore, miniature, computer-operated versions of this vehicle will be built which do not contain even a single moving part. This craft will be the only example of a precisely controlled vehicle which does not consist of any moving part. In the big, man-operated versions, for the convenience of the crew, it will be better to replace the slanting of the Magnocraft by tilting the axes of its propulsors (especially when it lands). In such versions, the propulsors will consist of the

rotatable twin-chamber capsules placed inside the spherical casings, as was described previously. Sometimes, especially in the smaller types K3 and K4 of the man-operated Magnocraft, to save space a compromise solution is possible. In this solution the side propulsors are fixed and consist only of the twin-chamber capsules directly joined to the structure of the craft, whereas the main propulsor is rotatable (i.e. its twin-chamber capsule is built inside of a spherical casing and may revolve in relation to this casing).

B4.1.3. The specifications of the Magnocraft

The unlimited prospects that the building of the Magnocraft will create for humanity can be realized from the following review of the properties of this vehicle.

The spinning magnetic field of the Magnocraft will cause a cumulative ionization of air, and the creation of a glowing plasma whirl surrounding this spacecraft. The centrifugal forces acting on each particle of air in this whirl will reject the air out of the surface of the vehicle, forming a kind of local vacuum bubble which will cause the craft to fly without friction. This will allow the Magnocraft to reach a speed of about 70,000 km per hour in the atmosphere, plus flights close to the speed of light in free space. The vacuum bubble surrounding the craft will also protect it from heat action during flights in melted media and blazing gases. The silent character of magnetic interactions in connection with the elimination of frontal pressure by the plasma whirl will make the Magnocraft noiseless in flight. The plasma whirl will also form a kind of circular saw of enormous power, which will enable the vehicle to penetrate through solid matter (e.g. rock, buildings, bunkers) creating glossy tunnels. The centrifugal action of the plasma whirl, supported by the forces of magnetic interactions between the craft's propulsors, forming a kind of magnetic framework, will provide the Magnocraft with the ability to withstand any high environmental pressure. This invisible framework will enable the vehicle to penetrate safely any depth, flying not only to the bottom of oceanic trenches, but also to the centre of the Earth, and perhaps even to the nuclei of stars. The spinning magnetic field will induce electric currents in the conductive materials in the vicinity, changing them into explosives. This will form around the Magnocraft a kind of inductive shield, providing it with the ability to oppose any weapon that our present military techniques may use against it.

When, on a command from the crew, the spinning magnetic field is changed into a steady, constant one, all the above properties will disappear. However, in this case different kinds of properties will be revealed. For example, according to the theory of general relativity, energy is equivalent to mass. Therefore an enormous condensation of energy in a small space surrounding the spacecraft will release the same effects as the local increase of density of mass, i.e. it will alter the optical properties of this space, forming a kind of magnetic lens. This in turn will make the Magnocraft invisible to radar and to the naked eye.

The forces of magnetic interactions propelling the Magnocraft will also enable a number of such vehicles to be coupled together into modular arrangements. In this way, not only spherical and cigar-shaped complexes, but also entire flying cities can be formed for the duration of long distance trips (see Figure G6).

During any kind of flight, the operation of this vehicle will be pollution-free.

B4.2. The second motor-propulsor pair in the first generation of magnetic propulsion systems

The Magnocraft provides a partner (propulsor) for the electric motor. Both together form the first pair of the magnetic propulsion systems. But the Periodic Principle states that when this pair is completed, our civilization may begin the development of the second pair of propulsion devices belonging to the same first generation of magnetic propulsion systems. This second pair, if ever completed, would consist of a pulsatory motor and a star-shaped space ship.

The author worked out the operation of these two magnetic propulsion systems and published it in his earlier treatises [1F]. Therefore those readers who are interested in learning more about the pulsatory motor and the star-shaped space ship may contact him for details. But because the operation of these devices differs considerably from the operation of the Magnocraft, and also because their discussion does not support the main topic of this treatise, he decided to eliminate their descriptions from this publication.

The additional reason why the author decided to omit the description of the pulsatory motor and the star-shaped space ship is that these two magnetic propulsion systems may not be built on Earth at all. Table B1 reveals that some matter-circulating propulsion systems of the second generation were built before the development of the entire first generation was completed. So the appearance of these higher-level propulsion systems could cancelled a demand for the second motor-propulsor pair from the first generation. If the same pattern is repeated also for magnetic propulsion systems then the first commercial motors of the second generation can even be operational before the Magnocraft. Practically, this means that the development of a pulsatory motor and star-shaped space ship may coincide in time with the development of much more advanced devices belonging to the first pair in the second generation of magnetic propulsion systems, i.e. with a telekinetic motor and a Teleportation Vehicle - see Table B1 and descriptions from chapter J and subsection B6. These propulsion systems of the second generation, whose operation is based on the technically induced telekinesis, are more advanced in every aspect than those based solely on magnetic interactions. Therefore they may completely eliminate the need for a pulsatory motor and a star-shaped space ship, as earlier they will provide a better way of achieving similar effects. It may therefore happen that our civilization will never attempt the development of devices belonging to the second motor-propulsor pair in the first generation of magnetic propulsion systems - although, theoretically, building these devices is possible.

B5. How the "omnibus trend" should culminate in three conventions of the Magnocraft's operation

In plain English the word "convention" means "unambiguously defined behaviour". In this treatise the same term will be used to describe the strictly defined behaviour of an advanced flying vehicle. Thus, by the "**convention** of operation of a vehicle" will be understood a name assigned to the basic principle employed in a particular spacecraft to cause its own motion. This name is usually derived from the most advanced energy carrier that is utilized in the working medium of this vehicle (see the third column in Table B1). In the case of the Magnocraft, depending on which generation this vehicle belongs, three conventions of its operation can be distinguished, i.e. magnetic, teleportative, and time travel.

To explain more precisely the interpretation of "convention of a vehicle's operation", a hypothetical flying aircraft called an "omnibus" will be discussed. The omnibus has the shape

of an open-ended barrel or tube. It incorporates in one vehicle the capabilities of as many as three different generations of propulsors operating on the principle of circulation of matter, i.e. a glider, a hovercraft and a jet propulsor. When the omnibus flies at high altitudes and extinguishes its fuel combustion, it glides through the air, thus functioning as the first generation of propulsors belonging to the matter circulating propulsion systems. In Table B1 these propulsors are represented by a sail (see also explanations from subsection B3). When the omnibus directs the stream of its exhaust gases downward, it operates like a hovercraft, flying horizontally just above the ground. During such an operation it represents the second generation of the matter circulating propulsors. The omnibus may also operate as a jet propulsor, thrusting its way up into the air. In such an operation it represents the third generation of the propulsors based on the circulation of matter.

The above explanations show that in order to describe how an omnibus operates in a particular instant of time, the use of the term "convention" is necessary. Thus, we may state that the omnibus operates either in a glider convention, in a hovercraft convention, or in a jet convention. In each one of these, the single omnibus behaves the same as aircraft belonging to an entirely different generation of matter circulating propulsion systems. By naming the convention in which it operates we are able to clarify all possible ambiguity concerning its behaviour and properties.

The experience accumulated so far indicates that all three successive generations of the matter circulating propulsors complement one another. Thus, the contemporary propulsors of the third generation, such as jet or rocket, not only are unable to replace or substitute the propulsors of the first or second generation, such as a glider or hovercraft, but also they introduce a growing need for simultaneous application of these simple propulsors. An example of such a need can be the first space shuttle "Columbia" which had to operate as a rocket, as a glider, or as an inertial satellite. On the other hand, our increasing knowledge of the propulsion systems provides technological capabilities for building omnibuses. Therefore it gradually becomes evident that as our development progresses, our ability to build omnibuses increases. An example of this "omnibus trend" can be contemporary military aircraft, which already are required to display the capabilities of jet aeroplanes, as well as the ability to take-off vertically (i.e. for operation as a hovercraft), and also the ability for gliding.

The above observation can be expressed in the form of a general rule which states that:

"In highly developed civilizations the '**omnibus trend**' becomes so dominant that the development of higher generations of flying vehicles are achieved through adding further conventions to the existing vehicles of lower generations utilizing the same working medium."

As is shown in the Periodic Principle, there exists a striking symmetry in the development of propelling devices that utilize three general types of working media. Therefore the regularities observed during the development of matter circulating aircraft must also be in operation for the flying vehicles based on the circulation of magnetic fields. To put this another way, the omnibus trend described above impacts to the same extent on the development of contemporary aircraft as the development of future Magnocraft.

The omnibus trend will have a direct impact on our civilization when the second and third generations of magnetic spacecraft eventuate. These two advanced vehicles will not be built as entirely new and different spacecraft, but rather as improved versions of the ordinary Magnocraft. Their shape, internal design and one of the conventions of their operation (i.e. magnetic convention) will be identical to those of the Magnocraft. The only difference these advanced vehicles will display in comparison to the Magnocraft, is that independently of the magnetic convention they will also be capable of using, when required, the teleportative

(vehicles of the second generation), and teleportative or time travel (vehicles of the third generation) conventions. To emphasize that both these advanced magnetic vehicles evolved from the ordinary Magnocraft, they will also be called here the Magnocraft of the second generation (i.e. able to operate in the magnetic or teleportative conventions) and the Magnocraft of the third generation (i.e. able to operate in the magnetic, teleportative, or time travel conventions). In contrast to this, the ordinary Magnocraft, which can only operate in the magnetic convention, will be called here the Magnocraft of the first generation, or simply the "Magnocraft". It should be stressed that each of these vehicles can operate only in one convention at a time. For example, when the Magnocraft of the second generation flies in the magnetic convention its teleportative capabilities must be switched off, but when it turns on its teleportative operation it must simultaneously extinguish its forces of magnetic attraction and repulsion.

B6. Three successive generations of magnetic propulsion systems

Subsection B2.1 has shown that for each general type of working medium as many as three successive generations of propulsion systems will eventually be completed. The electric motor, Magnocraft, pulsatory motor, and star-shaped space ship, all represent only the first and the most primitive generation of the propulsion systems based on the circulation of magnetic field force lines - refer to Table B1. The only magnetic field attribute employed by this generation is the force of magnetic repulsion or attraction. But the Periodic Principle shows that after completion of this first generation, the second and third generations of the magnetic propulsion systems must appear. Each one of these generations will allow the completion of as many as four separate propelling devices belonging to two motor-propulsor pairs, as illustrated in Table B1. The operation of all these advanced devices will utilize not only magnetic attraction and repulsion forces, but also such sophisticated magnetic phenomena as technically induced telekinetic motion (which is triggered by the magnetic equivalent of mechanical inertia - see explanation in chapter C) and the alteration of time (time is a magnetic equivalent, or a mirror reflection, of internal energy of material systems - see chapter D, subsection D3). To put the above into terminology used in this treatise: the second and third generations of magnetic propulsion systems will be capable of operating in, respectively, telekinetic (teleportative) and time travel conventions.

Two chapters that follow are to explain the theory behind the phenomena employed in the operation of all these advanced magnetic propulsion systems, starting from the explanations for the so-called "Telekinetic Effect" utilized in the operation of the Magnocraft of the second generation.

Table B1. The Periodic Table completed for the propulsion systems. This Table was constructed by listing along its vertical axis the phenomena utilized in the operation of successive generations of propelling devices, and by the listing along the horizontal axis all possible types of propelling devices that utilize these phenomena. The symmetry and repetitiveness in the internal structure of this Table give it enormous potential for prediction, as it allows for the transfer (extrapolation) of vital attributes between various devices. Its empty spaces indicate the devices still waiting to be invented. By analysis of the location of these spaces (i.e. their row and column) it is possible to determine the future operation and characteristics of devices yet undiscovered. The invention and development of the Magnocraft was the direct result of the completion of this Table.

A remark regarding Vidi's box: the "Atmospheric Clock" utilizing for propelling purposes a version of the Vidi's box is exhibited in Clapham's Clock Museum, Whangarei, New Zealand. The French makers of this clock claimed it was "as close to perpetual motion as you'll ever get".

Fig. B1. The internal design, main components, and operation of the smallest Magnocraft, type K3. In this diagram, a section of the front shell from a horizontal flange is removed to better illustrate the location of side propulsors (compare this vehicle with the vehicle in Figure G4). The Magnocraft has the shape of an inverted saucer. In its centre a main propulsor (M) is suspended, and in a horizontal flange surrounding the base a number of side propulsors (U) is located. Between them the ring-shaped crew cabin (1) is placed. The main propulsor (M) produces a repulsion force "R" through interaction with the environmental magnetic field (which can be the field of the Earth, Sun or Galaxy). The eight side propulsors (U) attract the environmental magnetic field, thus producing stabilizing forces "A". Flights and manoeuvres of the Magnocraft are achieved through a combination of the three following actions: changing of the relation between forces "R" and "A" - this causes the ascent, hovering, or descent of the vehicle; changing of the inclination angle "I" of the central propulsor magnetic axis - this causes the horizontal flights in a south/north or north/south direction; spinning of the magnetic field around the vehicle's shell, thus activating the magnetic equivalent of the "Magnus Effect" that thrusts the Magnocraft in an east/west or west/east direction. The switching on/off of any of these modes of operation causes the magnetic, jerky flights of this vehicle, characterized by the following straight lines and rapid changes of direction without a radius. The edges of the walls, made of a material impermeable by a magnetic field, are indicated by a broken line. The edges of the walls which are made of a material permeable by a magnetic field are shown with a wavy line. During normal flights the Magnocraft is always oriented with its base perpendicular to the local course of the environmental magnetic field. But this vehicle is shown as if approaching to land on flat ground, i.e. its base is parallel to the ground whereas the telescopic legs (2) are extended. During landing, the powerful magnetic field yield from the propulsors of this vehicle scorches a ring of vegetation, as marked in this diagram, like the rays of a microwave oven. For the K3 type of Magnocraft, this ring has a nominal diameter $d=D/\sqrt{2}=3.1$ metres.

Fig. B2. The Magnocraft's orientation during flight. This orientation optimizes the vehicle's interactions with the force lines of the environmental magnetic field. Therefore a solo flying vehicle favours turning its base perpendicularly to the local course of the environmental magnetic field (i.e. the field of the Earth, Sun or Galaxy). While flying above the Earth's equator, the main propulsor of the Magnocraft has its magnetic axis positioned tangentially to the Earth's magnetic field, and the magnetic poles of this propulsor are directed towards the like poles of Earth (i.e. N of the propulsor to the N of Earth, and S to S). Thus, this main propulsor forms significant repulsive forces " R_N " and " R_S " which lift the spacecraft. The extremely large effective length of the magnetic bubble produced by the vehicle's propulsors is appreciable even when compared with the diameter of Earth (see subsection G5.3). Therefore, in spite of the small physical size of the Magnocraft, its magnetic dimensions can be illustrated by the proportions from the above diagram.

Chapter C.

THE TELEKINETIC EFFECT

In 1924 the great French physicist, Louis DeBroglie, published his important discovery which is sometimes called the "Principle of the Symmetry of Nature". According to this principle, in our universe everything is strikingly symmetrical in many ways. DeBroglie's principle provided philosophical and scientific foundations for a number of important discoveries and devices. For example: the Periodic Table of the Elements (also called the Mendeléeiev Table), the existence of a mirror duplicate for each elementary particle (e.g. electrons and positrons, protons and antiprotons), and the similarities between atoms and solar systems - all these document the symmetry existing in the structure of matter; the similarities between equations that describe different physical phenomena (e.g. Navier-Stock's equation describing flow of fluids and Laplace's equation describing heat transfer) express symmetry in the laws of nature; whereas the technological correspondence between e.g. hydraulic motors and pumps, or electrical motors and electricity generators, reflect the symmetry in the operation of technical devices.

One of the vital implications of DeBroglie's symmetry, which has a direct bearing on the content of this monograph, is the postulate that **"every phenomenon must have a corresponding counter-phenomenon"**. So far a large number of phenomena and corresponding counter-phenomena have been discovered which confirm the correctness of this postulate. For example, the existence of electrical luminescence utilized in some electric bulbs to transform electricity into light has a counter-phenomenon in the form of the photoelectric effect that transforms light into electricity. The so-called left-hand rule, also called the motor effect, which describes phenomena used for the transformation of electricity into motion, has its counter-rule in the form of Fleming's right-hand rule, also called the generator effect, which works in reverse, i.e. transforms motion into electricity. The Seebeck Effect, which produces a flow of electrons through a junction of two dissimilar conductors being heated, has its counter-phenomenon in the form of the Peltier Effect, which causes the heating and cooling of materials in a similar junction when a current flows through it.

However, contemporary physicists claim that there is an exception to this principle. This exception is friction. Friction is considered to be the irreversible phenomenon which has no counter-phenomenon. But in 1985 the author of this treatise discovered the phenomenon which represents a reversal of friction. In the same way as friction spontaneously converts mechanical motion into heat, this newly discovered phenomenon spontaneously converts heat into motion. Because in its natural form this phenomenon is manifested during telekinetic (or psychokinetic) motion, it is named the **"Telekinetic Effect"**. Not long after the Telekinetic Effect was discovered, the author also found technological ways of releasing it (through an acceleration or deceleration of magnetic field force lines).

The discovery that the Telekinetic Effect represents a reversal of friction, and subsequent discovery of the technological ways of activating this effect, provide the theoretical foundation for building the telekinetic propelling devices (including propulsors for the Magnocraft of the second generation). As this will be explained in subsections to follow, one of the extraordinary attributes of such telekinetic propulsion systems is that they do not require any energy supply; they simply use reversal of friction capabilities to convert thermal energy always present in the environment into the useful motion of the objects (vehicles) being propelled by them. According to this newly gained knowledge about such devices, the

conversion of thermal energy extracted from the environment into a useful motion requires only: (1) the building of devices that technologically release the Telekinetic Effect, (2) the absorbing of thermal energy from the environment and then its transformation into useful motion with the aid of this effect, (3) the channelling of the motion which is produced, so that it is finally converted into the movement of a propelled object (e.g. a vehicle, a motor, a machine, or electrons in wiring of an electricity generator).

C1. History of the Telekinetic Effect's discovery

The history of the Telekinetic Effect discovery is closely connected with the invention of the Magnocraft. This in turn has already been described in chapter A.

After the description of the Magnocraft was published, as with every other new idea, it encountered criticism from some quarters. But almost all critical comments about this vehicle resulted from the overlooking of some vital points already postulated by the Magnocraft's theory. The only argument that initially this theory did not explain was the popular claim that "not a magnetic field, but antigravity will be the carrier of the propulsion systems of the future". In order to examine the merit of this argument, the author completed a broad analysis of our knowledge about antigravity. The effect of this analysis was the formulation of a completely new understanding of a gravitational field, which is now disseminated under the name "**Concept of Dipolar Gravity**". The theory describing this concept is summarized in chapter D, and it is also published in a few separate monographs and articles by the author - e.g. see monographs [1] and [6] listed in chapter S, and the article [1C1] "Gravitation als Dipolare Felder", Raum & Zeit, No 34, June/July 1988, pages 57 to 69. In turn, one of the most important phenomena whose existence this new concept postulated, is the Telekinetic Effect. The author's discovery of the Telekinetic Effect provided principles of operation for the magnetic propulsion systems of the second generation. The most spectacular examples of these propulsion systems taking the form of telekinetic space vehicles are mentioned in subsection C5.2 and presented in chapter J. Further examples of telekinetic motors, generators, and other free energy devices are summarized in subsection C5.1 and described in a separate monograph [6].

C2. Action of the Telekinetic Effect explained by the Concept of Dipolar Gravity

The Concept of Dipolar Gravity was formulated in order to describe the nature of gravitational field in an opposite (alternative) way from that described by present science. The present interpretation of gravity assumes that the gravitational field displays all characteristics of a monopolar type of field. In this way the attributes of gravity are treated as resembling those of other monopolar fields, e.g. electrical fields, pressure fields, etc. Because of this assumption, the present understanding of gravity can be called the "concept of monopolar gravity". However, the analysis completed by the author and summarized in subsection D1 proved that the nature of a gravitational field is totally different from that described by the concept of monopolar gravity. Gravity was found to correspond to all dipolar type of fields, such as magnetic fields, fields formed by circulating streams of fluids, etc. The author's Concept of Dipolar Gravity was developed just to accommodate this new re-classification of gravity into dipolar type fields, and to reveal various implications that this has for science, philosophy, religion, etc.

The most important differences between the old and the new concepts concentrate mainly around the mutual relationship between matter and antimatter. In the scientific old concept of monopolar gravity, matter and antimatter existed in the same set of dimensions (or world), similar to the way positive and negative electric charges coexist in the same space. This concept also claims that matter and antimatter should repel each other, thus allowing for the building of antigravity vehicles. But because this repulsion must lead to the separation of matter from antimatter, and to their dislocation into opposite ends of the universe, this old concept makes it impossible to experimentally prove the existence of antimatter and antigravity.

In the author's new Concept of Dipolar Gravity, matter and "antimatter" coexist like both poles of a magnet: surrounded by spaces with opposite properties, and mutually linked by the gravitational field force lines. But because of the concentric nature of a gravitational field, in our set of dimensions (or world) only one gravitational pole prevails. The other, opposite pole of gravity disappears from our world and emerges in a parallel set of dimensions which is separate from ours (i.e. prevails in a different "**counter-world**" existing parallel to ours). The matter existing in our world and the substance which fills up this parallel counter-world are mutually linked by forces of gravitational interactions, in the same way as poles of a magnet are linked with force lines of a magnetic field.

Note that in order to distinguish between the terminology in both (old and new) concepts of gravity, the substance prevailing in the parallel counter-world, from now on will be called here "**counter-matter**" so that it is not confused with the idea of "**antimatter**" from the concept of monopolar gravity. Of course, because of the opposite foundations for both concepts, also properties and behaviour of counter-matter and antimatter must be different.

The relationship occurring between matter and counter-matter in the Concept of Dipolar Gravity reveals the primary consequence of re-classification of gravity into the dipolar type of fields. This consequence is that gravity forces must join every single particle of matter with the corresponding particle of counter-matter thus forming inseparable twin particles. These twin particles can be compared to gravitational equivalents to elementary magnetic dipoles. Each such a twin particle has one of its component (a particle of the matter) prevailing in our world, whereas the other component (i.e. a particle of the counter-matter) prevailing in the parallel counter-world. In turn, the existence of these twin particles provides the mechanism that explains telekinetic motion. Let us now discuss the principles involved in the creation of such a motion.

One of the consequences of the joining of each particle of matter with a twin particle of counter-matter is that all material objects existing in our set of dimensions (our world) must have their counter-gravitational duplicate existing in a parallel set of dimensions (counter-world). The mutual relationship between each material object and its counter-material duplicate is an analogy to an image and its mirror reflection, or computer hardware and software, or to the idea of 'body' and 'soul' postulated by various religions. Similarly like an image and its mirror reflection, both parts of an object are exact copies of their opposite duplicate, and also exactly imitate each other's movements. Moreover, both - the material object and its counter-material duplicate - can also be independently taken hold of and dislocated in space. But because of the gravitational links between them, independently of which part is grabbed and dislocated first, the other part must imitate exactly its motion. For this reason, depending on which part of an object is grabbed first and thus first dislocated in space, the Concept of Dipolar Gravity distinguishes between two different types of motion, i.e. the "physical motion" and the "telekinetic motion". The **physical motion** occurs when the material part of an object is moved first, whereas the counter-material duplicate is pulled

behind it by the forces of the gravitational links. The **telekinetic motion** occurs when the counter-material duplicate is moved first, whereas the material part of this object is pulled behind the counter-material duplicate by the force of their mutual gravitational links. To illustrate this with an example, the Concept of Dipolar Gravity shows that the telekinetic motion is like forcing an object to move by shifting its reflection in a mirror, so that this re-located reflection causes the object to move also. Of course in order for this example to work in reality, light would need to behave like gravity forces. The other, even more illustrative explanation for the telekinetic motion would be to liken it to "shifting material objects by dislocating their counter-material 'souls'".

The above explanation for telekinetic motion also defines the origin of the Telekinetic Effect and the mechanism which causes it. Thus, the definition of this Effect is as follows. **"The Telekinetic Effect is a phenomenon of the indirect manipulation of an object obtained via the interaction with the counter-material duplicate of this object."** This definition explains that the Telekinetic Effect is, amongst others, the source of telekinetic motion in a similar way as the physical force is a source of physical motion. But there is a whole range of differences between the physical force and the Telekinetic Effect. The most important of these differences is that the Telekinetic Effect does NOT exert (return) a reaction force to its cause. (For a physical force, every action must produce an equivalent reaction force to be returned to (exerted upon) the object causing this action). Practically this means that the increase in work completed by the Telekinetic Effect does not involve any change in the amount of energy required for the release of this effect. Moreover, the support of such telekinetic devices does not require any force, no matter what weight they lift. This means that a device that releases this effect can also be suspended in space, and the lack of reaction forces allows it to remain unaffected independently of the scale of actions that it causes. For example, a portable telekinetic crane lifting any object (e.g. a building or a huge rock) can be held in a child's hand without any effort. The other major difference between the Telekinetic Effect and a physical force is that for the Telekinetic Effect the Principle of Energy Conservation is satisfied due to a spontaneous extraction of thermal energy from the environment by a telekinetically moved object itself. This in turn leads to a number of phenomena explained later, such as the cooling of the environment of objects shifted telekinetically, emission of a subtle "extraction glow", etc.

One of the most important achievements of the Concept of Dipolar Gravity is that, while indicating the existence of the Telekinetic Effect, it also postulates two different methods of triggering (releasing) it. These are: (1) the biological method, and (2) the technological method. In the **biological method** the Telekinetic Effect is produced through the employment of a natural capability of the brain, or more precisely - the part of the brain called a "pineal gland". There are a number of versions of this effect produced biologically by the human brain (e.g. telekinetic healing, bending spoons) most of these are listed in subsection C3. One of the most spectacular examples of such biologically released human telekinesis is called "psychokinesis". Other popularly known examples include levitation and radiesthesia (i.e. the telekinetic bending of divining rods). A form which depends on a psychokinetic release of a huge quantities of heat at the moment of experiencing a shock, is the so-called "spontaneous human combustion". Theoretically speaking, most probably also some animals are capable of the formation of telekinesis to enhance some vital biological functions. An example of such animal telekinesis can be the production of calcium by chicken which is discussed in a later part of this subsection.

In the **technological method** the Telekinetic Effect is produced through the acceleration or deceleration of magnetic field force lines, and its action includes all objects contained in the area so activated. Because the area subjected to the action of the Telekinetic Effect is itself

a kind of a very active field which affects all objects contained in it, therefore the author calls it the "**telekinetic field**". Various research completed so-far on this new telekinetic field revealed that some of its properties resemble those of a magnetic field, e.g. various substances can be permanently "magnetized" (or perhaps we should say "telekinetized") with it. In this treatise only the subject of propelling devices is covered. For this reason the technological method of releasing the Telekinetic Effect will mainly be examined here. But a number of observations gathered for this method apply also to the biological telekinesis.

At this point it is worth stressing that the generally accepted old concept of monopolar gravity was unable to provide any explanation for the nature of telekinetic motion, in spite of the enormous body of evidence that documents the existence of this phenomenon. This probably is the main reason why a large number of contemporary scientists refuse to acknowledge the existence of telekinesis, and discourage any attempts to investigate it. Moreover, this old concept does not allow for any reasoning concerning the attributes of this motion or the technological ways of releasing it.

An important part of the Concept of Dipolar Gravity is the interpretation of the Energy Conservation Principle as applied to telekinetic motion. Dipolar Gravity states that the laws prevailing in the counter-world must be the reversal of laws prevailing in the material (our) world. This also means that friction and energy consumption - so characteristic of the material world, are non-existent in the counter-world. Therefore, if the motion of any object is begun in the counter-world through a dislocation of the counter-material duplicate of this object, then the cause of this motion does not need to provide any energy. But the motion of the material part of this object in our world must obey the Conservation of Energy Principle. Because the cause of the telekinetic motion does not provide the energy required to satisfy this Principle, the material part of the object moved telekinetically must achieve this by itself. Therefore, during telekinetic motion, the material part of the object moved must spontaneously exchange thermal energy with the environment (i.e. absorb or release heat). The necessity for this exchange will be called here the "**postulate of spontaneous heat exchange between the telekinetically affected objects and the environment**". This postulate is responsible for two observable consequences, i.e.: (1) it produces a change in the environmental temperature during telekinetic motion, and (2) it produces a faint glow, called the "extraction glow", emitted from the matter (space) surrounding the telekinetically moved objects.

While the above explains fully the principles behind the temperature change caused by telekinetic motion, the mechanism of the "**extraction glow**" requires further explanation. If energy is rapidly withdrawn from an atom, its electrons must fall from their higher orbits into lower ones. This in turn, according to quantum physics, must cause the emission of photons. Therefore, the rapid extraction of heat from the matter that surrounds an object moved telekinetically must be accompanied by the emission of a faint glow from this matter, referred here as the extraction glow. This emission should register as a faint white light that surrounds the surface of objects moved in a telekinetic manner. The intensity of the extraction glow depends on the amount of telekinetic work required for the completion of a given motion. Because this work is rather insignificant for the biological sources of telekinetic motion, the intensity of the glow that they produce must also be low. Thus, for the motion which is caused biologically, the extraction glow is usually not noticeable by the naked eye, and only a sensitive photographic film is able to register it. This indicates that the best method for detection of this glow is to photograph objects moved telekinetically - see Figure C1. But for the technological sources of telekinetic motion (e.g. highly efficient telekinetic power-stations - see subsection C5.1.1, or advanced propelling devices utilizing the Telekinetic Effect for transportation purposes - see chapters J and O) which extract large quantities of thermal energy from the

environment, the emission of the extraction glow starts to be noticeable with the naked eye. To outside observers, the glow from the sources of technological telekinesis will make their surface appear to be "oiled with light". Of course, the appearance of the extraction glow will always be accompanied with the rapid drop of the environmental temperature (i.e. its rapid cooling down).

Independently from the extraction glow, the Telekinetic Effect is capable of causing the opposite phenomenon which we call here the "**dispersion glow**". The dispersion glow is emitted while the telekinetically manipulated objects yield thermal energy instead of absorbing it - e.g. consider the example of a telekinetic vehicle which previously flew with a high speed being decelerated (slowed down), or a user of telekinetic personal propulsion walking downstairs. The principles involved in the emission of the dispersion glow are very similar to those from the extraction glow. But because of the direction of the energy flow for this glow is favouring the emission of photons by electrons from specific atomic orbits, the dispersion glow will produce the light with a clear green tinge. Also the appearance of this greenish dispersion glow will be accompanied with the visible increase of the environmental temperature (i.e. with the rapid warming up of the environment).

It is worth mentioning here that for practical reasons it is possible to merge together both phenomena above to obtain useful illuminatory systems which would produce extremely pleasant lights. In these systems the light would not be emitted by a single source (e.g. a bulb) but by the whole volume of space (air) contained in a given compartment. In this way the light would not be blinding to eyes, would not produce shadows, and would assure the excellent visibility of detail. In order to achieve the production of this extraordinary light in a given compartment it is sufficient to create a standing magnetic wave, the course of which would telekinetically cause the cyclical acceleration and then deceleration of air particles. Thus these particles would alternatively emit the white extraction glow and then the greenish dispersion glow. The interesting aspect of this system is that after it is supplied with a temperature sensor it simultaneously can perform the function of an air condition unit thus keeping the temperature in a given compartment at a constant and easily controlled level. It can be added here that this particular system of illumination seems to be already used on Earth. For example in a book **[1C2]** by Alec MacLellan "The Lost World of Agharti", Souvenir Press, London 1982, ISBN 0-62521-7, there are descriptions of just such greenish light already utilized by citizens of "Agharti". Furthermore, not long ago the author had a brief (but unfortunately interrupted) discussion with an occasionally met globetrotter, who tried to describe his visit to one of the less known Egyptian pyramids. He supposedly saw a compartment lit up with a strange green light which did not produced shadows and no one knows from where it originated. A local guide supposedly said that present science is unable to explain the origin and properties of this green light. Of course, immediately after the discussion with this globetrotter the author initiated his search through literature on pyramids, unfortunately he has not found any mention of a mysterious compartment lightened with a greenish light of unknown origin which present science is not able to explain. (If any of readers knows anything about this compartment with its mysterious greenish light, or about the literature where descriptions are provided, the author would be obliged for letting him know.)

The principle of the controlled triggering of thermal phenomena described above which, amongst others, is able to emit interchangeably the extraction glow and the dispersion glow, can also be utilized for numerous different applications - not only just for an illumination or air conditioning. One of the most important applications, having a direct connection with the topic of this monograph, is the maintenance of the temperature of Oscillatory Chambers at a

constant and controllable level - see descriptions in subsection F5.3. The principle used for the maintenance of this constant temperature depends on controlling the course of the field pulsations in the chamber so that the subsequent pulses of this field trigger the Telekinetic Effect. In turn this effect accelerates the motion of electric charges through the chamber. The energy sustaining this motion is the thermal energy (heat) previously released by the sparks. In that way the thermal energy losses occurring as a by-product of sparks are subsequently transformed by the Telekinetic Effect into the motion of electric charges. As the result of this strictly controlled process, the entire thermal energy dissipated in the chamber by sparks is transformed (recovered) back into electric charges.

Although in this monograph the utilization of the Telekinetic Effect for the production of motion is mainly stressed, this phenomenon can be also employed for various other applications. For example it can alter the state, shape, consistency, composition, energy level, structure, or attributes of material objects, and much more. In such alterations the affected objects can either absorb the environmental heat (e.g. during the acceleration of telekinetic vehicles) or release thermal energy (e.g. during the deceleration of telekinetic vehicles). However, the lower the exchange of thermal energy with the environment is, the easier to complete these alterations are. Thus the easiest to complete are the telekinetic transformations which are self-balancing thermally, i.e. which do not absorb nor release any thermal energy. One of the most unusual transformations triggered by the Telekinetic Effect, which seems to occur only if the selection of intake components and the final products allows for such energetic self-balancing, is the ability to transform one group of elements into another group of elements.

The actual occurrence of this thermally self-balancing transformation of one elements into another seems to be confirmed already by a number of empirical observations and experiments. For example in a region of French Bretonnia where is a lot of mica but simultaneously there is a significant deficiency of calcium in the soil, hens still lay eggs with normal, hard shells. French chemist named Louis Nicolas Vauquelin was so inspired by this empirical observation that he completed an interesting experiment. He fed hens with a significant deficiency of calcium, but gave them for picking as much mica as they wanted. His hens still laid eggs with hard shells. But when he fed the same hens with the same deficiency of calcium and simultaneously he did not give them mica, they laid eggs with completely soft shells. Mica is a complex hydrous aluminium silicate mineral usually composed of potassium, aluminium, silicon, oxygen and hydrogen; e.g. composition of the principal type of mica, called "muscovite", is described by the formula: $K_2Al_4(Al_2Si_6O_{20})(OH)_4$. It appears that Vauquelin's hens self-satisfied their need for calcium by producing this element from some element which is readily available in mica but simultaneously is absent in the environment, e.g. from potassium. Although present science seems to ignore his experiments, as just on the basis of nuclear physics there is no known means of transforming one element into another, the action of the Telekinetic Effect explains his findings as a result of biological telekinesis which transformed some elements into others, e.g. potassium and some other, yet unidentified element, into calcium and some other, yet undisclosed element. Experiments conducted by Vauquelin are described in two books, i.e. **[2C2]** by Peter Tompkins & Cristopher Bird, "The secret life of plants" (Penguin Book Australia Ltd., ISBN 0 14 00,3930 9, 1973, page 243), and **[3C2]** by Layall Watson, "Supernature", Hodder and Stoughton, London 1973, ISBN 0340173688. There is also another example of such conversion of elements, but this time triggered by a technological telekinesis. It can be found on some landing sites formed by vehicles built by other civilizations which already utilize telekinetic propulsors in their space vehicles (see chapter O). Research conducted on such sites

revealed that the calcium content in their soil is around seven times higher in comparison to content from the soil in the surrounding area - see the book [4C2] by Allan Hendry (Foreword by Professor Allen Hynek): "The UFO Handbook" (Sphere Books Limited, London, England, 1980), page 131. As the shifting of calcium in the soil would involve extremely unlikely mechanisms, almost the only rational explanation for this increased calcium content in some UFO landing sites is that it was synthesised there by the Telekinetic Effect released by the propulsors of these vehicles. The transformation of potassium into calcium is not the only change of elements which can be triggered by the Telekinetic Effect. Another change which seems to be also confirmed by numerous empirical findings is the transformation of silicone (found, for example, in ordinary sand) and some other unknown yet element, into gold and some other unknown yet element. Such a synthesis of gold occurred on a large scale in explosion sites of space vehicles propelled by the means of telekinesis. Their example is the formation of "golden fleece" in ancient Kolchida, and more recently near the township of Tapanui in New Zealand and in Tunguska, Central Siberia. More details about this "golden fleece" is provided in monograph [5].

To conclude the series of explanations above, the "postulate of spontaneous heat exchange between the telekinetically affected objects and the environment" makes the Telekinetic Effect to act like a reversal of friction. As the phenomenon of friction causes a spontaneous absorption of motion and the production of heat, the Telekinetic Effect spontaneously absorbs environmental heat and produces motion.

Independently from the "postulate of spontaneous heat exchange between telekinetically affected objects and the environment" the Telekinetic Effect releases a whole range of new and non-typical phenomena. The appearance of most of them results from the general principle that the Telekinetic Effect seems to execute almost all physio-chemical processes along the "line of greatest resistance" (thus this effect seems to cause the reversal of "normal" processes occurring in untamed nature which follow the "line of least resistance"). In case of various chemical substances this direction could be defined as "transformation from energetically lower states into energetically higher states", or occurring "from chaos to order". Because for the majority of living organisms and substances the above direction of changes means transformation from degeneration and dependency into a state of growth and durability, the Telekinetic Effect displays the capability for enormous biological, chemical, and structural stimulation, which is manifested in the following manners:

1. All living organisms (i.e. vegetation, animals, and people) subjected to telekinetic field display accelerated and enlarged growth. In the areas of landings or explosions of vehicles with telekinetic propulsion (see treatise [5]) in extreme cases the vegetation may grow as many as up to 12 times faster and higher than the same vegetation from surrounding areas. (For example near Tapanui in New Zealand - see [5], where a residual telekinetic field still prevails after the telekinetic explosion that occurred there in 1178 A.D., pine trees can be harvested after 20 years, during such short time growing to sizes which in Europe would take at least 100 years.) In turn animals and people affected with the field of such landing or exploding vehicles may reach size and strength significantly higher than others. Thus the above reveals the possibility of building "**telekinetic stimulators of growth**", i.e. devices which would cause the acceleration of growth but in an intended and controlled manner.

2. Damaged, degenerating, or ill parts of bodies/organs placed in the range of the Telekinetic Effect released technologically seem to heal and regenerate very rapidly. The regeneration and healing achieved in such a "technical" manner is very similar to that manifested during the influence of the biological telekinetic field released by healers.

Some of these healing results were already observed by a number of inventors working

on telekinetic devices for the extraction of environmental energy (also called "free energy devices") - see subsection C5.1 and monograph [6]. It seems that the observation of healing properties of the technological version of the Telekinetic Effect represents a major discovery which in the future may allow for the development of "**telekinetic healing devices**". The operation of such devices will objectively and repetitively imitate the subjective action of contemporary healers. As such, the medical applications of the Telekinetic Effect can even overshadow the currently pursued application for energy production. If this is reinforced by further research, we may be on the brink of a major discovery which may completely revolutionize our medicine. It is worth mentioning that a Swiss inventor named Werner KROPP (WEKROMA Laboratory, Via Storta 78, CH-6645 Brione s/M, SWITZERLAND) already works on the development of such healing devices.

3. Powerful doses of telekinetic radiation may cause the evolution of new useful genetic structures. Thus new and better adopted mutations of living organisms can come to life.

4. Amongst people subjected to the action of the telekinetic field a number of paranormal phenomena can be induced at random. Examples of these include:

- Enhancing paranormal capabilities of a given person. People who remain for a longer time under the influence of this effect can display paranormal abilities they have not noticed before (e.g. their ability to heal, clairvoyance, telepathy, telekinesis, etc., rapidly may become enhanced). It looks almost as if the Telekinetic Effect clears or revives internal organs in our body (e.g. the pineal gland mentioned previously) which are capable of inducing paranormal phenomena but which is dormant due to chronic disuse.

- Triggering phenomena which may have religious interpretations, e.g. visions, rapid and unexplained changes in the state or capabilities of human body or surrounding objects (like small "miracles"), etc.

5. Various chemical substances normally difficult to associate or separate are spontaneously produced in the sphere of action of this effect (e.g. ozone is formed from oxygen in the air, water is dissociated into the oxygen and hydrogen, etc.). The energy balance during telekinetic production of such substances apparently does not fulfil the Energy Conservation Principle (e.g. the release of telekinetic dissociation of water consumes less energy than it is obtained during subsequent burning the oxygen and hydrogen produced in this manner). This is because the spontaneous absorption of energy from the environment can not yet be quantified with instruments. Such manifestation of the Telekinetic Effect can be utilized for the development of new energy efficient methods of ozone production, water dissociation, etc. Examples of inventors who currently are working on devices for the telekinetic dissociation of water are: Stanley A. Meyer (3792 Broadway, Grove City, Ohio 43123, USA), and Stephen Horwath (P.O. Box 3880, Sydney, NSW 2001, Australia).

6. The Telekinetic Effect may activate the "cold fission" of atomic structure of elements, in advanced application allowing for the **transformation of elements** into other elements.

7. The energy bound in substances, phases, or forms more permanent, is withdrawn and transferred into substances, phases, or forms less permanent. For example some permanent crystalline phases which bound quantities of energy, can be transformed into other phases which release a lot of heat - see the telekinetic bending of spoons (the world-known person capable of such bending is Uri Geller from Israel).

8. Under the action of the telekinetic effect heat flows from the areas or objects with a lower temperature into the areas or objects having a higher temperature. The most drastic example of such a flow realised via biological telekinesis is the so-called Spontaneous Human Combustion. The same effect but released technologically is utilized in the invention by Peter Daysh Davey, Senior (257 Locksley Avenue, Christchurch, New Zealand) who

developed an electric jug that boils water but consumes almost no electricity - see New Zealand patent no 92.428 dated 12 December 1944.

9. The crystallic structures and organic compositions can become "perfected" by eliminating from them various atomic vacans, planes of slips, breaking lines, changes of density, etc. In this way for example car tyres exposed to the field of a telekinetic vehicle hovering above may become completely wear and tear resistant, steel may refuse to corrode, etc.

10. Solid objects moved telekinetically can penetrate, or be penetrated by other solid objects without affecting or damaging the consistency of either of them. Thus, when utilized in propelling devices, this may lead to the development of **wall crossing vehicles** which can penetrate through solid matter (e.g. pass through walls to our homes) without leaving any damage or mark.

11. Parts of solid objects subjected to the action of the Telekinetic Effect can become transparent as if made of energy not matter. The appearance of such transparency can already be observed on photographs capturing telekinetic motion (e.g. it is quite obvious on photographs documenting the telekinetic motion induced by the famous English medium from the beginning of this century named Eusapia Palladino - see Figure D4). This may lead to the development of **invisibility devices** allowing people and objects/vehicles to remain unseen by others.

It is not the goal of this monograph to present evidence in support of the above list, as such evidence is presented elsewhere (e.g. see monographs [6] and [1]). At this point it is sufficient to mention that the occurrence of almost all of the phenomena listed above has been observed.

The most important attributes of the telekinetic field coincide with the properties of magnetic fields. For example the impact of this field is proportional to the output of its source (e.g. to the size/type of a telekinetic vehicle which landed in a given area), time of the action of this field, and the distance from the source of this field.

C3. Experimental confirmation of the Telekinetic Effect

The action of the Telekinetic Effect, and the correctness of the Concept of Dipolar Gravity from which it was derived, are already confirmed by a vast number of experiments. These can be classified into two categories: (1) the well known experiments the results of which coincide with the new Concept of Dipolar Gravity but which can not receive a satisfactory explanation on the old basis of monopolar gravity, and (2) the results of completely new experiments postulated by the Concept of Dipolar Gravity, which give results that directly confirm the action of the Telekinetic Effect. In this section both of these categories of experiments will be reviewed, starting from those which are already well known.

Surprisingly, a large number of the experiments already known confirm the correctness of Dipolar Gravity. One of the most evidential of these are Kirlian photographs of incomplete living organisms. In such photographs, parts of organisms that were previously removed from them still remain visible (e.g. parts of a leaf being cut off, fingers missing from a hand, etc.). According to the Concept of Dipolar Gravity, those missing parts revealed on Kirlian photographs represent the remains of the counter-material duplicates of particular objects. Another group of such well known experiments originates from the "wave-particle duality of nature". One of the manifestations of this duality is the contemporary coexistence of the corpuscular and wave theories of light. As is quoted in some books "Physicists have been

jokingly accused of believing in light waves on Mondays, Wednesdays, and Fridays and in photons on Tuesdays, Thursdays, and Saturdays" (see the book [1C3] by O.H. Blackwood and others: "General Physics", 4th edition, John Wiley & Sons, Inc., 1973 page 665). The explanation of this duality of light provided by contemporary physicists is unsatisfactory, but the Concept of Dipolar Gravity explains it in a very simple and understandable way: the duality of light results from the fact that light signals can move within two different worlds (material and counter-material). Depending on in which of these two worlds the motion of light is observed, it can be described as a corpuscle or a wave.

Well known experiments also exist which directly confirm the operation of the Telekinetic Effect. The largest number of these experiments is known in the physics of elementary particles. One of the more spectacular of these is the so-called "tunnel effect". In this effect elementary particles disappear at one energy level and re-appear at a completely different level in a manner that defies all known rules of motion. Present science accepted this effect empirically, although on the basis of monopolar gravity its mechanism was impossible to explain. But in the Concept of Dipolar Gravity the tunnel effect represents only a micro-scale manifestation of the Telekinetic Effect. The other large group of phenomena also confirming the Telekinetic Effect is anomalies of the gyroscope. These anomalies in the present concept of gravity can be described only by the effects which they cause, not explained in terms of the mechanism that makes them work. But the Telekinetic Effect allows us to explain this mechanism also.

Independently of the above experiments which have been known for a long time, the author designed two groups of new experiments, which should confirm directly the action of the Telekinetic Effect. Both of these new experiments depend on the registration of effects of the "postulate of spontaneous heat exchange between telekinetically affected objects and the environment", described in the previous subsection.

The new experiments that confirm the action of the Telekinetic Effect must be completed in two stages. Firstly, it is necessary to find, and to check, a source of the Telekinetic Effect whose work can be repeated on request. (This source can be a person who on request is able to complete biological work of a telekinetic origin.) Only then can evidence of the thermal effects of such work be recorded.

Many investigators claim that laboratory research on telekinetic work is impossible to complete because of the lack of access to a telekinetic motion that can be repeated. But these investigators understand by telekinetic motion only a narrow class of the spectacular phenomena which is **called** "telekinesis" and in which objects are dislocated without being touched. As is known, this class of phenomena is extremely rare, and its reconstruction in laboratory conditions is very difficult. However, to date misunderstanding of the action of the Telekinetic Effect has caused these investigators to ignore a large body of phenomena, the mechanism of which **obeys the principles** of telekinetic motion, but which is commonly referred to by different terminology. In order to show the availability of telekinetic work through the utilization of these other phenomena, some more popular sources of the biological version of this work are listed below.

1. V-shaped divining rods bend telekinetically when searching for water. It should be mentioned here that the operation of such rods may be based on two different principles, i.e. involuntary (physical) motion, and telekinetic motion. Therefore it is vital for an investigator to be able to distinguish between them. The rods that utilize only physical motion are prepared as resilient rods loosely inserted inside rotary handles and held in a state of unstable equilibrium during searches. After finding water these rods are physically thrown out of balance as the result of involuntary movement of the dowser's hands. The second type of

rods, the operation of which utilizes the Telekinetic Effect produced by the dowser's mind, are usually prepared as flat forks. Frequently old clock springs, whale bones, or fork branches are used for this purpose. During the search they are held firmly in the diviner's hands and visibly bend downwards (females dowsers usually bend them upwards) after water is detected. People who use this second type of rod possess a well developed telekinetic capability. Usually they are also able to telekinetically move other objects such as the needle of a compass, the pointer of an amperometer, etc. After appropriate training they should even be able to shift small material objects along plain surfaces.

2. All paranormal phenomena involving motion, such as levitation, psychokinesis (telekinesis), bending spoons with the power of the mind, poltergeists, supernatural apparitions, ghosts, etc.

3. The paranormal activities of hypnotized people (e.g. the stiff horizontal suspension on a single support), or people in a state of deep meditation, religious trance, euphoria, etc.

4. Healing. The majority of effective healing activities involve telekinetic (psychokinetic) work conducted by the healer on parts of the body. The work completed during such healing sessions must also satisfy the postulate of spontaneous heat exchange between the objects affected telekinetically and the environment. Therefore this work is able to be recorded with the same methods and devices as that completed during any other telekinetic motion.

It is worth stressing here that the methods of recording and measurement of telekinetic works which are described in this monograph, also make possible the simple measuring of the efficiency of a healer through the determination of the capacity of his/her thermal output. This in turn allows us to distinguish easily between those people who have real healing capabilities and those who only declare they have such capabilities. Therefore, one of the effects of the theory described in this monograph is that it can open the way for verification with instruments of the efficiency of healers. Thus it can lead to future licensing of healing practitioners, and even establishing some kind of registration, categorization, and certification.

5. Selected demonstrations by some professional magicians (especially of Gypsy or Indian origin). There are magicians who have mastered the ability to cause telekinetic motion on demand, and can use this ability during the performance of some very spectacular shows. Frequently they demonstrate the non-destructive penetration of the human body by sharp objects, similar to that done by some healers during bloodless surgery (e.g. drawing nails through hands, pushing knives through corpses, etc.), or the penetration of one physical object by other objects. But there are also magicians who can demonstrate levitation, shifting objects without touching them, changing the properties of objects (e.g. the stiffening and raising of ropes), etc.

The majority of the sources of telekinetic motion listed above are able to produce the Telekinetic Effect on request. Therefore, these biological sources can repeat the supply of such motion frequently enough to be used for experiments conducted under laboratory conditions.

Independently of the biological sources of telekinetic work, there are also available sources of the technological version of this work. The most accessible of such sources are:

6. Telekinetic power-stations as described in subsection C5.1.1 and monograph [6], or their main components (e.g. spinning magnetic discs with brushes collecting current from them). Popularly they are called also magnetic generators of free mechanical energy or "free energy devices" - see subsection C5.1 and D6. They provide a telekinetic motion without any external energy supply. If such a device is available, it can be used for registering the extraction glow.

7. Vehicles of other civilizations operating in telekinetic convention - see chapters J and

O, as well as Telekinetic Personal Propulsion of these civilizations - see subsection P2.

Therefore, where such devices are repetitively accessible, it is possible to utilise them to confirm the action of the Telekinetic Effect.

The first group of experiments that confirm the action of the Telekinetic Effect depends on the creation of a telekinetic motion and a subsequent recording of extraction glow. To complete such experiments, the author found a few subjects capable of biological telekinesis, and he then photographed objects moved by them telekinetically. In the majority of cases his photographs actually recorded the presence of the extraction glow. But because of the small telekinetic work completed by his subjects, the results obtained are not spectacular enough to be presented in this publication. However, in various publications on topics that involve the sources of telekinetic motion listed above, numerous photographs - taken by other experimenters - are presented. Many of them register the extraction glow of a much more spectacular intensity than the author's. An example of these, representative of the wealth of photographic evidence already published showing the extraction glow, is contained in **Figure C1**.

In cases of extremely intensive action of the Telekinetic Effect, the extraction glow is so strong that it can be seen by the naked eye. A Polish healer, Wojciech Godziszewski (ul. Szczecińska 2 C, 72-003 Dobra Szczecińska, Poland), during his healing sessions sometimes induces such a glow clearly visible upon the subject's temple. Another example of such a case is described on page 32 of the book **[2C3]** by David St. Clair, "Psychic Healers" (Bantam Books, NY, 1979, ISBN 0-553-02056-0). Here is the relevant quotation describing the effects of a telekinetic healing:

"I have been in many 'psychic' places and seen many 'psychic' things, but I was not prepared to see a current of light run down Cassidy's arm and into my friend's body. I was not prepared to see his body light up like a white neon tube and stay that way while I rubbed my eyes, glanced around the room to see if other things were glowing".

The second new experiment designed by the author to document the action of the Telekinetic Effect is the recording of a temperature drop caused when conducting telekinetic work. In order for the experiment to be successful, this work should not have a cyclical nature. For example, it cannot be the repetitive bending and releasing of a V-shaped divining rod, or the utilization of a short-circuited rotor from a telekinetic generator. The reason why cyclical telekinetic work cannot be used for such an experiment is that its total balance of thermal energy transfer is equal to zero. This means that the heat absorbed in the first half of the cycle is then released in the second half of the same cycle. A good illustration of this simultaneous absorption and release of heat is an example of the telekinetic generator whose circuits have shorted. The rotor of such a telekinetic generator absorbs the heat from the environment to produce an electric current. But the flow of this current through the generator's circuitry (being short out) causes the simultaneous production of the same amount of heat, which is then returned back to the environment. Thus the total thermal balance of such a generator is equal to zero.

Unfortunately, the majority of the sources of telekinetic work listed before displays a cyclical character. Therefore, the necessity for elimination of cyclical works from this experiment introduces a significant drawback that limits the capabilities of experimenters noticeably. Thus, the person conducting such an experiment must either somehow cause the cyclical work to be converted into non-cyclical work, or limit the experiment so that it uses solely the non-cyclical sources of telekinetic work. The conversion of cyclical work into non-cyclical work represents a more difficult task, but it can be achieved. For example, for a telekinetic generator this requires the transmission of its output into another room, where the

electric current needs to be converted into heat (e.g. through the connecting of the generator to an electric heater).

The first success in the experimental recording of the drop in temperature caused by the completion of telekinetic work was achieved by Werner Kropp of the WEKROMA Laboratory (Via Storta 78, CH-6645 Brione s/M, Switzerland). His experiment used telekinetic healing to supply non-cyclical telekinetic work. The measurement depended on the completion of such work and subsequent photographing of the space where this work was conducted, with a highly sensitive thermovision camera. In the results of his experiments, Werner Kropp has documented that the telekinetic work causes a significant fall of temperature, in his case reaching 3 degrees Celsius. An example of the results he obtained is shown in **Figure C2**. Although his experiment may appear simple in comparison with spectacular demonstrations by, for example, nuclear physicists, it is an important breakthrough for the extraction of free energy from the environment. This is because his experiment clearly illustrates the thermal consequences of the telekinetic work. It also documents the new approach to experiments in telekinesis that eliminate the zeroing balance of works completed cyclically. Moreover, it shows the direction to the results for those wishing to commence objective research with instruments on human telekinesis.

It is commonly known that we are convinced sooner by the results of experiments conducted by ourselves. As the simplest experiment documenting the action of the Telekinetic Effect requires only a source of telekinetic work, a camera, and a photographic film sensitive enough to register a faint extraction glow, the author invites every reader to repeat his experiments, and to personally verify the statements from this subsection.

C4. Technological activation of the Telekinetic Effect

According to the Concept of Dipolar Gravity, the Telekinetic Effect can be activated (released) in a technological way through the acceleration or deceleration of magnetic fields (see subsection C2). All objects fully submerged into such accelerated fields experience a telekinetic drive which causes them to telekinetically move in the direction of the effect's action.

At the present stage of research, the action of the Telekinetic Effect so released can be described only partially, mainly covering linear accelerations and centripetal accelerations of rotating discs. So far, it is established as follows:

1. The Telekinetic Effect is a fundamental primary phenomenon, whose action is manifested in all cases of acceleration or deceleration of magnetic fields.

2. This effect releases elementary telekinetic drive P whose action is uniformly spread over all matter (including elementary particles, whole atoms, molecules, and entire material objects) contained within the range of the accelerated or decelerated magnetic field, independently of the magnetic or electric properties of the objects formed from this matter. Note that the term "telekinetic drive" is used here to define the capability of the Telekinetic Effect to induce motion. Therefore during telekinetic motion, the "telekinetic drive" is equivalent to a "force" which causes a physical motion.

3. The elementary telekinetic drive P produced by this effect demonstrates all the attributes of the telekinetic interaction, especially: (A) it does not produce the reaction forces which would return back onto the object that released the Telekinetic Effect; (B) the consumption of energy for the work completed by this drive is satisfied through a spontaneous absorption of thermal energy contained in the environment. Thus, the work of the drive P is not completed at the expense of energy supplied by the object that released the

action of the Telekinetic Effect. (This (B) attribute makes the elementary telekinetic drive P to become an active reversal of frictional passive forces.)

4. The direction of elementary telekinetic drive P, according to the theoretical deductions which utilize the symmetry rules expressed by Tables B1 and C1, should coincide with the direction of an active acceleration "a" and should point opposite from the vector of inertial force.

For **linear accelerations**, the direction of this telekinetic drive P in fact coincides with that direction deduced theoretically. For such accelerations the drive P acts along "a", thus making the analysis of the Telekinetic Effect quite simple.

However, for the **centripetal accelerations**, the direction of this drive differs in reality from that deduced theoretically. Analysis of the behaviour of electrons in the N-Machine suggests that this direction is a complex function of a minimum of three vectors: V, a, L. (It is possible that this direction also depends on the local vector of the magnetic field gradient). The direction of elementary drive P determined empirically in this manner is shown in **Figure C3**. The vectors influencing this direction are as follows:

- "V" represents the vector of the linear speed of a given fragment of spinning matter at which the telekinetic drive P is released,

- "a" is a vector of the active acceleration or deceleration that a given magnetic field is subjected to. Active acceleration (deceleration) is understood to be any acceleration (deceleration). The word "active" is only added here to stress that the direction of this acceleration (deceleration) is opposite from the "passive" direction of inertial forces produced by the action of this acceleration (deceleration). To explain it more clearly the following example is used. In centripetal acceleration, passive inertial forces act outwards. Thus the vector of active acceleration is directed inwards. The same inwards direction should also display the drive P.

- "L" is a vector that describes the local direction of magnetic field force lines. This vector is tangential in each point to the local course of force lines of a magnetic field. Its direction is such that each force line leaves the south magnetic pole and submerges into the north magnetic pole of a particular magnet. (At this point it is worth stressing that because of the author's interest in the magnetic propulsion systems of flying vehicles, his notation of magnetic poles is designed so as to facilitate the analysis of such systems. Therefore in all his publications, the N magnetic pole is the pole that prevails on the north geographic pole of Earth, and also the pole of a magnetic needle tip pointing south - see subsection G5.2).

The difference between the theoretical and experimental directions of the drive P for centripetal accelerations, highlighted above, may result from the limiting of findings to date to the description of the behaviour of electrons inside spinning objects. (Electrons are lightest observable objects available freely thus their telekinetic motion is most easy to induce and to measure.) As it was determined in various experiments, electrons also spin. Therefore, except for the drive P, their behaviour can be controlled additionally by gyroscopic momentums of their own rotations as well as the rotations of the objects through which their telekinetic motion occurs.

5. The maximal value of the drive P which acts at a given material object of a volume "U", seems to be proportional to the acceleration or deceleration "a" of a given magnetic field, and the local density "g" of magnetic energy: $P_{max} = C \cdot a \cdot g \cdot U$.

The exact working out of the Telekinetic Effect is very difficult and encounters numerous obstacles. The most important of these obstacles are: (1) the complexity of the effect itself, (2) its close coexistence with a number of electromagnetic and mechanic effects of the first generation from which it is difficult to be separated, (3) the prejudices that contemporary

scientific establishment shows towards telekinetic phenomena. In spite of these obstacles, research is progressing continually. To date, the history of its investigations seems to indicate that the Telekinetic Effect is one of the greatest challenges imposed on our science by the forces of nature. On the other hand, the type of benefits that this effect promises makes its mastering also one of the most important bequests that scientists of this century can present to future generations.

The research on the technological version of the Telekinetic Effect has only just started. So far there is almost nothing known about the action of this effect caused by pulsating magnetic fields. Thus as this research progresses, the information provided in this subsection will be updated and made more general.

C5. Technical utilization of the Telekinetic Effect

In the same manner as the discovery of electromagnetic phenomena allowed to gradually build up the present technical advancement of our civilization, also the recent discovery and future utilization of the Telekinetic Effect will further revolutionize our technical environment in all energy and propulsion related areas. It is easy to predict that there are two areas in which the utilization of the Telekinetic Effect will have the largest impact at our civilization. These are: energy production, and means of transportation.

C5.1. Utilization of the Telekinetic Effect for the production of energy

To illustrate the application of the Telekinetic Effect for the future evolution of **energy production** devices, the author constructed a corresponding Periodic Table which is shown as **Table C1**. This Table includes only those power producing devices whose operation utilizes various forms of motion. The motion in these devices is a kind of "catalyst agent" which absorbs the external energy, transfers it through various stages of conversion, to finally pass to an output medium. Thus, Table C1 does not include all devices that produce electricity by various static principles, e.g. through the implementation of chemical, photo, or radioactive phenomena. For each type of these static devices it is necessary to construct separate Periodic Tables.

The Periodic Table C1 contains the names of all important power producing devices. These are listed at the cross points of the rows and columns. The placement of a particular device in a given row indicates the attributes of motion utilized in its operation, and thus also the generation (or the level of advancement) to which this device belongs. The placement of a device in a given column indicates the general category of devices to which it belongs, thus it also shows the technological implementation of its principles of operation. The empty boxes in this Table show the gaps which still exist in our inventions of these devices. The location of these empty spaces (i.e. their row and column) informs about principles of operation of those devices not yet invented.

The horizontal broken line inserted into this Table shows the level of technology in power producing devices achieved to date. This line separates the devices which our civilization has already completed (see all the devices listed below the line), or is able to complete, from all those devices whose operation still needs to be learnt through the discovery and investigation of new phenomena. The devices named below this line already exist, whereas those named above it will be completed in the future. It is worth noticing that

there are empty boxes below the broken line. Such spaces indicate that the appropriate phenomena which are required for the completion of these devices are already known, but the lack of demand for the application of such devices has caused their invention to be unnecessary or delayed for some unspecified time.

In the left section of the Periodic Table, inside the thick lines, details of the energy producing phenomena that are utilized by devices from a particular row (generation) are defined. This column is further sub-divided into three sub-columns which describe: (1) the energy carrier utilized by the devices listed in the rows on the right, (2) the generation number to which these devices belong (the higher this number, the more advanced the device), and (3) the attributes of motion, which are utilized for the operation of devices listed in the rows. As with the elapse of time all three items described above move into their higher levels, this column also represents the time axis of the Periodic Table.

Examination of the time axis from the Periodic Table shows that the power producing devices utilize three energy (motion) carriers: (1) mechanical motion, (2) flow of gases or fluids, and (3) motion of magnetic fields. For each of these energy carriers three subsequent generations of the power producing devices are built. Each of these generations utilizes a different set of attributes of a motion. The first generation utilizes only a steady motion or a flow. The second generation utilizes a motion of the energy carrier as well as its acceleration or deceleration. Whereas the third generation utilizes a motion, an acceleration, and an internal energy reserve (e.g. compression, heat, etc.).

In the row within thick lines at the bottom of the Periodic Table, the categories of the devices listed in each column are named. These describe the technological implementation of the principles of operation utilized by devices from each column, including the main output of their work. Because of this operation, five separate categories of power producing devices can be distinguished. In this monograph they are called: (1) motors, (2) generators, (3) aggregates, (4) electrostatic machines, and (5) cells or batteries. All of them together carry also a more general name "power stations".

Amongst numerous types of power stations so-far developed by our civilization, the direct connection with the topic of this chapter have devices called "telekinetic power stations". Let us now learn more about these unusual devices.

The rocketing prices for fuels and energy, diminishing natural resources, pollution of the environment, holes in the ozone layer, the glass-house effect, and a few other reasons motivate pioneer research on unique telekinetic devices to be advanced in a number of countries. These new devices popularly are called "free energy devices", whereas in this monograph they are referred to as "telekinetic power stations". The general purpose of these devices is to employ the Telekinetic Effect in order to **extract energy contained in the environment**, and to convert this energy into a useful form (most frequently into electricity). Thus the operation of these new devices is drastically different from that of present sources of power. As is already known, present power supply devices utilize the difference (gradient) between two energy levels. Through causing a flow of energy from a higher to a lower level, they re-direct a part of this flow, and subsequently force it to convert into a useful form (e.g. into electricity). But the operation of free energy devices does not require differences in energy levels. They simply spontaneously absorb thermal energy which is always present in the environment, and then just transform this energy into a consumable form (e.g. into electricity). Therefore the use of these new devices does not depend on the availability of any external fuel or energy supply, such as combustible substances, wind, water flow, muscle power, electricity, etc. In this way the final outcome of free energy devices is very close to that implied by the ancient idea of "perpetuum motion", although the mechanism and philosophy behind

achieving this outcome is entirely different (i.e. free energy devices do not create energy as this was assumed for "perpetuum motion", but they simply "tap" vast amounts of energy always present in the environment, and thus absorb it by operating as a kind of self-sustainable heat pump).

According to common opinion, the operation of such free energy devices should not be possible because they would appear to run against the Conservation of Energy Principle. Fortunately their inventors have disagreed with standard beliefs and continued their research. After the first prototypes of these devices were built, common opinion was again proved to be wrong - like so often before. The completion of free energy devices turned out possible, and their operation doesn't contradict the Conservation of Energy Principle. The detail overlooked by those who disagreed was that these devices do not "create" energy - they only extract it spontaneously from the environment, due to the action of the Telekinetic Effect. Therefore, they produce electricity during their operation, but at the same time they also decrease the environmental temperature.

To illustrate the current state of these free energy devices, the most representative of them will be briefly described in the subsection to follow.

C5.1.1. Review of the main types of telekinetic power-stations built so far

A number of prototypes of telekinetic power-stations have already been completed by dedicated inventors who arrived at their construction empirically. But so far there has been no theory which would explain the operation of these extraordinary devices. This has made their improvement and manufacture difficult, and it has also impeded formal recognition of these devices by the scientific establishment. Only after the formulation of the Concept of Dipolar Gravity and the introduction of the Telekinetic Effect, was such a theory created. Its existence allows for the rational explanation of the principles of telekinetic power-stations, and formulates a theoretical foundation that allows for the systematic improvement of these devices.

During the analysis of subsequent telekinetic devices it is worth noticing that although these devices are designed to produce electrical energy, their structure and operation are typical for mechanical (not electrical) machinery. Such an apparent contradiction results from the fact that at our level of knowledge, the release of the Telekinetic Effect requires the motion and dynamic interactions of parts in a complex mechanism - i.e. the phenomena studied by mechanical engineers.

Prototypes of telekinetic power-stations which are already completed will now be presented. Their discussion commences with a **motor** called the "Permanent magnet motor". This motor was invented by Howard Johnson (P.O. Box 199, Blacksburg, Virginia 24060, USA). Historically, it is considered to be the first operational telekinetic motor ever completed on our planet. Its design and operation are published in article [1C51.1] by Jorma Hyypia, "Amazing Magnet-Powered Motor", Science & Mechanics, Spring 1980, pages 45-48 and 114-117. This motor is subject to USA patent no 4,151,431. According to reports, its efficiency slightly exceeds 100%. Thus, once started, it sustains its operation until intentionally held back or until its mechanical parts wear out. But the excess of its output power is still too small to be useful. Therefore, its significance lies in proving that the construction of telekinetic devices capable of self-sustaining their own motion is feasible, whereas the energy produced by this motor hasn't any practical application.

The general design of the Johnson motor is shown in part (a) of **Figure C4**. The original design of this motor contains only two relatively moving parts - marked as (1) and (3) in Figure C4. (The introduction of the third part, marked as (2), is proposed by the author to explain ways of increasing the efficiency of such motors). The stator (3) contains a set of small magnets located in equal distances from one another. Above the stator (3) magnets of the Telekinetic Effect activator (1) move in the direction "V". The shape of magnets (1) is vital, i.e. they must be a half-moon or banana shape. The proportion of dimensions of both groups of magnets, i.e. (1) and (3), is also vital.

The operation of the Johnson motor, explained by three subsequent stages of release of the Telekinetic Effect, is also illustrated in Figure C4. Parts (a), (b), and (c) of this Figure show three successive positions that the activator (1) takes in relation to the stator (3). The thick closed line passing through magnets (1) and (3) represents the path of the magnetic circuits (force lines) that join both of these parts. The operation of this motor begins with stage (a) in which magnetic circuits are in an equilibrium position. But the inertial motion of the activator (1) in the direction "V" causes these circuits to jump into the position shown in part (b) of this Figure. During such a jump, the magnetic circuits are accelerated. This acceleration releases the telekinetic elementary drive "P". A small fraction of this drive acts also at both ends of the magnet (1), providing them with an impulse that sustains the motion "V". The special shape of the magnet (1) causes it to intercept part of the telekinetic drive released by the motion of this magnet. The jump and acceleration of magnetic circuits extend until stage (c). Further motion of the activator (1) in the direction "V" causes the final return to the equilibrium position already described in part (a). Then the whole cycle of the operation is repeated.

After an analysis of the Johnson motor it becomes obvious that the greatest value of the elementary telekinetic drive P' is released just above the magnets of the stator (3), where the acceleration of magnetic circuits is the largest. This indicates that the efficient telekinetic motors should contain not less than three relatively moving parts, i.e. a stator (3), a Telekinetic Effect activator (1) and a rotor (2). In such a three-part motor the mutual interactions between the stator and the field activator are only to release the Telekinetic Effect. But the impulse of elementary drive P' of this effect is intercepted by the rotor, which then feeds a part of the impulse just received back onto the activator - to sustain its motion.

This shows why the main drawback of the Johnson motor is its low efficiency. It results from the use of only two relatively moving parts instead of three. The activator (1), that normally should release only the Telekinetic Effect, in this motor also tries to intercept its driving impulse. Of course, because of its inconvenient location, it intercepts only a small fraction of the telekinetic drive that it releases. Moreover, the part of the drive intercepted during the acceleration of magnetic circuits is then eliminated by an opposite drive intercepted during the deceleration of the same circuits. This drawback can easily be eliminated through the introduction of a segmented rotor (2), placed between the activator (1) and the stator (3) - as is marked in Figure C4 by a broken line. The rotor (2) would spin at a speed at least two times greater than that of the activator (1), and would be joined with mechanical gears. During the operation its blades would always appear in the place of the strongest telekinetic drive P', and disappear from the area of the opposite action of the Telekinetic Effect. The use of a rotor for the interception of the telekinetic drive would also simplify the design of this motor. This is because the activator (1) would not then require magnets of a special shape. It is worth mentioning here that the spinning of the rotor (2), could also be used for the generation of electric power in a manner similar to that used in the N-Machine. Thus the appropriate design of this rotor could transform the telekinetic motor into a telekinetic aggregate.

While discussing the Johnson motor it is worth noting that its inventor was unaware of the existence of the Telekinetic Effect, therefore he explains the operation of this device in a different manner. According to his explanation, the continuous motion of this motor is the result of an imbalance between the magnetic attraction and repulsion taking place in opposite directions. Of course this explanation does not say why his motor requires the initial starting impulse of the motion (for its operation caused by such an imbalance should be able to start on its own). Also such an explanation eliminates the justification for a third moving part, thereby giving no theoretical clues as to how to improve the efficiency of this device.

Out of all magnetic power-stations of the second generation, telekinetic motors are the subject of inventive activities of the highest intensity. The development of various versions has been carried out by numerous inventors in a number of countries. But all these devices are still in the research and development stage. A lot of publicity was received by a telekinetic motor invented by Ulrich Schumacher (Ulrich Schumacher KG, Sperbersloher Strasse 564, D-8509 Wendelstein, West Germany).

The operation of the next category of telekinetic devices will be explained with an example of a **generator** called the "N-Machine". A photograph of this generator is shown in **Figure C5**. The N-Machine is the best known and the most investigated telekinetic device. The results of its operation, and also all of its technical details, are available to interested people. Actually, the N-Machine is so far the only telekinetic device known to the author whose vital technical details are not kept confidential. The inventor of the N-Machine is Bruce DePalma, an investigator of free energy devices, presently recognized as the leader in the scientific approach to the extraction of energy from the environment. The current developmental research on the N-Machine is conducted by the DePalma Energy Corporation (1187 Coast Village Road #1-163, Santa Barbara, CA 93108, USA) in cooperation with the Indian Nuclear Power Board, Karwar, India. Detailed descriptions of this generator are contained in reports prepared and disseminated by the DePalma Corporation (e.g. [2C5.1.1]). Video tapes that demonstrate its operation can also be purchased on request, or it can be examined in the laboratory of the DePalma Corporation. The prototype of the N-Machine, which has been investigated in detail, has about 1 meter in length and 0.4 metres in diameter. Its weight is around 400 kilograms. Its output reaches 2480 Watts (i.e. 800 A x 3.1 V) of a direct current (DC), for the input rotations of about 2600 rev/min.

A diagram of the N-Machine is shown in **Figure C6**. The most important part of this generator is a solid, bronze rotor (2) assembled on a rotary shaft (1), and consisting of permanent magnet segments (3). In the prototype shown in Figure C5, a NdFeB permanent magnet is used, which has the shape of a ring 212 mm long and 330 mm in diameter. It produces a field of about 6750 gauss. The electrical energy produced in the rotor (2) is collected by brushes (4) and (5), which transfer it to an output collector (9). At the end of the shaft (1) a belt transmission (6) is located. The rotor (2) is supplied with the required rotational speed "n" via this transmission (6) and the shaft (1). The speed "n" is produced by the propelling motor (7). The electric current is passed to the motor (7) from an input collector (8).

The operation of the N-Machine is based on an old empirical discovery in 1831 by Michael Faraday. He discovered that the spin of a conductive magnetic disc creates a difference of electric potentials between the peripheral and the centre of this disc. But the origin of this difference was satisfactorily explained only after the Telekinetic Effect was discovered. Therefore, the operation of the N-Machine will be presented in the light of the action of this effect.

In the DePalma generator, a motor (7) produces the rotary motion "n", and supplies this

through a belt transmission (6) and a shaft (1) to the rotor (2). The fast spinning of the bronze rotor (2) produces the centripetal acceleration that acts at the force lines of a magnetic field yielded by the magnet (3). This acceleration releases the Telekinetic Effect whose drive P begins to act upon the free electrons contained in the bronze rotor (2). Subsequently, this P drive causes the dislocation of these electrons and the formation of a difference of electric potentials between the brushes (4) and (5). This difference amounts to about 1.216 V for each $n=1000$ rev/min. The brushes (4) and (5) are connected to the output collector (9) which passes on the current produced for use. After the short-circuiting of the outer connections, the present prototype of this generator produces power of about $W_o=800A \times 3.1V$.

DePalma's experiments determined that there is a critical density of the magnetic field which saturates the bronze rotor. Below this critical density, the increase of a magnetic flux supplied to the rotor increases proportionally the electrical output of the generator. But above this critical density, the increase of the field does not cause an increase in the output. It seems that such a saturation results from the number of free electrons which exist in a given volume of bronze, and which can be shifted by the Telekinetic Effect. This critical density can be easily achieved through the application of permanent magnets.

At the present level of development of the N-Machine, some technical obstacles still exist which hold back its commercial use. These obstacles are caused mainly by problems with the effective utilization of the generator's output for a self-supply of its own energy consumption, i.e. the consumption of energy by the electric motor that provides the rotations necessary for its operation. The successful solving of these problems requires further experiments and research. The most difficult aspect of these problems is that the Telekinetic Effect is able to create only about 1.216 V for each $n=1000$ rev/min of the rotor. Thus the entire power of the N-Machine is contained in its Amperes, not in its Volts. On the other hand, designs of highly efficient electric motors require the input voltage of about 24 V. Therefore a commercially viable N-Machine needs to be able to produce at least this high voltage.

The DePalma team tried to resolve this problem through the use of two rotors on a common shaft, and their subsequent connection in a series. But after the building of such a prototype, it turned out that the magnetic field from one rotor interferes with the operation of the other, and vice versa. Moreover, the additional electric current which is forced to flow through a given rotor, but which originates from the other rotor, releases a number of electromagnetic effects of the first generation. These first generation effects (e.g. a right-hand rule, Lorentz force, Hall effect, etc.) increase the drag (friction) of the generator and neutralize the action of the Telekinetic Effect. It appears that the only way to resolve the low voltage problem in the N-Machine is to complete a pilot research on the Telekinetic Effect first, and only after this, to implement the findings obtained. The difficult part of this problem is how to release the Telekinetic Effect so that it is not accompanied by any other electromagnetic effects of the first generation. There is the possibility of such segmentation and serial connection of the rotor, so that the shape of subsequent segments exactly corresponds to the direction of telekinetic drive, whereas their capacity corresponds to the output of this Effect.

Soon after the completion of one of the first prototypes of the N-Machine, a group of experts several times measured precisely the overall efficiency of the DePalma generator. This first crude prototype, in the most unfavourable conditions, had an efficiency amounting to 104.5% of the total energy input to the electric motor that supplies rotational speed "n" to the generator - see **[2C5.1.1]** "Report on the Initial Testing Phase of N-1 Electrical Power Generator", DePalma Energy Corporation Report #1, 6 January 1988, page 6. The results obtained by DePalma encouraged other investigators to repeat his findings. All three investigators who made their results available (Trombly, Tewari, Kincheloe) confirmed the

achievement of a similar level of the generator's overall efficiency [2C5.1.1].

One of the reasons for the low commercial viability of current telekinetic devices is that they must cooperate with the devices of the first generation, while they themselves belong to the second generation. For example, the Johnson motor requires a generator of the first generation to convert its mechanical output into electricity, whereas the DePalma generator requires a motor of the first generation to feed it with the motion. This draws us to the obvious conclusion that the overall efficiency of telekinetic power-stations can be increased in a simple way through the coupling together of two devices of the second generation. In this way more than 100% efficiency of the telekinetic generator would add to a similar efficiency of the telekinetic motor, significantly increasing the excess of overall efficiency. Even better results would be achieved when the operation of both of these devices could be combined inside a single device. In this way a telekinetic **aggregate** would be achieved in which two separate Telekinetic Effects would produce simultaneously: (1) the motion required for the operation of this device, and (2) the electricity representing its output. In such an aggregate the energy loss from friction would be reduced to half of the losses from the separate motor-generator devices. Therefore its efficiency would also increase about two times.

An example of an aggregate already in existence is a telekinetic **electrostatic machine** called the INFLUENZMASCHINE. Its photograph is shown in **Figure C7**. The invention of the INFLUENZMASCHINE is attributed to a Swiss clock-maker, named Paul Baumann. In 1978 he constructed the two first such machines for the direct current, called TESTATICA, which presently are owned by the METHERNITHA religious community (CH-3517 Linden near Bern, Switzerland). The newest (improved) models of this machine are called THESTA-DISTATICA. The developmental work on the adoption of this free energy principles for purposes of commercial manufacturing is conducted by the other group called VENE (P.O. Box 1451, CH-3601 Thun, Switzerland). The name VENE originates from the abbreviation of the words: Vereinigung zur Erforschung natürlicher Energiequellen. Machines investigated by VENE differ from those by METHERNITHA, as they are designed to produce AC current. Therefore the output parameters of the VENE machines could be adapted to any requirements of the user through the application of transformers. The VENE group also works on the development of a telekinetic battery in which the electro-magnetic pulsations are achieved through the application of crystals.

The INFLUENZMASCHINE was initially built as a single-disc DC telekinetic device named TESTATICA, quite similar in design and operation to the Töpler's electrostatic machine. However, as a result of subsequent improvements, a second disc was added later forming the Wimshurst's like machine named THESTA-DISTATICA. The use of two discs allows for a cumulative replenishment of electrostatic charges, and also for employing the mutual interactions between both discs to sustain their relative rotations. Therefore the two-discs INFLUENZMASCHINE represents a telekinetic aggregate. The propelling mechanism of this aggregate operates like an electrostatic motor of the first generation. But its propelled mechanism operates like a telekinetic electrostatic machine of the second generation. Only two-disc aggregates are now produced by Methernitha.

A short description of the INFLUENZMASCHINE is published in **[3C5.1.1]**, the West-German magazine Raum & Zeit, no 34, Juni/Juli 1988, page 94. Its newest operational prototype (THESTA-DISTATICA) weighs about 20 kg. Discs of this prototype rotate with the speed of between $n=80$ to 40 rev/min. According to the developers' specifications, it produces DC current of up to 900 V and fluctuating power of up to 3 kW. The electric field between discs leads also to the strong ionization of air and to the production of ozone as a by-product of its operation. After initial starting by hand, discs of this device self-sustain their rotations. Thus,

the entire output from the INFLUENZMASCHINE represents an excess of free energy that already can be utilized for some consumption purposes. Therefore this machine is the first telekinetic aggregate in the world which is sufficiently effective for an instant commercial utilization. As such, this aggregate represents enormous profit-yielding potential. Thus, for understandable reasons, the developers of the INFLUENZMASCHINE keep secret its major technical details. The descriptions provided below do not originate from the developers of this machine, but they were reconstructed (or more strictly: re-invented) by the author on the basis of sparse information and photographs available to him.

Vital parts of the INFLUENZMASCHINE are described below (compare Figures C7 and C8). The most important parts of this machine are two parallel discs (d') and (d''), made of a good electric insulator (e.g. glass), both 55 cm in diameter, mounted coaxially close to each other on a common shaft, and rotating quickly in opposite directions (n') and (n''). To the external surfaces of these discs, 48 tin-foil electrodes with square perforations are attached (laminated). These electrodes are made of a magnetically neutral metal (e.g. bronze, silver, or gold), and are arranged concentrically towards the centre of each disc. Each single leaf of these electrodes is 19 cm long, and looks like a small ladder. In the front of the first disc (d') a small magnetic disc (d) is placed. The diameter of this disc is 12 cm. It holds a single magnet (m), utilized for the activating of the Telekinetic Effect. The force lines from this magnet pass through the disc (d') around its electrodes. Two powerful Leyden jars (L-) and (L+), whose outer coatings are connected with each other, have their inner coatings connected to the collecting combs (C-) and (C+), and the induction heads (H-) and (H+). The combs collect the electrostatic charges from discs and supply these to the Leyden jars. A user draws the output of this machine from two wires connected to the inner coatings of jars (L-) and (L+). The opposite sides of both discs are connected together by two fixed bridging wires (i) that end with little brushes of gilt threads. The INFLUENZMASCHINE also consists of a small belt transmission (a belt and four pulleys but working without a winch shaft) to secure the required directions and relative speeds of the discs' rotations.

The operation of the INFLUENZMASCHINE is illustrated in **Figure C8**. Because this operation is quite complex, in the case of someone having difficulty understanding it, the author recommends additional reading about the operation of the Wimshurst's electrostatic (influence) machine, whose models are utilized for discharges production in laboratories of almost every high school. The INFLUENZMASCHINE combines as many as five different operational principles in one device. These are: (1) the electrostatic induction of charges on electrodes of the front disc, (2) the electrostatic induction of charges on electrodes of the back disc, (3) the self-sustaining of the continuous rotation of discs, (4) the replenishment of electrostatic charges, and (5) the telekinetic compensation of losses by friction. Each one of these principles is explained separately below.

1. The electrostatic induction of charges on electrodes of the front disc (d') - see part (a) of Figure C8. Let us assume that the inner coatings of two Leyden jars marked as (L-) and (L+) are initially charged with negative (-) and positive (+) electricity. Thus, these charges also appear on the square induction heads (H-) and (H+) connected to these coatings. The heads are suspended close to each other above electrodes number (1') and (5'), but do not touch them. The presence of static electricity in heads (H-) and (H+) causes their repulsive and attractive interactions with the natural electric charges existing in the metal of electrodes (1') and (5'). As a result, opposite electrostatic charges of these electrodes will be separated into the opposite ends of the electrodes. Therefore, when the inner ends of the electrodes (1') and (5') are connected together with the fixed bridging wire (i'), the flow of charges must occur. This flow causes only positive (+) charges to remain on the electrode (1'), whereas only negative

(-) charges remain on the electrode (5'). Because the disc (d') is in a state of continuous rotation in the direction of (n'), after the electrodes (1') and (5') are so charged, the next subsequent couples of electrodes are charged in exactly the same manner. Thus, the head (H-), supported by the bridging wire (i'), charges positively (+) each electrode running under it, whereas the head (H+) in a similar way charges negatively (-) each electrode running under it. When the rotation of the disc (d') turns the first electrodes which are charged into a position underneath the combs (C-) and (C+), the electric charges of these electrodes will be collected and stored in the Leyden jars (L-) and (L+).

2. The electrostatic induction of charges on electrodes of the back disc (d'') - see part (b) of Figure C8. In exactly the same way, as with the front disc (d'), the back disc (d'') is also charged. In order to increase the communicativeness of the Figure C8, the back disc (d'') is shown here as having a larger diameter, although in the actual machine diameters of both discs (d') and (d'') are exactly the same.

3. The electrostatic sustaining of the rotation of both discs - see part (c) of Figure C8. The discs (d') and (d''), whose electrodes are charged electrostatically, represent together an electrostatic motor of the first generation. This motor transforms the electrostatic energy accumulated in its Leyden jars into relative rotations of both discs. Therefore, after the jars of this motor are loaded with electrostatic energy, it will continue the rotations until the entire energy is dissipated through friction.

The operation of the INFLUENZMASCHINE as an electrostatic motor of the first generation is illustrated in Figure C8 (c). In this motor, the relative rotations of both discs are produced by the mutual attraction of electrodes having unlike charges (e.g. the electrode (4') of the front disc attracts the electrode (5'') of the back disc, and vice versa), reinforced by the mutual repulsion of electrodes having like electrostatic charges (e.g. the electrode (5') of the front disc repels the electrode (4'') of the back disc, and vice versa). In the vicinity of electrodes numbers (1) and (5) the forces of these attraction and repulsion are oriented in such a manner that they propel the continuous rotations (n') and (n'') of both discs. In the part (c) of Figure C8, the forces which are significant for sustaining the rotations of both discs are shown as small vectors running between electrodes. The analysis of this Figure reveals that the more induction headings (H) a given machine has on both discs, the higher its propelling capability will be. Therefore, the real INFLUENZMASCHINE will use more than 2 headings per disc. It is also worth mentioning here that similar forces of electrostatic repulsion or attraction are in fact produced between each pair of electrodes. But the majority of these forces are insignificant for the operation of the motor described here. This is because they act in the directions which either neutralize each other's propelling action, or try to deform the discs (instead of supporting their rotations). The vectors of these non-significant forces are not indicated in Figure C8 (c).

4. The replenishment of electrostatic charges. If one analyses the mutual interaction between electrodes of both discs, than it becomes obvious that the motion of charges of one disc must produce an electrostatic induction of charges in another disc. Thus, a cumulative mechanism of electrostatic replenishment of charges is achieved. Because such a replenishment lies at the foundations of the operation of all of Wimshurst's electrostatic machines, its description will not be repeated here.

5. The telekinetic compensation of losses for friction - see part (d) of Figure C8. The principles described in items 1 to 4 above will cause that, after the initial hand-turning of the machine to load its Leyden jars with an electrostatic energy, the INFLUENZMASCHINE would continue its rotation until the energy accumulated in its jars is dissipated in friction. Thus, in order to rotate its discs forever, the operation of the machine must include also some

mechanism that restores the charges that are lost by friction. This mechanism is provided by a small rotating disc (d) with a magnet (m) attached to it. The magnetic field produced by this magnet penetrates the disc (d') and releases the Telekinetic Effect in it. This Effect forces a flow of electrons from the material of disc (d') to the electrodes of this disc. The principles of this flow are similar to those utilized in the N-Machine. Of course the small charges released by the Telekinetic Effect are then replenished in a cumulative manner by the electrostatic induction (see item 4 above). If the amount of energy produced in this manner is larger than the amount of energy lost by friction, the INFLUENZMASCHINE, once started by hand, will rotate infinitively, loading its Leyden jars with a continuous stream of electrostatic energy.

An interesting observation, concerning the exchange of heat with the environment by the INFLUENZMASCHINE, was reported by the chairman of VENE. It was noted that after inserting this aggregate in a thermally insulated box, it gradually lost its power and finally ceased working. This important observation leads to the confirmation that the gradual cooling of the environment was responsible for stopping the INFLUENZMASCHINE. It reveals that the efficiency of heat absorption from the environment for this aggregate must depend on the external temperature (the lower the environmental temperature, the less effective is the heat absorption by the Telekinetic Effect). Thus the aggregate should work very well in the tropics but rather poorly in the Antarctic.

The technical problems of the INFLUENZMASCHINE waiting to be solved are: (1) the production of a high voltage (even up to 900 V) accompanied by a small amperage (this problem seems to be a reversal of the problem with the N-Machine); (2) the significant instability of the output voltage, reaching around 200 V (or 25%), which leads to the fluctuation of the power supplied; and (3) the lack of a control mechanism that would adjust the parameters of output to the user requirements. Thus, in practice, the design of the INFLUENZMASCHINE still requires fine-tuning before its effectiveness, reliability, and stability reach the level of the present power producing aggregates of the first generation.

All of the power-stations described above use only a small portion of the Telekinetic Effect which they release. Moreover, they produce this effect mainly through inefficient centripetal accelerations caused by a spin of objects. Therefore, after more knowledge about the Telekinetic Effect is obtained, a significant increase in the efficiency of these power-stations will be possible. The utilization of two other, at present not well known, methods of acceleration of magnetic fields can greatly contribute to this increase. These are: (1) a dynamic crushing of magnetic fields originating from a few different sources, and (2) the impulses (pulsations) of magnetic fields. Both these methods should release the highly effective Telekinetic Effect. In the case of the pulsating fields, the utilization of this Effect will also not require the presence of any moving parts. Thus such fields should significantly increase the efficiency of telekinetic work, as they would eliminate mechanical friction.

The utilization of pulsating magnetic fields for the release of the Telekinetic Effect will lead to the production of telekinetic **batteries**. Such batteries will not contain any moving parts. Their operation will depend on the replacement of mechanical motion by electromagnetic motion (i.e. the Telekinetic Effect in them will be released through the oscillations of magnetic fields that originate from electrical oscillations). Therefore their construction will resemble a cross between a transformer, oscillatory circuit, and a rectifier, rather than the mechanism of a contemporary motor or generator.

A number of inventors are presently working on various models of a telekinetic battery. Most of them seem to prefer keeping secret the details of the device being developed. But there is a person who has had a very open discussion with the author about her battery. She is an Italian developer, Mrs. Daniela Giordano, presently living in Sicily (I Cavalieri Di Pegaso,

Via Antonio Veneziano, 120, I-90138 Palermo, Italy). She calls her battery the "pyramid", as its external shape resembles that of Egyptian pyramids. Another battery the development of which also come to the author's attention is that of a Japanese inventor, Shinihi SEIKE (Space Research Institute, Box 33, Uwajima 798, Japan). His telekinetic battery is shaped in the form of a Tesla Coil coupled with appropriately synchronized oscillatory circuit. Its (very general and laconic) description is contained in his book **[4C5.1.1]** "The Principles of Ultra-Relativity".

* * *

At the present level of development, each one of the telekinetic devices described in this subsection still has an imperfection which delays commercial mass production. As we learn from the history of technology, the process of gradual elimination of such imperfections takes many years - see **Figure C9**. For example, from the time of the first experiments of Benjamin Franklin in 1745, until the completion of the first effective generator by Michael Faraday in 1831, almost 90 years elapsed. But the delay in the date of commercial utilization of the first device that effectively extracts environmental energy does not mean that the building of these devices is unfeasible. The telekinetic power-stations already built have proven that the idea of these devices is feasible, and that their successful utilization in everyday life is only a matter of time.

Further details concerning telekinetic free energy devices are contained in a separate monograph marked as [6] in chapter S.

C5.2. Utilization of the Telekinetic Effect for transportation purposes

Where the utilization of the Telekinetic Effect for the **purpose of transportation** is concerned, from the point of view of the mutual positioning of the device which produces the Telekinetic Effect and the object being transported, two different means of transportation can be completed. These are: (1) the transporting beam, and (2) the Magnocraft of the second (and third) generation.

Re. 1. **The idea of the transporting beam** is based on the possibility of guiding the Telekinetic Effect, by passing the magnetic field impulses along the beam of a strong light (e.g. a laser beam). Such a beam of light would then perform the function of a "magno-duct", i.e. a straight and enclosed passage in space through which the magnetic impulses would propagate. The Telekinetic Effect directed in this way can make possible the future transportation (i.e. "beaming up") of people and loads over long distances, along channels made of light. The incoming utilization of such beams is already sensed by some writers and film makers who presented these beams in their futuristic books and movies. During this way of transporting, there will be no reaction force released to interact with the device producing the Telekinetic Effect. This in turn will enable a device of the size of a pocket torch to be held by a child and to lift huge machines, buildings, or rocks. As distance does not make a significant difference for this form of transportation, telekinetic beams sent from satellite stations or from the Moon will allow to transport into the orbit (or into the Moon) any object or person present on Earth.

Re. 2. **The Magnocraft of the second generation** become reality when our technology advances so much that it will be able to supply the Magnocraft's magnetic propulsors with the additional capability of producing the Telekinetic Effect. A new vehicle produced in this way is called here the Magnocraft of the second generation. It will be capable of telekinetic flights and manoeuvres - recognizable from a white extraction glow that will surround the flying vehicle. Because of the extraordinary properties of such telekinetic flights, this Magnocraft can also be

called a "Teleportation Vehicle". As this vehicle will totally revolutionize our means of transportation, the more comprehensive explanation of its operation and main attributes will be provided in subsection J1.

* * *

In the final statement it is worth stressing that all author's discoveries regarding the Telekinetic Effect were triggered due to the previous formulation of the Concept of Dipolar Gravity. For this reason in the chapter D to follow this important new concept of gravitational field will be outlined.

Table C1. **Periodic Table showing power producing devices** whose operation utilizes various forms of motion. Such Tables are very similar to "Mendeléeev's Periodic Table of the Elements", but instead of elements they list technological devices. Rows distinguished along the vertical axis of this Table define the subsequent attributes of the motion utilized in the operation of each successive generation of the power producing devices. This vertical axis also represents the elapse of time. Columns placed along the horizontal axis reveal the types of devices whose operation utilize each subsequent set of these attributes. Empty boxes in the Table indicate the devices still waiting to be invented. By analysis of the location of these boxes/spaces (i.e. their row and column) it is possible to determine the future operation and characteristics of power producing devices yet undiscovered.

Fig. C1. **An photograph showing an example of the "extraction glow"** emitted from the space just penetrated by a V-shaped divining rod bent in a telekinetic manner. Observation of this glow provides experimental proof for the existence of the Telekinetic Effect. Its emission results from the "postulate of spontaneous heat exchange between telekinetically affected objects and the environment". According to this postulate, the energy consumption of the objects moved telekinetically is satisfied through the spontaneous extraction (conversion) of thermal energy contained in the environment. In turn, such spontaneous absorption of heat must cause the rapid fall of electrons in the atoms from the affected area into their lower orbits. Quantum physics states that such a fall is always accompanied by the emission of photons. Therefore, the consequence of every telekinetic motion must be the emission of a faint glow from the matter surrounding the objects so moved. This glow is detectable by a sensitive photographic film as an "extraction glow". The most frequent subjects (and therefore also the most easily available for research) utilizing telekinesis are dowsers whose success in the search for water is indicated through the telekinetic bending of their V-shaped divining rods. The above photograph was originally published in the book **[1FigC1]** by Christopher Bird entitled, "Divining" (A Raven Book, London 1979, ISBN 354-043889, page 7).

Fig. C2. **The temperature change (drop) in the hands of a healer**, Mrs. Leuenberger, caused by her non-cyclical telekinetic work. The first experiment that registered this change was completed by Werner Kropp of WEKROMA Laboratory (Via Storta 78, CH-6645 Brione s/M, Switzerland). His method of recording depended on the use of a sensitive thermovision camera during her healing session. Three colour photographs of her hands, marked as (a), (b) and (c), were taken during the span of about 3 minutes, i.e. at 10:12, 10:14, and 10:15. During this time, the camera registered the temperature drop of the healer's hands as about 3° Celsius.

Fig. C3. A diagram that shows the direction of **an elementary Telekinetic Effect (P)** created by the spinning of a magnet "m" around the axis "x-x". For the situation shown on this diagram, this direction seems to be the vectorial sum of a centripetal acceleration (a), linear speed (V), and the local direction (L) of magnetic field force lines. However, the direction of the effect (P) reverses into a direction that is exactly opposite after the reversal of the direction "n" of the magnet's revolutions. Moreover, this direction also reverses, after the polarity of magnet "m" was reversed (i.e. after directing its pole "N" to the side where its pole "S" is now directed). The above shows that direction of the Telekinetic Effect (P) depends in a complex manner on the direction of vectors (V), (a) and (L), and does not represent only a vectorial sum of these.

(During the analysis of this diagram it should be noted, that because of the author's specialization in propulsion systems of flying vehicles, all his publications define "N" magnetic pole as the pole that prevails at the north geographic pole of Earth, or at the end of a magnetic needle pointed south - see also subsection G5.2).

Fig. C4. Three subsequent stages (marked a, b and c) of the **operation of the Johnson telekinetic motor**. A description of these stages is provided in the content of this treatise. The design and operation of the Johnson motor originally are published in article [1C5.1.1] and also are subject to USA patent no 4,151,431. In the original version, this motor contains only two parts, i.e. the stator (3) and banana-shaped magnets of the Telekinetic Effect activator (1). Its efficiency slightly exceeds 100%, thus hardly sufficing to cover the friction of its relatively moving parts. Therefore, an additional part has been added to this diagram, i.e. the rotor (2) that does not exist in the original device. The purpose of this rotor is to absorb more efficiently the elementary drive P' of the Telekinetic Effect. The rotor (2) can also be used for the generation of an electric current (similarly to the rotor from the N-Machine) thus transforming the Johnson motor into a telekinetic aggregate.

Fig. C5. **A photograph of the operational prototype of a telekinetic generator called the "N-Machine".** This generator was completed by Bruce DePalma, and is being developed by the DePalma Energy Corporation (1187 Coast Village Road #1-163, Santa Barbara, CA 93108, USA) in cooperation with the Indian Nuclear Power Board, Karwar, India. The overall efficiency of the prototype of this generator, which is already operational, is 104.5%.

Fig. C6. A diagram that illustrates **the design and operation of the N-Machine**. This DC generator consists of a shaft (1) made of conductive metal, on which a disc-shaped bronze rotor (2) is assembled. Inside the rotor permanent magnets (3) were placed which yield a field of about 6750 gauss. Brushes (4) and (5) collect the electric current which is produced and supply it to the output collector (9). The electricity supply to the propelling electric motor (7) is achieved via the input collector (8). This motor gives about $n=2600$ rev/min, which are transmitted through a belt transmission (6) and the conductive shaft (1) into the bronze rotor (2). The centripetal acceleration, caused by the spinning of this rotor, releases the Telekinetic Effect. The forces of this Effect act on free electrons present in the rotor (2), forcing them to flow towards the centre of rotation. The brush (5) touching the conductive shaft (1), and brush (4) touching the periphery of the rotor, collect the flow of current thus formed, and supply it for use.

Fig. C7. Photographs of the telekinetic aggregate INFLUENZMASCHINE whose operation is based on the principles of Wimshurst's electrostatic machine. Video recordings presenting this machine in operation are available from METHERNITHA (CH-3517 Linden near Bern, Switzerland). Its brief description is contained in an article published in the West-German magazine Raum & Zeit, no 34, Juni/Juli 1988, page 94. The weight of the operational prototype shown above (called the Thesta-Distatica) of this machine is around 20 kg. Its discs rotate with speeds of between about 80 to 40 rev/min. Developers report that it produces up to 3 kW of electric power (3kW is the power of the first, short-duration impulse) with a fluctuating voltage of around 250 V. A by-product of its operation is the ionization of the surrounding air and the production of ozone. Except for quick starting by hand, the continuous operation of this machine is self-sustained by its spontaneous absorption of heat from the environment, and thus it does not require any external supply in fuel nor energy. The INFLUENZMASCHINE is the world's first free energy device which at the present stage of its development is ready for some limited commercial applications.

Fig. C8. The operation of the INFLUENZMASCHINE with two discs, which produces a DC current, reconstructed (or rather: re-invented) by the author. Explanations of this operation are provided in the content of this treatise. Symbols: C+, C- = collecting combs connected to the inner coating of Leyden jars; d = a small disc containing a magnet (m) that is used for the release of the Telekinetic Effect; d' = front disc made of a good electric insulator (e.g. glass); d'' = back disc identical to the front (d') one (in order to increase the communicativeness of this illustration this back disc is shown as having a larger diameter); H-, H+ = square induction heads that electrostatically influence the machine's electrodes; i', i'' = motionless bridging conductors; L+, L- = two Leyden jars which collect electrostatic charges from the electrodes of both discs (users are plugged to the wires that are connected to the inner coatings of these jars); n, n', n'' = direction of the rotation of each disc; 1, 2, ..., 8 = numbers of the subsequent electrodes (this drawing shows 8 electrodes only, but each disc of the INFLUENZMASCHINE houses 48 separate electrodes); +, - = positive and negative electrostatic charges; ', '' = indexes that assign particular symbols to the front (d') or back (d'') discs.

- (a) Principles of the inducing electrostatic charges in the front disc.
- (b) Principles of the inducing electrostatic charges in the back disc.
- (c) The operation of an electrostatic motor that sustains the continuous rotations of the INFLUENZMASCHINE's discs.
- (d) Telekinetic generation of charges that restores their loss from friction.

Fig. C9. The evolution of a technical idea, from its conceptual formulation to a viable technological implementation. Around 130 B.C. Hero of Alexandria invented the aeolipile (eolipile), shown in part (a). It was as late as 1884 when an English inventor, Charles Algernon Parsons, built the first steam turbine in which the principles of the aeolipile are implemented efficiently enough to produce useful mechanical power - see part (b). The efficiency of current telekinetic devices is equivalent to that of the aeolipile. So before these devices become commercially useful, their efficiency needs to be transformed into the equivalent of that of steam turbines.

(a) The operation of the aeolipile. It utilizes only jets of expanding steam that escape from two hollow arms, thus not utilizing the energy of pressure, impact, and temperature of the steam. Because of the inefficient conversion of energy carried in the escaping steam, this device produces mechanical energy that scarcely covers its own friction. Therefore, the rotation of the aeolipile (similar to the motion of current telekinetic devices) only demonstrates the correctness of its principles, but cannot supply any useful power.

(b) Principles underlying the operation of steam turbines, demonstrated with only one of several cascade rotors. The blades of these rotors deflect the jet of steam, intercepting its inertial impact. In addition, as the steam passes between the blades, it expands and accelerates, propelling them with reaction forces similar to those formed in a rocket outlet. After the steam leaves a particular rotor, it is intercepted by the fixed blades of a stator and redirected to strike the next rotor. Thus, such a cascade conversion of the steam's energy in turbines is efficient enough to produce an excess of mechanical power that can be utilized.

Chapter D.

THE CONCEPT OF DIPOLAR GRAVITY

For centuries, generations of scholars and philosophers have tried to consolidate into one consistent body of knowledge all the diverse areas of human intellectual development such as science, religion, folk wisdom, rituals, beliefs, superstitions, etc. After centuries of failure, it seems that finally we are succeeding in this effort and that a common concept has been found which unites all directions of our intellectual progress. This consolidatory concept is called "the Concept of Dipolar Gravity".

Although it may take many years to be recognized and acknowledged, the present understanding of the gravitational field tolerates an enormous error. The deductions which reveal, document and neutralize this error, are formulated into a new theory of gravitational field called here the Concept of Dipolar Gravity. In general, the error depends on classifying gravity to an entirely wrong group of fields, i.e. monopolar instead of dipolar. If we correct the above error and classify gravity into the group of dipolar fields, then the entire view of the Universe will need to be verified. For example, the so-called paranormal phenomena will gain a gravitational explanation and thus parapsychology would need to be re-classified as a part of physics. Dipolar gravity will also indicate the existence of a second world (parallel to ours) which for centuries has been acknowledged by religion but which is still denied by contemporary science. The substance prevailing in this other world displays the capabilities of a "natural computer", i.e. it is able to think in its natural constitution. The existence of the other world filled with "thinking substance" turns the entire universe into a single huge "brain". This in turn introduces numerous philosophical and religious implications, some of which will be revealed in this chapter. Because in definition the Concept of Dipolar Gravity incorporates in itself almost all of the correct formulas and laws so far developed by various other disciplines (physics, astronomy, chemistry, biology, medicine, etc.), it can be considered to be the articulation of the "Theory of Everything" (TOE) searched by scientists and philosophers for so long. (The "Theory of Everything", similarly to the Concept of Dipolar Gravity presented here, also supposed to bound together, express, and contain in itself all aspects of human knowledge.)

The Concept of Dipolar Gravity was presented for the first time in 1985 in the treatise by the author [2F(d)] published in New Zealand. Since then it has been published in Poland [1F(c)], West Germany [1C], and published again in New Zealand [1]. The chapter that follows presents the fifth, updated formulation of this Concept.

The Concept of Dipolar Gravity is an entirely new physical and philosophical model constructed to explain the structure and operation of the Universe ruled by Dipolar Gravity. In this new concept our Universe consists of two separate worlds. The first of these is usually called here **our world**, but terms such as the world of matter, the world of hardware, or the converse world can also be used. The second one is called the **counter-world** (but other terms, e.g.: the world of intellect, the world of software, or the world of reverse images, can also be used to describe it). The world of hardware (our world) is the one which we experience every day with our five physiological senses. The counter-world is closed to our senses, but it can be investigated by our intellect and accessed by the mysterious ability called Extra-Sensory Perception or ESP.

The Concept of Dipolar Gravity does not represent one more purely speculative model

having no practical application, but it provides us with instant, various and strictly measurable benefits. For example it explains the principles of telekinetic motion and allows the building of technological devices which can utilize this phenomenon for the purposes of transportation and acquisition of free energy (see chapters J and C). It also reveals the natural source (i.e. the substance prevailing in the counter-world usually called "ether") of the absolutely correct and complete information on every material object that ever existed, exists or will exist in the entire Universe, and it provides theoretical foundations for developing various techniques (ESP, hypnosis, meditations, psychic healing, dreams) that allow us to access this information and to gain from it the various benefits applicable in every field of human activity.

As the research into dipolar gravity reveals, our civilization has exploited this natural source of information for centuries, collecting from the ether data on underground resources of water and minerals (dowsing), about the health of people and animals (healing), etc. But everything we have achieved in this field up to now is only an introduction. The Concept of Dipolar Gravity paves the way to developing further techniques which will provide far more significant benefits in the near future. For example, designers can gain from ether all the unknown technical details of their projects. Constructors may find the best parameters for their work, the best materials and the most useful technologies for their models. Inventors may validate and improve their ideas. All these possibilities could be extremely useful when applied to completely new technical concepts such as the Oscillatory Chamber and the Magnocraft. This is the reason why the author is devoting a lot of effort to investigate these new directions of creative work and to seek some reliable methodologies of utilizing them technically.

The Concept of Dipolar Gravity also provides a number of non-material benefits concerning our intellectual development. It supplies explanations for the vast body of observations previously treated as unexplained (e.g. telekinesis and its human version sometimes called psychokinesis, clairvoyance, telepathy, near-death experience, spontaneous human combustion, fire-walking, etc.). It repairs the inadequacies in the description of our Universe disseminated by contemporary physics. It creates a valuable link for the separate areas of intellectual activity. It inspires intellectual investigations in completely new directions. It also forms a rationale for the philosophical principle that **every goal which it is possible to imagine is also possible to achieve** (compare subsections E1 with D7).

There are numerous speculative concepts (e.g. complex numbers and n-dimensional spaces in mathematics, the concept of energy in sciences) in common use which so-far have no existing equivalents in physical world but which have proved themselves to be extremely useful and practical. The various benefits and convenient explanations introduced by the Concept of Dipolar Gravity, may qualify it also as similarly useful and practical. Therefore, in order not to waste the potentials of this Concept by waiting unnecessarily for its official recognition by institutional science, some people may instantaneously accept it on the basis of its practicality, and thus put it immediately into good use.

The Concept of Dipolar Gravity is formulated in such a manner that every aspect can be verified experimentally. This Concept reveals a number of postulates and principles which allow us to work out and to complete objective experiments that confirm its validity. An example of such experimental confirmation, which can be completed by almost every reader, is outlined in subsection D11. Therefore whoever is willing to get "hard" proof that this Concept is correct, he/she may obtain this proof easily.

For those people who are prepared to rely on the validation routines completed by someone else, this chapter alone supplies a vast amount of evidence and completed

experiments which confirm the correctness of the Concept of Dipolar Gravity. Further similar evidence is probably part of almost every reader's experience. So let us combine our efforts in the best use of the evidence and proof already available, to achieve a speedy implementation of this very humanistic, positive and extremely useful idea.

D1. Why the Concept of Dipolar Gravity was formulated

In 1924 the great French physicist, Louis DeBroglie, published his important discovery which is sometimes called the "Principle of the Symmetry of Nature". His Principle laid a theoretical foundation for the development of new directions in physics. According to this Principle in our Universe everything is strikingly symmetrical in many ways. Some more common manifestations of this symmetry were discussed in chapter C. For example, if any particle is known, its antiparticle must also exist (e.g. electron and positron, proton and anti-proton, etc.) Also every phenomenon has its own anti-phenomenon (e.g. friction and the Telekinetic Effect). If we find an exception to this symmetry, it is obvious that its anti-partner still remains undiscovered. The gravitational field is such an exception. Therefore the intensive search for its anti-partner is fully justified.

On the above premises the only concept of gravitational field which is still in common use was formulated. Because this concept assumes the analogy of gravity to all monopolar fields, so in this treatise it will be called the "**concept of monopolar gravity**". One of the products of the concept of monopolar gravity is the speculation on the possibility of producing repulsive gravitational interactions (i.e. an antiphenomenon to gravity) which are popularly called "antigravity".

Since beginning his research on magnetic propulsion, the author of this treatise has paid special attention to the work done on antigravity. Analysing carefully the expected properties and abilities of the antigravitational field, he came to the conclusion that antigravity is contradictive to the natural order of things. Some deductions in this matter are contained in chapter C of treatise [1]. To reveal the logical error committed by the creators of the concept of monopolar gravity, which leads to the present misinterpretation of our Universe, the author reviewed the entire deduction that formulated this concept. The error was found at the very beginning. It depends on assuming "a priori" (i.e. without any verification) that the gravitational field belongs to the group of monopolar fields. However, we know that in nature two entirely different groups of fields coexists, i.e. monopolar and dipolar. Therefore in order to discover the truth about gravitational interactions, not one but **two** different concepts of the gravitational field must be considered. In both these concepts the following two possible natures of gravity must be verified:

- 1°. Monopolar,
- 2°. Dipolar.

Let us have a close look at these two concepts, analysing which one of them fulfils more extensively the requirements of the Principle of Symmetry of Nature.

The "concept of monopolar gravity" so-far is the **only concept considered at all** by contemporary science. The gravitational field in this concept is equivalent to all monopolar fields existing in nature, for example, electric field, pressure, etc. Just as positive and negative electric charges exist, our science also acknowledges the existence of "matter" - producing an attractive gravitational field (i.e. "gravity"), and "antimatter" - which is to produce a repulsive gravitational field (i.e. "antigravity"). Because the concept of monopolar gravity assumes that

matter and antimatter must strongly repel each other, these substances should segregate and both shift to opposite sides of the Universe creating "world" and "antiworld". Thus, the adherents of the concept of monopolar gravity are continually scanning through the galaxies in search of the "antiworld" where antimatter would be concentrated.

Investigations to-date have not only failed to reveal any evidence confirming the correctness of the concept of monopolar gravity (e.g. in spite of intensive searches antiworld nor antimatter never were found), but have even encountered evidence which strongly negates it (e.g. see the evidence discussed in the next part of this subsection).

Any in-depth analysis of the concept of monopolar gravity must lead to the inevitable conclusion that this concept, instead of corresponding to, is entirely contradictory to the Principle of the Symmetry of Nature. Therefore, to construct a more realistic model of reality, the author designed an alternative concept of gravity which is called here the "**Concept of Dipolar Gravity**". The Concept of Dipolar Gravity has never been formulated or considered by our science. The author of this treatise is the first person to propose, work out, and publish it. In the author's Concept, gravity displays similarities to all dipolar fields, e.g. magnetic, hydraulic (i.e. flows of mediums), etc. Just as in a magnetic field two separate poles (N and S) exist, similarly two opposite poles also appear in the gravitational field. But because of the concentric nature of gravity, the second, opposite pole of the gravitational field is directed "inwards" and prevails within a separate world, existing parallel to the world recognizable to our senses. Thus, the Concept of Dipolar Gravity indicates the necessity of a parallel existence in the same space of two separate worlds, the first one of which (i.e. the world of matter) is recognizable to our sense organs; whereas the second one (i.e. the world of intellect) is closed to our senses but open to Extra-Sensory Perception (ESP). Such a constitution of our Universe introduces a number of practical consequences, which are explained in subsections that follow. But unlike antigravity, the existence of the "other pole of gravity" (called "counter-gravity" in this treatise) does not alter or influence in any way the behaviour of our world as we know it. Therefore it is very difficult to detect it with our present instruments. On the other hand the existence of the other pole of gravity opens for scientific investigation an incredibly wide range of psychic phenomena and presently unexplained facts. Thus the Concept of Dipolar Gravity rapidly extends our horizons into hitherto unrecognized fields, without the necessity of re-defining our present laws.

After the Concept of Dipolar Gravity was formulated, the author began his search for evidence which would confirm the correctness of this new model of reality. As a result of his research he revealed a wealth of evidence which supports his claims. On the other hand no even a single fact has hitherto been found which is contradictive to the Concept of Dipolar Gravity. Below are summarized the most important facts which ['] strongly negate monopolar gravity and simultaneously ['] confirm the correctness of its dipolar character:

#1. The kind of force interactions existing between the carriers of the gravitational field (i.e. particles of matter). As we know, these **particles seem to attract each other**, forming the well known gravitational pull that prevails between all possible clusters of matter.

['] in all MONOPOLAR fields carriers of the like poles **repel one another**. The interactions occurring between like electrical charges (e.g. positive charges repelling all other positive charges) as well as those occurring between particles of gases forming pressure fields (e.g. tendency to decompress) are the best examples of such a repulsion. Therefore, if gravity would have a monopolar character, the particles of matter should repel one another, not attract. This lack of repulsion denies the monopolar character of gravity.

['] around poles of all DIPOLAR fields, carriers of these fields exert a dynamic pressure

(described by Bernoulli's Equation) which compresses them together. This pressure manifests itself in the form of forces that pull the field's carriers together, making an impression as if they **attract each other**. For example, there is a well known phenomenon of pulling a ping-pong ball into a fountain's water stream and then holding this ball suspended within the stream. The forces that pull this ball are the same ones that we are talking about (i.e. Bernoulli's dynamic pressures prevailing at outlets from poles). The forces of gravitational pull seem to be an exact equivalent to this dynamic pressure directed inwards that appears in all dipolar fields. This confirms that gravity behaves as a dipolar rather than a monopolar field.

#2. The complete lack of evidence for the existence of two opposite monopoles of gravity, combined with the simultaneous wealth of evidence confirming the existence of a gravitational dipole.

As we know, in all monopolar fields two opposite types of field carriers (e.g. positives and negatives) are separated by a space subjected to the action of these monopoles. But in dipolar fields the situation is reversed, i.e. two different spaces in which opposite field conditions prevail are separated from each other by the field carriers (dipoles) being subjected to the action of these spaces.

[] if gravity has a MONOPOLAR character, the second (opposite to matter) monopoles of gravity should be found. But so far our highly sophisticated nuclear experiments have revealed only particles and antiparticles which differ electrically but which are identical in gravitational understanding. Thus, all known particles and antiparticles represent only two main electrical components of the same matter and do not constitute opposite monopoles of gravity. Our sophisticated science consistently **fails to find monopoles of gravity**.

[] in DIPOLAR gravity, the Universe would be composed of two separate spaces, or worlds, in which two opposite types of gravitational interactions would prevail (e.g. attraction in our world and repulsion in this other one). Therefore, the same laws and phenomena, but observed within each one of these two worlds, would also display drastic differences, depending on which side of the gravitational dipole they are manifested. As a matter of fact, we already know from physics examples of such dual behaviours. These are registered under the name "wave-particle duality of nature". One of the manifestations of this duality is the contemporary coexistence of the corpuscular and wave theories of light. As it is quoted in some books "Physicists have been jokingly accused of believing in light waves on Mondays, Wednesdays, and Fridays and in photons on Tuesdays, Thursdays, and Saturdays" (see [1D1]: O.H. Blackwood and others: "General Physics", 4th edition, John Wiley & Sons, Inc., 1973 page 665). One of the simplest and at the same time the most satisfactory explanation of this duality can be derived from the Concept of Dipolar Gravity. According to it, the consequences of the corpuscular and wave theories of light originate from the simultaneous distribution of light signals within the two different worlds. Depending in which of these two worlds light signals are observed by a given instrument, the corpuscular or wave aspect of light is manifested. This again confirms that **the action of the gravitational dipole is already registered in physics**.

#3. All attempts to detect the existence of two opposite monopolar worlds (i.e. our world and "antiworld") have failed, whereas there are already registered worlds from both sides of the gravitational dipole.

[] in MONOPOLAR gravity the opposite world (called antiworld) is claimed to be repelled from our world, so it should be shifted into a remote corner of the Universe. Therefore this world could be detected only in an astronomical manner. But almost two centuries of

astronomical search **has not revealed even a trace of the antiworld** or antimatter from which it would be constituted. As it is stated in the book [2D1], "Worlds - Antiworlds", by Professor Hannes Alfvén of the Royal Institute of Technology, Stockholm, Sweden - a widely recognized expert in antimatter, "There is no definite evidence for the existence of antimatter in the cosmos". This again denies the monopolar character of gravity.

["] if gravity has a DIPOLAR character, the world from the other side of the gravitational dipole must occupy the parallel space to our world. In fact a technique which reveals a parallel coexistence of the same object in two separate worlds is already known. This technique is called "Kirlian photography". In this photography some damaged objects still reveal parts which in the physical world are separated from them (e.g. photographs of damaged leaves may show the outlines of the missing parts). Thus the photographic **images from the counter-world are already recorded**. The above provides further evidence that the behaviour of the Universe is governed by Dipolar Gravity.

* * *

The above examples do not exhaust all the evidence which confirms the dipolar character of gravity, and which simultaneously denies the monopolar understanding of this field presently adhered to. Further examples of this evidence may be found in various other disciplines, such as religion, parapsychology, medicine, ornithology, etc. Because both concepts of gravity contradict each other, and only one of them can be correct, the existing evidence shows that our present understanding of the gravitational field is entirely wrong and leads to a misinterpretation of reality. Therefore it should be withdrawn from use as soon as possible. It is in the common interest of all of us to repair the error that has been committed, and to replace the present, misleading view of our Universe by the more correct one - based on the Concept of Dipolar Gravity.

D2. The operation of our Universe ruled by dipolar gravity

The previous subsection has revealed that in one aspect our present understanding of gravity is definitely wrong. This aspect is the polarity of the gravitational field. As has already been indicated, present science recognizes gravity as possessing a monopolar nature, similar to the one manifested by electrical charges. This chapter, however, shows that the gravitational field has a dipolar nature, thus displaying similarities to the magnetic field (i.e. gravity, similar to a magnetic field, also forms two opposite poles). The establishment of this dipolar character of gravity allows us to make some deductions revealing what our Universe is like and how it operates under the conditions of dipolar gravity.

All deductions concerning dipolar gravity must be started from the acceptance that this field possesses two opposite poles. The first pole prevails in our world and produces all gravitational interactions known at present. However, because of the concentric nature of gravity, the second pole of gravitational field must be directed "inwards" and extend into another world, invisible to ours. Therefore the immediate consequence of dipolar gravity is the parallel existence in the same space of two opposite worlds. We are fully conscious of the first of these worlds (i.e. the world of matter) because every day we experience it with our five senses. But the second world (the counter-world) must extend into another set of dimensions, symmetrical to ours, but undetectable by our biological senses.

Because of the tight connection through gravity, this second, counter-world of our Universe must be an exact reflection of our converse world - in the same way as every mirror

reflection is an exact picture of a real, material object. On the other hand, because of the opposite nature of the other pole of gravitational field prevailing in the counter-world, the laws which operate in it would be the exact reverse of the laws in our world. For example the medium that makes up this second world, which would be the equivalent of our matter, must have no mass, must have no friction during its displacement, and must display "self-mobility" (i.e. a property being the opposite to the "inertia" of our matter). Therefore it would be the exact implementation of the historically well-known but at present ignored concept of "ether".

To understand completely the principles of the coexistence of both worlds, some examples are presented below which explain this. The first example illustrates their operation, the second one our difficulty with an insight into the counter-world, whereas the third one illustrates our perception of these worlds.

1°. Since ancient times people have been building machines whose operation is always an imitation of the mechanisms of the Universe. Not long ago, man completed the device which is the exact model of the operation of both worlds discussed here. This device is called the "computer". In every computer we may find hardware (i.e. equipment and energy converters) detectable to our biological senses, and software (i.e. programs) undetectable to our senses or technical instruments but perceptible to our intellect. The hardware is the equivalent of the converse world, whereas the software is the equivalent of the counter-world. If we gave a contemporary computer for research by the scientists from last century who had no idea of the duality of its structure, their senses and instruments would describe very precisely the characteristics of its hardware. However, there would be no way that they could detect the existence of software, so some of the actions of the computer would induce astonishment and fright. When observing this device none of these scientists could imagine the vast range of possibilities and prospects that the same hardware may offer after one has introduced appropriate changes into the software. Also none of them would know that the counter-world is no less capacious nor less complicated than the world of hardware, and that the preparation of a particular program must obey a wide set of laws and rules completely different from those which govern the production of technical devices. In our present understanding of the Universe we are perhaps like these scientists from the above example, seeing only its "hardware" and not even realizing that at the other end of gravity there is another counter-world.

2°. To illustrate the present difficulty with an insight into the counter-world, let us imagine a group of last century scientists who received a modern magnetic tape for investigation. They could describe perfectly the physical properties of this tape but they would be unable to detect that there is any sound recorded on it. Until playing devices were invented, these scientists would be unable to access the world of sounds that the same tape contains. Our civilization is like these scientists, where present knowledge of matter represents the physical properties of the tape, whereas the counter-world represents the yet undiscovered music on this tape. Unless we develop devices which access the information stored in the counter-world, we will be convinced that the whole reality is limited to the matter around us.

3°. To illustrate our perception of both worlds, let us consider the analogy of a huge ocean of "ether" in which there is floating a number of objects. Let us suppose that one half of each object is above the surface of this ocean, whereas the other half stays submerged. The substance filling our hypothetical ocean (i.e. the ether) is in a permanent state of "boiling", forming numerous drifts which writhe in many directions and toss about all floating objects. People, similarly to every other object, would also drift in this ocean, as if exactly half of their bodies were submerged. But all senses would remain in the part above the ether, therefore

they would have the illusion that the whole Universe is limited to only what they can see. Without having a view under the surface, the people in our analogy would have no idea that the surface is not the end of the Universe but only the border of their visibility and that, closed to their senses, there may exist another whole world.

The only link between our world and the counter-world is through forces of gravity. The requirement of balancing these forces causes each particle of matter existing in our world, to be attached to a similarly sized particle of ether. In this way, every material object existing in the world of hardware, must receive its identical copy (a mirror reflection) existing in the counter-world. This reflection is made of ether. The gravity forces tightly joining together the material objects from our world and their etheric copies prevailing in the counter-world introduce a very unique cooperation between both worlds. This cooperation can be defined as follows:

"The actual configuration of the counter-world determines the course of events in our world, whereas the changes in our world modify the actual configuration of the counter-world".

The above definition of cooperation between both worlds will be referred to as the "hardware/software mechanism of phenomena". According to this definition the mutual interaction between our world and the counter-world is an exact equivalent to a real-time cooperation occurring between a numerically controlled machine (i.e. hardware) and a computer program (i.e. software). This is because in any man-made system the only solutions that can be utilized are those which are already applied to the operation of the Universe. If we consider a numerically controlled machine (hardware), its operation represents the behaviour of matter from our world. On the other hand, the computer program that controls this machine represents the capabilities of ether from the counter-world. The program, in order to control the machine, must contain the numerical reflections (i.e. software models) of all parts of that machine. This means that the program must describe for each moving part its actual state, previous position, future goals, possibilities and limitations. When the entire system consisting of the program and the machine is run, then the control signals originating from the program cause particular actions by the machine. But each change (action) of the machine must be observed by the program which is altered according to the effects of this action. Thus, the altered program executes different actions, etc. The continuation of the above interactions between the program and the machine leads to the sequence of events in the hardware. These events are the exact reflection of the routine described in the software. In the same way as this machine and program interact with each other, our world is interacting with the counter-world.

The hardware/software mechanism of phenomena described above is a key to our understanding of the Concept of Dipolar Gravity and to our understanding of the explanations derived from this Concept. There are numerous consequences of this mechanism, the presentation of which will be continued. One of the primary consequences is that the counter-world must accommodate all attributes of what we call "real-time control programs". Thus, the mirror (etheric) reflections of every material object must behave like software models for numerically controlled machines. So, these reflections must also contain all data about history, present state, and future goals of the objects they describe, forming in that way a kind of "register" easily accessible through ESP, dreams or hypnosis - see subsection D2.2. The data contained in the etheric reflections must somehow be intercepted, stored and processed. This means that the counter-world must additionally display all the capabilities of a natural computer, including not only the capabilities to intercept, store, and release data,

but also the ability to process them (i.e. to think).

The principle of our world interacting with the counter-world based on the hardware-software model, makes two different means of introducing changes into our world possible, i.e. "physical" and "telekinetic". The "**physical**" means is well known to us and depends on a forced interaction with the objects of our world, involving the particular amount of work to be done and causing appropriate energy to be spent. In the previous description of a machine controlled by a computer program, this "physical" means would be an equivalent of the hand-introduced displacement of some parts of the hardware. The "**telekinetic**" manner of introducing changes into our world depends on altering the configuration within the counter-world. This in turn causes self-activated changes occurring within our world. To explain it more simply, in the telekinetic motion we move the mirror (etheric) reflections of objects, instead of moving these objects. But because these mirror reflections are attached to original objects through gravity forces, moving these reflections causes the objects to also move along exactly the same paths.

The properties of the telekinetic manner of moving material objects described above reveal that we have already accumulated much evidence indicating a practical utilization of this ability. The majority of miraculous events and ghost stories in fact reduce themselves to the observations of objects moved in such a manner. The cases of telekinesis, psychokinesis and levitation also fall into this category. Moreover, the idea of teleportation seems to be the vision of future spacecraft utilizing the same principle. Some observations also reveal the major side effect that accompanies telekinetic work, i.e. the absorption or release of large amounts of thermal energy (see the Postulate of Interchanging Thermal Energy). For example, there are reports about advanced Yoga practitioners who decrease the temperature of their bodies, or about people who cremate themselves (Spontaneous Human Combustion) by "inner fire" ignited as an effect of extreme psychic tension.

The displacement of objects caused by the "telekinetic" manner do not require any energy to be supplied by the person or device who executes such a displacement. This is because in the counter-world friction and inertia do not exist. But the material objects following their etheric reflections within our world must consume energy, as the Principle of Energy Conservation must always be fulfilled here. Therefore, this energy consumed in the material world must be withdrawn from the environment of the objects moved in this manner. The only form of energy available for such a purpose is thermal energy. Thus, the telekinetic manner of introducing changes into our world must cause thermal energy to be withdrawn from the environment - when the telekinetic motion goes against external forces, or to be supplied to this environment - when the telekinetic motion acts along with external forces. In this chapter the above conclusion is called the "Postulate of Interchanging Thermal Energy". This postulate applies to all paranormal phenomena that affect the Principle of Energy Conservation, e.g. telekinesis, some Yoga exercises, etc. (Note that such a cooling capability of telekinetic motion causes telekinesis to be a kind of friction in reverse, i.e. it consumes heat and produces motion.)

The Postulate of Interchanging Thermal Energy by material objects moved in a telekinetic manner makes the existence of the counter-world extremely easy to be proven in an experimental way. It is because this postulate indicates that the objects moved telekinetically must produce a subtle kind of glow, which will be called the "extraction glow". The existence of this glow results from the statements of quantum physics, which indicate that the atoms whose electrons fall from higher orbits into lower as the result of a rapid cooling, must emit photons. These photons should be registrable as a kind of glow. Therefore, any

telekinetic absorption of thermal energy should be accompanied by a glow emitted from the affected area. In order to prove experimentally that the Concept of Dipolar Gravity is correct and that the counter-world exists, it is sufficient to register this "extraction glow" - see subsection D11.

There is a wealth of evidence already available which confirms that our Universe operates according to the Concept of Dipolar Gravity. Let us now review the most important facts confirming this.

#1D2. For centuries the existence of a "second world", separated from ours, is claimed by religions. Although contemporary science adhering to the concept of monopolar gravity had no justification to support this claim (therefore the majority of scientists deny the existence of another world), the Concept of Dipolar Gravity leads to the conclusions surprisingly coherent with the claims of religions.

#2D2. Most paranormal phenomena affect the level of thermal energy contained in the environment, thus fulfilling the Postulate of Interchanging Thermal Energy. For example, it is widely known that shifting objects by so-called "Poltergeists" decreases the room's temperature almost to freezing level. Yoga practitioners may also decrease their body temperature. Moreover, during extreme psychic tension enormous heat can be released which leads to "Spontaneous Human Combustion".

#3D2. There are numerous photographs already published which clearly capture the emission of an extraction glow by objects moved telekinetically. Some examples of such photographs, reproduced from widely accessible books, are shown in Figures D4 and D5. In cases of extremely intensive paranormal phenomena, the extraction glow is so strong that it can be seen by the naked eye. An example of such a case is described on page 32 of the book **[1D2]** by David St. Clair, "Psychic Healers" (Bantam Books, NY,1979, ISBN 0-553-02056-0), and already quoted in subsection C3.

#4D2. There are a number of observations accumulated that describe in detail the so-called "beaming" of people onto decks of UFOs. One of the effects of this beaming is that people subjected to it experience a significant loss of thermal energy, manifested through feeling cold, shaking, tingling of bodies, etc. - see phrases N-44 and N-16 in Appendix Z. Therefore, the phenomena employed by UFO-nauts to cause this beaming fulfils the Postulate of Interchanging Thermal Energy described earlier. On the other hand, all the other effects accompanying this beaming; e.g. the strong emission of "extraction glow", psychic experiences, passing through solid objects, etc.; exactly correspond to the use of an advanced propulsion system based on a technological version of telekinesis. The above facts are consistent with the Concept of Dipolar Gravity and confirm that devices exploiting this Concept are already in use by some other civilizations.

D2.1. Ether - the thinking substance from the counter-world

The main characteristics of all dipoles is that they bind together, and simultaneously separate, two symmetrical sets of dimensions (spaces) in which opposite field conditions prevail. Therefore between the set of our dimensions, and the set of dimensions where the opposite gravitational pole prevails, an inaccessible boundary must appear. This boundary forms a border separating both worlds that constitute our Universe. Because everything is subjected to the forces of gravity, the border between our world and the counter-world can not be penetrated by any physical equipment nor any material object.

In all dipolar fields the environmental conditions that prevail at both poles are always opposite. The above is expressed by the "rule of opposite properties at both ends of a dipole" that governs the behaviour of all dipolar fields. This particular rule, when applied to the gravitational field, shapes the structure and operation of our Universe in a unique, symmetrical manner. Its two most important consequences are as follows:

1. The existence of the gravitational dipole must cause exactly opposite polar CONDITIONS to prevail in both worlds of our Universe. These opposite conditions in turn mean that all laws and properties prevailing in our world must be inversely duplicated in the counter-world. For example, in our world inertia is one of the main properties of matter, therefore in the counter-world self-mobility (i.e. inertia in reverse) must be an equivalent of inertia to be exerted on the substance prevailing there.

2. The existence of a gravitational dipole must also mean that every physical FORM (i.e. substance or object) is inversely duplicated in both worlds (like an object and its mirror reflection). This in turn means that our world and the counter-world must be both symmetrically filled up with two different substances having opposite properties, and that every material object existing in our world must have its etheric duplicate in the counter-world.

When both the above consequences of the gravitational dipole are carefully analyzed, they allow deductions to be made concerning the mutual relationship between our world and the counter-world. The author has already made some deductions and the conclusions he has arrived at are described below. The presentation of these conclusions will be started by describing the substances prevailing in both worlds and the relationship between their properties.

The substance prevailing in our world is already well known by contemporary science. We refer to it under the name of "matter" and its fundamental properties include mass, inertia, friction, etc. The substance prevailing in the counter-world must have all the properties opposite to those of matter, i.e. it must be weightless, self-mobile (i.e. opposite to inertial), free from friction, etc. It is known from history, that the existence of such a weightless substance has already been postulated by classic physicists, one of them being James Clerk Maxwell (1831-1879) - creator of the famous equations of electromagnetism. They called this substance "**ether**". Out of respect to the contribution of these people, the author will keep the name "ether" for the substance prevailing in the counter-world, although he is aware that many contemporary investigators could find it easier to accept the deductions presented here if instead of "ether" some more modern term is used (e.g. "tachyons").

Amongst all the unusual properties of ether, one requires special justification, as it introduces numerous implications to our understanding of reality. This unique property of ether is its natural ability to think (i.e. to work as a kind of natural computer). The following logical deduction is to justify the author's conclusion that ether thinks. As it has already been stressed, the "rule of opposite properties at both ends of a dipole" applies to all dipolar fields. On the other hand, the main property of matter is that in its natural constitution it is unable to think, and it is only after being rearranged in special structures (such as brains or computer microchips) it gains the capability of conducting thinking processes. Thus, after applying the "rule of opposite properties at both ends of a dipole" to this main property of matter, the conclusion is derived that ether in its natural constitution must display an ability to think, and only after being rearranged in some special structures (e.g. in the boundaries between two thinking entities that maintain the separateness of each of them) it will be unable to think.

Ether, similar to our matter, is not a single type of substance, but probably a collection of various substances characterized by different properties. For example, there may exist a

solid, liquid and volatile ether.

We know that in 1887 the famous **Michelson-Morley experiment** was completed. It claimed to prove the non-existence of ether. But we also know that the conditions of this experiment were so designed that it was only capable of detecting ether if this substance existed in our world. According to the Concept of Dipolar Gravity, ether prevails in a separate world into which any device installed in our world has no access, thus dipolar gravity automatically cancels the validity of the Michelson-Morley experiment. Ether existing in another world may not be detected from our one.

Ether turns out to be a necessary component of our Universe. As human knowledge advances, various intellectuals keep re-introducing the concept of this extraordinary medium. Although in all these re-introductions ether receives different names, the general concept of this medium always remains similar. Let us list a few examples of terminology currently being used to express various presentations of the same concept of ether:

1. Inventors working on Free Energy Devices describe this concept with the term "tachyon energy".

2. Various schools of spiritualism, natural health, and personal development, implement practically some of the capabilities of ether. Of course, in each of these implementations ether is referred to by a different name. Below are listed examples of the more popular of these names:

- Reiki, i.e. the name attached to ether in a Japanese school of natural health and personal development.

- Orgone energy, i.e. a name which describes ether in the book **[1D2.1]** by T.J. Constable, "The Cosmic Pulse of Life" (Neville Spearman Ltd., Suffolk, Great Britain, 1976, ISBN 85435-194-9).

3. Our science, after initially denying the existence of ether, has gradually returned to this old idea after changing its name. Here are examples of scientific terms which represent this idea:

- Vacuum. Contemporary quantum field theory claims that vacuum is so featureless and has such a high symmetry that a velocity can not be assigned to it. Moreover, this theory states that particles are excited states of the vacuum state. The above means practically that the quantum field theory has assigned to the vacuum all properties which classic physicists previously attributed to ether.

- Energy Body. Medicine has gradually adopted from acupuncture the concept of an "energy body", which is only a different name for the old occultistic idea of an "etheric body".

Ether is also referred to in numerous ancient sources. The most well known ancient names assigned to this medium are: "The Ancient of Days" described by Christian and Jewish traditions, and the "Vril Power" (see [2D2.1], pages 84 to 99 and 170 to 174) described by eastern tradition. The analysis that follows reveals the total correspondence between the old interpretation of Vril Power and the characteristics of ether from the Concept of Dipolar Gravity. Similar comparison, but completed for the idea of the Ancient of Days and idea of magnetic field, is provided in subsection L5.

#1D2.1. On page 179 of the book **[2D2.1]** by Alec MacLellan, "The Lost World of Agharti, The Mystery of Vril Power" (Souvenir Press, London 1982, ISBN 0-62521-7) the author defined the Vril Power in a following manner: "VRIL is actually an ancient Indian name for the tremendous resources of energy which are made available as a result of mastering the Etheric Body (or Time Organization)". Other parts of the same book explain the term VRIL even more exactly. Let us quote a few more sentences:

p. 92: "... the gradual discovery of the latent powers stored in the **all-permeating fluid** which they denominate VRIL."

p. 170: "There is no word in any language I know which is an exact synonym for VRIL. I should call it electricity, except that it comprehends in its manifold branches other forces of nature, to which, in our scientific nomenclature, differing names are assigned, such as magnetism, galvanism, etc."

p. 171. "It can be used for expanding the consciousness of the mind, and allowing the transference of thoughts from one person to another by means of trance or vision. It was through the agency of VRIL, while I had been placed in the state of trance, that I had been made acquainted with the rudiments of the VRIL-YA's language."

p. 172: "Further uses of the force include the motive power for robots, the propulsion of land vehicles and flying contrivances, and for supplying light. ... VRIL is seen as an enormous reservoir of universal power, some parts of which can be concentrated in the human body."

Even a brief comparison of the above quotations to the descriptions from further parts of this chapter makes obvious the total correspondence between the term VRIL and the term ETHER.

D2.2. Software models (registers) of material objects

The example of interaction between computer software and hardware is the key to our understanding of the coexistence of our world with the counter-world. It can be logically deduced that the counter-world must be an equivalent of contemporary numerical models for simulating real-time computer processes. Therefore all laws and principles concerning these models are elements of more general laws and principles ruling the counter-world and must also be obeyed within the counter-world. As we know, the simulation of any real-time process is not possible without building into its software model all information about the past (history), present and future of this process. This means that because of the strict analogy to such models, the counter-world must also consist of some records of the entire history, present state, and also the future of every object from our world. Practically, for every person, every organism and every object existing within the world of hardware there must be a kind of "register" (or "non-destructible memory") which contains the information on all events from the past, present, and future of this object. Therefore, if we could somehow gain "insight" into these registers, we would have access to all the required information about everything, including also the events that will happen in the distant future.

At this point we should extend the explanation of the "register" provided briefly in subsection D2. The register is a mirror reflection (software model) of a material object, made of ether and contained in the counter-world. This reflection displays all the attributes of the material object which it reflects. It memorizes all the data on this object including the entire history of events that this object was subjected to. It also describes the present state and the direction of future development for every component of the reflected object. Registers exist only for material objects - can not be created for ideas or abstracts, but inside these registers any idea or abstract can be recorded or developed.

It can be deduced that the registers must store the information in a holographic manner. Such manner is confirmed by some evidence collected to-date (e.g. by the lack of time delay in ESP inquiries concerning very distant objects, by the characteristics of the life

review occurring in the first stage of dying, etc.).

Amongst the various properties of the etheric registers, one deserves our special attention. This is the non-destructible aspect. Differing from physical objects, software models (i.e. "registers") from the world of intellect can not be destroyed by any action taken in the material world. Therefore objects which physically cease to exist still possess their registers somewhere in the counter-world. Various religions describe such registers of dead people (or animals) as "ghosts", "spirits" or "souls".

The non-destructibility of etheric registers finishes when a destructible agent is formed within the counter-world. The content of subsection D5 reveals, that such a situation occurs when the destruction is caused by an extremely powerful electromagnetic disturbance, similar to the one formed during nuclear explosions. For this reason the Concept of Dipolar Gravity warns us about the use of nuclear weapons, as "those who die in a nuclear explosion may cease to exist in the spiritual plane as well". As such, a possible nuclear war would be a loss to the entire universe, not only to the planet where it occurred.

There is a wealth of evidence available at present which confirms the correctness of the conclusion that every material object has its mirror (etheric) reflection in the counter-world. Listed below are some examples of this evidence:

#1D2.2. The conclusion derived from Dipolar Gravity that "every material object has its etheric mirror reflection (register)" in the counter-world only provides a new, scientifically based justification to the very old finding that for ages was presented to us by various sources. In religion this reflection is called "soul", Psychics call it "etheric body", acupuncture refers to it as "energy body", etc. The mutual correspondence between the concept of a "register" derived theoretically from the Concept of Dipolar Gravity and the concept of the "etheric body" so successfully utilized in Psychic Healing, is best expressed in the book [1D2] by David St. Clair, "Psychic Healers" (Bantam Books, New York, 1979, ISBN 0-553-02056-0). On page 244 of this book the famous American Psychic Healer, Reverend William Brown, explains the principles involved in his healing. Here is an excerpt from his explanations:

"The etheric body is an exact copy of the flesh and blood body with every muscle, bone, organ, and nerve reproduced but in a finer density. The principle is that this body, being more basic than the physical, can be adjusted more rapidly and bloodlessly. Each condition corrected in the etheric body is reflected back into the physical body, thus adjusting the physical back to health".

It is amazing how closely this Psychic explanation corresponds to the "hardware/software mechanism of phenomena".

#2D2.2. In 1906, Dr. Duncan McDougall of Massachusetts General Hospital conducted some precise measurements of weight of people just before and after their death. These measurements revealed that the human body at the moment of death loses as much as 7 to 28 [grams] in weight. The above loss of weight can be attributed to the separation from bodies of their software models (registers) which are made of some volatile component of ether. As these models are attached to the bodies by gravitational forces, their separation must cause changes in gravitational interactions which would be detectable as in the change of weight.

#3D2.2. Software models from the counter-world are actually registrable on a photographic film. The technique which allows the registration of these etheric images is called Kirlian photography.

D2.3. Possible gains from the mastery of the counter-world

The gravitational link existing between both worlds introduces enormous potential for exercising an intelligent control over our world. If we build a machine that will be able to change the configuration within the counter-world, then this would cause an instant change within the material world. For example instead of physically travelling from place to place, we could alter our position in the counter-world and this would cause our instant disappearance from one place and re-appearance in another one. In this way "teleportation" may replace our present dislocation of matter. It is not the only possibility that the alteration of the counter-world may open. Some of other could be:

- materialization instead of production,
- dematerialization instead of disposal,
- body-transformation instead of healing.

The machine for introducing some alteration into the counter-world would be the supreme achievement in the utilization of the possibilities that this duality of the Universe may offer. However, not less useful would be the device which could just allow "insight" into and "reading" of the registers contained within the counter-world. Through such an insight we could, for example, obtain complete information about:

- the history of each person, organism or object,
- the future fate of people and objects,
- the appearance and course of illnesses before symptoms are noticeable,
- the thoughts, intentions, secrets and personal details of any particular person,
- the location of lost people and objects,
- the content of non-transparent objects, e.g. letters within envelopes, natural resources, underground water sources, etc.

It seems that for thousands of years mankind exploited the counter-world through magic, exorcism, rituals, etc. However, to-date people's use of the laws of that world has been "blind" and without understanding of their operation. Realizing that such a world exists will help us in the systematic compilation of its laws and in developing a complete knowledge of its operation. From this, there will be only a short step to the development of our natural abilities to exploit this world, in a way similar to the development of muscles by body builders. The existence of this world makes possible the mastery (without devices) of such hitherto incredible abilities as: telepathy, shifting objects by the power of the mind, healing, seeing the content of non-transparent objects and learning the personal secrets and thoughts of others.

Similarly to our world, the counter-world must also be objective and repetitive. It must be governed by a set of natural laws, whose meaning can be detected, identified, learned and utilized by our intellect. Therefore the recognition and acceptance of this world will open completely new dimensions, for the good of all people.

D3. The interpretation of time in the Concept of Dipolar Gravity

As it was explained in subsection D2, the counter-world (also called the world of intellect) contains real-time software models (registers) of our reality. These models execute the course of events that take place in our world. Thus the key to understanding the operation of the counter-world is its analogy to a real-time computer program.

Let us refer to the operation of a real-time computer program. Such a program is made up from a number of elementary processing commands that are combined together in one continuous sequence. The completion of these commands is achieved in steps, each one

of them being executed in isolation from the others. During this process the control unit of a computer gives the execution power to these commands in the order of their positioning, one after the other. Thus in each computer program there exists one such elementary command which is actually in the process of execution. All commands located before this particular one are already completed, whereas all the commands located after this one will be completed in the future. Therefore a flow of the execution control throughout such a computer program performs the same function as the flow of time in real events. The above shows that in the computer programs operating in real-time, the flow of execution control is equivalent to our idea of time.

The analogy existing between the counter-world and the real-time computer program allows us to deduce the principles of completion of real events occurring in our world. These events will be executed by the counter-world in a manner similar to the way the processing commands are executed in contemporary computer programs. Thus the software models contained in the counter-world are also combined from the sequences of elementary steps. These steps are executed in succession, one by one. Therefore, there is always a step which is actually in the process of execution, as well as the other steps, part of which were already executed in the past and part waiting to be executed in the future. Such a flow of the execution sequence occurring in the counter-world, is observed in our world as a lapse of time. The above provides the interpretation of time in the Concept of Dipolar Gravity. This interpretation will be called here the "**magnetic concept of time**". It states that: "**time is a flow of the execution control throughout the software models contained in the counter-world.**"

The above interpretation introduces numerous changes to our understanding of time. Firstly, it causes us to realize that our contemporary view of time as a uniformly flowing river is wrong. In fact, **time is motionless, only our execution control moves through it**. Also this interpretation indicates that the speed of elapsing time can vary from object to object and from situation to situation (i.e. time does not elapse the same for everyone and in every situation). Moreover, this interpretation shows that in the counter-world time can be instantaneously shifted backwards (i.e. the execution control can be shifted back to any previous step) or further forward, and the speed of elapsing time can be increased or decreased. Thus, in the Concept of Dipolar Gravity, time travel and the building of "Time Vehicles" is theoretically possible - see subsection J2.

Observations have already been accumulated which confirm the correctness of the above interpretation of time. Below is listed some examples of evidence from this area:

#1D3. Time elapsing is perceived differently for various objects and situations. For example, insects pass through time at a much faster speed than people, whereas the celestial bodies (e.g. planets, stars) have a much slower passage through time than humans do. Also in our lives we frequently observe the different speeds of elapsing time. As it was lightheartedly expressed by Albert Einstein, "one minute spent on a hot stove feels like an hour, whereas an hour spent with a loved partner feels like a minute". Most clearly the slowing of time is registered by participants of car accidents. Probably everyone has also noticed personally that the passage of time seems to increase in speed as we age (i.e. a day for children is longer than for older people).

#2D3. In the so-called near-death experiences (NDE), a person falling from a roof during his/her very short flight re-lives again in detail almost his/her entire life. The number of images and experiences passing through the mind of such a person would be impossible to review if time elapsed with "normal speed".

#3D3. There is objective evidence accumulated which confirms the capability of some

advanced civilizations for slowing down or accelerating the elapse of time. This evidence originates from observations of the so-called "Time Vehicles" in operation. Examples of this evidence (e.g. the so-called "state of suspended animation", claims of extraterrestrials, accelerating of abductee watches) are presented in subsection O2.

D4. The interpretation of electromagnetic phenomena in the Concept of Dipolar Gravity

The Concept of Dipolar Gravity reveals that the counter-world is filled up with a kind of medium, which for historic reasons we call here "ether". Ether is a reversal of matter from our world. Independent of the intellectual properties, it also displays a number of physical properties. As the classic physicists deduced, ether must possess no mass, must produce no friction and display no inertia. Ether can be put into a state of tension and be caused to move. The actual state and behaviour of this medium, however, may not be observed directly from our world, as our devices and sense organs have no access to the world in which ether is contained. But ether interacts with the opposite ends of gravity dipoles that prevail in its world and thus its state and behaviour impacts the behaviour of matter contained in our world. Because of this, ether can be observed indirectly by registration of its interactions with matter from our world.

If we analyze all possible interactions that may occur between our matter and ether, these may be two kinds, i.e. (1) those caused by the compression of the ether and (2) those caused by its motion. The areas where ether is compressed or decompressed must display all the attributes of what is presently known under the name of positive and negative electric fields. Thus the electric fields in the Concept of Dipolar Gravity represent the potential states of ether. The motion of ether will display all the attributes of magnetic fields. Therefore magnetic fields are the carriers of kinetic states of this substance. Both the above interpretations reveal that the electromagnetic phenomena in the Concept of Dipolar Gravity are understood as various states and behaviours of ether.

D4.1. A magnetic field is a circulating stream of ether

It is unfortunate, to say the least, that science in the last decades of the 20th century is still not able to answer the question: "what is a magnetic field?". The highest authorities in magnetism, when confronted with this question, simply "put their heads into the sand" and evade the issue by providing a definition which describes the effects, not the causes, of a magnetic field. It seems that the medieval monks' explanation of magnetism as a "sort of holy phantom which emerges from one end of a bar magnet and disappears into the other end" is still repeated by modern scientists, merely replacing the occultist expressions with the same meaningless mixture of super-modern, abstract terminology.

The formation of the Concept of Dipolar Gravity finally provides the answer to the question "what is a magnetic field?", as well as explaining the principles of the formation of this field. Below is given a more detailed explanation of this phenomena.

It was experimentally determined that all electrically charged particles, such as electrons, protons, positrons, etc., are spinning like tops. One of the presentations of recent discoveries in this matter is contained in an article **[1D4.1]** by Alan D. Krisch, "Collisions

between Spinning Protons", published in "SCIENTIFIC AMERICAN", August 1987, pp. 32-40. Because each of the spinning particles is contra-balanced in the counter-world by a corresponding cluster of ether, the rotation of this particle must also cause a circulation of ether surrounding this cluster. This circulation of ether could be compared to the formation of a miniature whirlwind by a child's toy - a "spinning top" - after setting it in rotation. As a result, micro-whirls of ether must accompany every electrically charged particle. In normal circumstances the axes of rotation for these billions of micro-swirls take chaotic orientations, therefore their actions mutually cancel one another's effects. For this reason in stationary charges the swirlings of ether can be detected only on a micro-scale. The situation changes drastically when the particles are forced to flow. During movement they orient their axes of rotation in the direction of the flow of currents. Having parallel axes of spinning, the particles now accumulate their effects on ether. Such an accumulation can be compared to the effect of hundreds of "spinning tops" swirling simultaneously in one room so that their miniature whirlwinds, reinforcing one another, cause the air in the room to rotate. The result is that the flow of electric charges orders their axes of rotation and thus form the large-scale circulations of ether known to us by the name of "magnetic field".

To summarize the above in the form of definition we can say that a **"magnetic field is a circulating stream of ether"**. This means that the force lines of a magnetic field are in fact the drift lines of circulating ether.

Ether is a substance permeating that other world inaccessible from our set dimensions - see subsection D2.1. Therefore the circulation of ether would be undetectable for our instruments, but would interact with other similar circulating streams of this substance. So it would behave exactly like a magnetic field.

When the electric current flows along a straight wire, ether swirls around this wire forming a vortex magnetic field (i.e. a field having indistinguishable N and S poles). But when electric charges take on a circular flow, as observed in coils of electromagnets or within the atoms at electrons' orbits, then the dipolar magnetic field (i.e. field having clear N and S poles) is formed.

The model of the formation of a magnetic field presented above allows for a simple explanation of all the known phenomena connected with magnetism. For example, magnetization (or production of permanent magnets) is the process of putting into order the axes of the particles' rotation, by means of the action of the external stream of circulating ether. (So it is a process that is the reverse of the formation of a field by the flow of charges). When analysing any other magnetism-related phenomena we must inevitably reach the conclusion that the model presented above is the correct one and that it should be commonly accepted as soon as possible.

It is much easier to comprehend the properties of a magnetic field when the circulation of the ether is imagined as the circulation of air. In such an analogy, one coil of an electromagnetic can be visualized as a propeller of an aircraft forcing the surrounding air to circulate. the analogy for a bar magnet would be a kind of "pipe" formed from billions of little propellers. To obtain the simulation of the interaction between two magnets, it is sufficient to consider the relative interaction between two streams of air circulated in that way. Of course, when applying the above analogy we should remember that ether, unlike our air, possesses no mass, no viscosity, and does not create friction. Therefore all the attributes of a circulating stream of air which result from the above properties of this medium will not appear in magnetic fields.

There is a mass of evidence originating from areas other than magnetism, which

additionally confirms the correctness of the ether-based explanation for magnetism. Let us review some examples of this evidence.

#1D4. Nuclear physics provides numerous photographs of elementary particles, which show that the carriers of electric charges usually follow a spiral trajectory. Because the energy input for these particles may occur only at the initial point of their motion, such a spiral trajectory must be caused by some kind of disproportions in environmental resistance (e.g. a "spinning top" usually follows a spiral trajectory). To make it clearer: if particles would move in a vacuum, as present science claims, the trajectories of particles should be circular, elliptical, or parabolic (but not spiral).

#2D4. It has been noticed that the lights of the aurora borealis, visible close to the north (N) magnetic pole, look as if they fall from the sky to the Earth, whereas the lights of the aurora australis, appearing near the south (S) pole, seem to come from the Earth and ascend into the sky. The logical explanation for this surprising contradiction in the direction of movement of the lights of both auroras is that this is caused by the motion of ether, which in its circulation leaves the Earth at the south pole and sinks into the Earth at the north magnetic pole. (Notice that in this treatise, and in other works by the author, the north magnetic pole (N) is defined as the one prevailing at the north geographic pole of the Earth - see subsection G5.2.)

#3D4. The application of the Principle of the Symmetry of Nature to the development of propulsion systems (see Table B1) reveals that three different generations of propelling devices will be completed, utilizing various properties of what we call a magnetic field. Some of these propulsion systems (e.g. Teleportation Vehicles) can only operate if the magnetic field is a circulating stream of ether. Some observations have already been accumulated which confirm that a Teleportation Vehicle in fact can be built - see subsection O1.

D5. Why, according to the Concept of Dipolar Gravity, paranormal phenomena must display electromagnetic character

One of the attributes of natural evolution is that in living creatures it develops a wide range of sense organs and abilities that prove useful for survival. These sense organs and abilities make the best use of every property of nature that is available, independently of the owner's awareness of its existence. Therefore, if the Universe operates according to the Concept of Dipolar Gravity, it should be expected that people have already developed senses (chakras) allowing them to gain insight into the counter-world, and also have developed some organs (e.g. pineal gland) for altering the configuration of this world. And in fact human beings are capable of inducing some phenomena, known under the name of "paranormal", which fit into the definition of interacting with the counter-world.

From the Dipolar Gravity point of view, all paranormal phenomena caused by people can be classified into two categories, i.e. (1) reading the information contained in the counter-world, and (2) alteration of configurations in the counter-world. In the first category of reading the information from the counter-world can be included such phenomena as clairvoyance, telepathy, dowsing, distant illnesses diagnosing (e.g. the ability demonstrated by Edgar Cayce (1877 - 1945), the founder of famous Edgar Cayce Foundation from Phoenix, Arizona, USA - see book [1D2] pp. 297-317), etc. In the second category of alterations introduced into the counter-world can be included such phenomena as: psychokinesis, bending of objects (e.g. spoons) by the power of mind (Uri Geller), bending of V-shaped divining rods by dowsers, psychic healing, levitation, etc.

The Concept of Dipolar Gravity defines paranormal phenomena as effects of various interactions with ether contained in the counter-world. On the other hand, the conclusion from the previous subsection is that the name "electromagnetic phenomena" is assigned to physical manifestations of the various behaviours of ether. Merging together these two findings leads to the general conclusion stating that:

"paranormal phenomena and electromagnetic phenomena are related to one another as both are manifestations of the interactions occurring between matter and ether". The above conclusion can also be expressed in the following way:

"paranormal phenomena originate from various behaviours of ether; physical manifestations of these behaviours are registrable under the name of electromagnetic phenomena".

There is a wealth of evidence already accumulated which confirms the above general conclusion. Let us review some examples of this evidence.

#1D5. Professor Janusz Sławiński of Kraków, Poland, has completed a series of experiments aimed at the registration and measurement of a beam of electromagnetic radiation popularly called a "Death Flash". This beam is emitted by all living organisms at the moment of their death. Some findings concerning "Death Flash" were presented in [1D5] OMNI magazine, Vol.8, No.3, December 1985, page 115. It should be explained here that in the Concept of Dipolar Gravity the "Death Flash" represents a dislocation of ether caused by a separation of etheric reflections (registers or software models) of dying organisms from their physical bodies. Religions describe such dislocations of ether as a separation of souls from bodies. Because any motion of ether manifests itself as the electromagnetic field, therefore, the above separation must also be registrable in the form of an electromagnetic beam (see also evidence #2D2.2 from the end of subsection D2.2).

#2D5. Research conducted on dowsers reveals that areas where their rods indicate some findings are also characterized by slightly different intensities of the magnetic field. Some descriptions of the results gathered in this matter are published in the paper [2D5] by Tom Williamson, "A sense of direction for dowsers?", NEW SCIENTIST, 109 March 1987, pages 40 to 43. In the above paper the experiment is also described, in which a magnet is placed on the forehead of subjects and it drastically disturbed their ESP abilities.

#3D5. Acupuncture points are detectable in an electromagnetic manner. On the other hand the Concept of Dipolar Gravity explains these points as areas where the etheric models of our bodies exchange signals with their surroundings. Because such an exchange would take the form of flows of ether, the paths of these flows must be indicated by relevant electromagnetic properties.

D6. Telekinesis - a power source for free energy devices and a principle of operation for Teleportation Vehicles

It is certain that every available property of the Universe, which is utilized by living organisms can also be utilized technically. We have already built numerous devices that copy recognized functions of the human body (e.g. microphones, speakers, video cameras, computers, artificial hearts). Further devices are in the process of construction. As the Concept of Dipolar Gravity explains the principles of telekinesis, we should also expect that soon even more advanced devices will be completed whose operation will utilize a technological version of this phenomenon. Let us now briefly analyze the general concept of

such devices, whose specific descriptions are contained in chapters C and J (see subsections C5.1.1 and J1).

The terminology used in this treatise is so selected that it indicates the origin of a given telekinetic motion. The term "psychokinesis" is given to the motion caused by the human brain. But the type of telekinesis caused in a technological manner, i.e. by a technical device not by a living organism, is called here "telekinesis". In spite of these two terms used to distinguish between human psychokinesis and technological telekinesis, the principles of this phenomenon in both cases remain exactly the same. From the Symmetry of Nature it can be deduced that telekinesis results from the utilization of the property of ether called self-mobility, which is the magnetic equivalent of mechanical inertia. The explanation of the magnetic field as a circulation of ether suggests that this self-mobility should manifest itself during the acceleration or deceleration of magnetic fields. Such acceleration or deceleration should either be obtained when the flow of ether is rapidly interrupted (human psychokinesis) or when magnetic field force lines are physically accelerated or decelerated (technological telekinesis). Present research seems to suggest that humans produce such interrupted flows of ether by that part of their brain called the "pineal gland". If this were the case then the key to learning about the nature of human psychokinesis would lie in the investigations with instruments of the magnetic connection between the pineal gland and common forms of human psychokinesis (e.g. bending of a V-shaped divining rod - see subsection D11).

The explanation for the principles of telekinesis derived from the Concept of Dipolar Gravity states that this phenomenon is a result of dislocating the mirror reflections (software models) of selected objects within the counter-world. Because of the gravity connection existing between the objects and their mirror reflections, such a dislocation must also cause physical objects to be moved in our world. To move the software models within another world no external energy supply is required. But the physical motion of objects within our world will consume energy according to the Conservation of Energy Principle. Therefore, as the Postulate of Interchanging Thermal Energy states, objects moved telekinetically will absorb thermal energy contained in the environment. This makes telekinetic motion a reversal of friction. Similarly, as friction spontaneously converts mechanical motion into heat, telekinesis spontaneously converts heat into motion.

The simplest device which could utilize a technological version of telekinesis would be a "telekinetic motor". We could describe such a motor as a device which causes the motion of some of its parts by shifting in the counter-world the mirror reflections of these parts. Because the technological telekinesis can be released through acceleration or deceleration of magnetic fields, telekinetic motors must employ some sources of magnetic field. It was explained that shifting the etheric reflections of the motors' parts will not cause any consumption of energy. Therefore the telekinetic motors are able to operate without any external energy supply. But according to the "Postulate of Interchanging Thermal Energy" described in subsection D2, the energy that drives telekinetic motors will be withdrawn from the environment, thus cooling it down. So, telekinetic motors will combine the function of "perpetual motion" with the function of a freezer - they will produce motion through decreasing the environmental temperature. The telekinetic motors, while operative, will also emit an "extraction glow", described earlier in subsection D2.

To illustrate how the design and operation of future telekinetic motors could be deduced directly from the Concept of Dipolar Gravity, it is necessary to analyze the technical ways of releasing telekinetic motion. An understanding of these ways requires our knowledge of the analogy (or rather reversal) existing between magnetic self-mobility and mechanical

inertia - refer to the second generation of the mass circulating propulsion systems listed in Table B1. Guided by this analogy we can deduce that telekinetic motors will probably consist of three relatively moving parts, i.e. a stator, a field activator, and a rotor. The stator and field activator must house numerous sources of a strong magnetic field. These sources will be in a continuous relative motion, causing their magnetic fields to interact dynamically with one another. Such an interaction will accelerate and decelerate the circuits of the magnetic field, thus triggering a technologically induced telekinetic motion. The motion so released will be directed onto a third moving part, a rotor, making this part rotate also. The motion of the rotor will then be transmitted outside of the telekinetic motor and supplied to the devices propelled by it. A fraction of this motion will be returned back to the field activator, causing relative movement towards the stator, and in this way forcing the incorporated sources of the magnetic field to accelerate and decelerate their force lines.

The above deduction shows that the telekinetic motor in many ways resembles an advanced electric motor. After increasing its external work-load above a certain "critical value" (which depends on its design and on the efficiency of the sources of the magnetic field utilized in it), the telekinetic motor should even operate as an ordinary electric motor. The major differences existing between these two propelling devices can be limited to the following:

(1) In a telekinetic motor the propelling effect is produced not by the flow of a single stream of a working medium, but by a confrontation of two streams of a working medium.

(2) This motor uses two separate groups of magnets dynamically interacting with each other in order to accelerate or decelerate their fields. (In contemporary asynchronous motors only one such source of a rotating field is used.)

(3) An effective telekinetic motor will use not less than three relatively moving parts, i.e. a stator, a field activator, and a rotor (instead of two such parts appearing in contemporary electric motors).

(4) In order to release and utilize the highly advanced telekinetic motion, the telekinetic motor must meet rigorous technological requirements which do not apply to the simple operation of an ordinary electric motor.

It should be stressed here that, after applying the above descriptions to the circulation of air, the differences existing between a modern windmill (representing a pneumatic motor of the first generation - see Table B1) and an air turbine (representing a pneumatic motor of the second generation) could be described in exactly the same way.

Let us now summarize the characteristics of the telekinetic motor. It will employ interaction of two groups of magnetic fields to release the technological telekinesis. It will contain not less than three relative moving parts, two of which must house numerous sources of a strong magnetic field (e.g. permanent magnets, electromagnets or Oscillatory Chambers). Its operation, design, and technical requirements will be much more rigorous than those of contemporary electric motors. The power of the mechanical motion produced will be limited by the power of the magnets utilized in its construction. It does not need fuel or electrical energy in order to operate. Thus, it will make mankind's oldest dream come true: to have a device which works continuously without requiring any energy supply. While operational it will cool down the environment and emit the so-called extraction glow. The intensity of such cooling and emission will depend on the thermal energy exchange with the environment, which must match its yield of mechanical energy.

If telekinetic motors are combined with electricity generators, their operation provides a foundation for the development of "free energy devices", which in this treatise are called "telekinetic power-stations" - see the description in subsection C5.1.1.

The Periodic Principle in the development of propulsion systems (see subsection B3 and Table B1) states that when the first commercially viable telekinetic motor is built, the completion of a second generation of propulsion systems utilizing the circulation of magnetic field force lines will commence. The next type of device developed in this generation will be the telekinetic propulsor used for transportation purposes. The transportation achieved in a telekinetic manner is called "teleportation". Therefore, the vehicles utilizing the telekinetic propulsor can be called "Teleportation Vehicles" - see the descriptions from subsection J1. Teleportation Vehicles will shift entire objects in space through altering the position of the etheric reflections of these objects. Their operation also will not require any external energy supply, but during flight they will decrease the environmental temperature and emit an extraction glow. Therefore mastering the technological version of telekinesis will open a new era of teleportation in our transportation systems, bringing to an end the present period of travelling and moving by means of a physical dislocation of objects in space.

The principle of telekinesis, revealed by the Concept of Dipolar Gravity, indicates that objects moved in such a manner should theoretically be able to penetrate solid matter (e.g. walls, rocks, furniture, etc.) without any damage to their own consistency nor the consistency of the matter penetrated. In this way civilizations possessing Teleportation Vehicles will be able to demonstrate actions which are considered impossible with our present knowledge of physics. For example Teleportation Vehicles will fly through buildings or mountains and not leave even the slightest trace on them, whereas teleportative personal propulsion will allow us to visit someone's home by entering through the walls. Note that in this respect teleportation propulsion will differ from the first generation of magnetic propulsion (i.e. the Magnocraft) which will burn out glossy tunnels while moving through solid matter.

The above brief summary of the applications of technologically induced telekinesis shows how important it is for our civilization to advance research on telekinetic power-stations. The intensification of this research, through accumulating and extending our knowledge on a technological version of telekinesis, will soon culminate in the teleportative propulsors (octagonal Oscillatory Chambers) which will make possible interstellar trips to almost unlimited destinations.

There is already some evidence accumulated which confirms the feasibility of the devices described above. Let us look at some of this evidence.

#1D6. The first working models of telekinetic power-stations are already completed. These are known under the name of "free energy devices". Subsection C5.1.1 of this treatise describes some of them.

#2D6. There are numerous reports from UFO observations that the vehicles of these advanced civilization are able to fly through solid matter or be penetrated by solid objects. Some of these reports can be found in the book **[1D6]** by N. Blundell & R. Boar, "The World's Greatest Mysteries" (New English Library, London 1980, ISBN 0-7064-1770-4) - see pages 132 (people are able to walk through UFO-nauts and UFO vehicles) and 142 (a flying disc disappears into rocks). The report quoted in appendix Z also provides evidence for such penetration of solid objects (see phrase N-46).

#3D6. In the TV program "The Magic of David Copperfield VIII", (CB, Director: Stan Harris) a scene shows David Copperfield walking through The Great Wall of China. Although this walk is claimed to be only a magician's clever trick, in fact this trick displays all the attributes of advanced propulsion systems based on teleportation (including emission of the "extraction glow").

D7. The model of the brain as an input-output device

According to the Concept of Dipolar Gravity every material object simultaneously exists in two worlds. The part of this object prevailing in our world (body) performs material functions, whereas the part prevailing in the counter-world (register) performs intellectual and information-storing (long-term memory) functions. The natural consequence of this situation is that in the process of evolution some more advanced life forms (e.g. humans, animals) must surely have developed organs that link together the parts from both worlds. The brain is an organ that most probably provides such a link.

It is registered in numerous cases that the memory remains even when portions of brain are surgically removed (see [1D7] "Intersections of Holography, Psi, Acupuncture, And Related Issues" by D. J. Benor, American Journal of Acupuncture, Vol. 11, No. 2, April-June 1983, pp. 105-118). This contradicts the understanding to-date of the brain as a collection of "pigeon holes" into which data is packed and stored. Therefore, the long-term memory must now be explained in another way. Contemporary medicine prepared another explanation of memorizing based on the so-called "holographic model of our brain". This model assumes that the remembered information is distributed amongst all cells of the brain like a holographic picture, so that every cell contains complete information about everything. Thus, whatever part of the brain is removed, in other parts the same information is still preserved.

But this holographic explanation still does not match the existing facts. There is an increasing number of facts indicating that the memory of events can be preserved or passed on even while the brain that registered them is completely dead. These kind of facts originate from the so-called "psychic" experiences. An example of such experiences can be learning about a murder directly from the victim, or learning about past life ("reincarnation") when the subject of this life is already dead.

While any model of the brain based on the present single-world understanding of our Universe is unable to provide satisfactory explanation for the above facts, the model derived from the Concept of Dipolar Gravity leads to the explanation that matches all existing evidence. This is because in a dual-world Universe, the substance (ether) filling up the counter-world displays the attributes of a natural computer, i.e. it intercepts, stores, processes and outputs the information. Thus, the existence of such a thinking and memorizing substance, allows us to store information in our registers contained in the counter-world, not in our physical bodies. The model of the brain which postulates this capability is called here "the model of the brain as an input-output device".

In the "**model of our brain as an input-output device**" it is assumed that we do not have in our heads any long-term storage (memory), but rather an input-output device which exchanges information with registers contained in the counter-world. Using "computer" terminology, our brain is not a computer itself, but only the equivalent of an intelligent terminal. This terminal is able to perform some limited processing by itself, as it possesses its own short-term memory, however, in all important cases it refers to the information contained within the counter-world. The process of exchanging this information with the other world is known by the name of long-term memory system.

The model of the brain described above provides an excellent explanation for all facts and phenomena observed to-date. For example, such phenomenon as **hypnosis** is defined as switching our brain entirely onto the perception of signals from the counter-world. **Telepathy** is exchanging the messages between different brains via the counter-world. **Dreams** can be explained as adventures of our registers in the counter-world. **Multiple**

personalities can be explained as switching our brain to cooperate with more than one register of memories. **Reincarnation** is simply attaching the brain of a new person to the etheric memory (register) of a person who is already dead.

One of the implications of the model of the brain as an input-output device is that it postulates the existence of a "**universal language**", i.e. a language in which the ether thinks, and thus which is used by the entire Universe. It is called here DMLT (Data Manipulation Language of Thought). This language would be a natural equivalent to binary "machine code" in which our computers think. It would differ from the human spoken languages, and would be the language in which all living creatures conduct their thought processes. It would also be the language in which all creatures living in our universe could directly communicate with one another. The existence of such an universal language not only enables brains to communicate with their etheric reflections, but also enables communication between one creature and another (e.g. humans with animals, plants, UFO-nauts, etc.). It is extremely interesting that the existence of such an universal language was already suggested indirectly in the late 1950s by Noam Chomsky in his research concerning generative grammar.

At this point the author would like to stress that the existence of such a universal language of thoughts (DMLT) introduces numerous philosophical implications. Probably the most important of them is that this language must consist only of the "words" which correspond to the ideas and possibilities already recognized and applied in the Universe. Practically, this means that we are not able to think or to imagine anything that exceeds the capabilities of the Universe, as it simply would not have the appropriate "word" to be expressed in our minds. Putting it in another way "**every goal which is possible to image in also possible to achieve**". The problem with comprehending the above principle lies in frequently mixing up the goals with the ways of achieving them. For example the previously discussed idea of an antigravitational field in the concept of monopolar gravity, in fact represents only our demand addressed to the Universe requiring its particular way of operation. Therefore antigravity thus defined represented the way of achieving the goal, not the goal itself. If antigravity is limited to a pure goal only, i.e. to the formation of a force that repels one mass from others, then a number of possibilities for its achieving can be revealed, two of which (i.e. the Magnocraft and the Teleportation Vehicle) are explained in this treatise.

An especially important consequence of the discussed model of the brain is that it provides a perfect explanation for all forms of Extra-Sensory Perception (ESP). In this explanation ESP is a body of methods for perceiving additional information (i.e. the information not stored by our own brain) from the counter-world. In order to gain this information, the brain of an ESP practitioner accesses the etheric model (register) of the object subjected to ESP inquiry and reads from this register all the information required.

There is a wealth of evidence which confirms the correctness of the model of our brain as an input-output device. Let us briefly review some of this evidence.

#1D7. Communication between people and UFO-nauts. There are numerous cases reported when members of UFO crews communicated with people using some telepathic devices. These devices caused a direct and soundless transmission of thoughts between the brains of humans and the brains of UFO-nauts. Such a direct exchange of thoughts is only possible when the universal language mentioned earlier exists. The existence of this language in turn confirms the operation of our brains as input-output devices.

#2D7. Communication between people and plants. The universal language allows us to communicate with every possible inhabitant of the Universe - even including pot plants. It has been confirmed that pot plants grow better when someone talks to them with love and

care. Moreover, there were experiments completed, which utilized equipment similar to a lie detector. These experiments proved that plants react with panic to our thought intentions to harm or destroy them.

#3D7. Communication between people and animals. It is well known that many people are able to "say" something to an animal, or insect, and that the message conveyed gets through somehow to the addressee, whose further actions prove the complete understanding of what was said. Any rational explanation for such communication must involve the operation of all brains (also those of animals and insects) as input-output devices.

The most well known person utilizing such communication was late Mrs Barbara Woodhouse, whose frequent appearance on British TV gained her world-wide fame (especially her "sit!" command).

In central Europe (especially in Poland, Germany and Czechoslovakia) there is a vivid tradition of peripatetic rat-catchers. Those extraordinary people earned a living by ordering rats, mice and even insects to follow them beyond the boundaries of the village that paid for this form of debugging. These pests were then drowned or burnt. The last of these rat-catchers was supposed to be still operative in an area of present Poland at the beginning of this century. One of the romantic records of these people survived in the form of the German legend of the Pied Piper of Hamelin (the main event of which supposed to take place on 23 July 1284).

#4D7. Animal instincts. It is well known that animals display abilities to resolve problems which definitely extend beyond the capabilities of their (or even human) brains. According to the model of brain discussed here, all brains (also those of animals and insects) must have the ability to access and read registers from the counter-world, thus the so-called instinct would be only an animal equivalent to human ESP abilities. Animals could gain knowledge of correct behaviour in a particular situation by searching through the appropriate registers in the counter-world. There is a mass of evidence supporting this possibility. Only some of this will be reviewed below.

a) Knowledge of correct behaviour in a critical situation. We can observe how a sick animal somehow recognizes the best food and treatment for a particular disease. During periods of drought, elephants, like our dowsers, find the location of shallow underground water sources, saving themselves and other animals. Dogs know the best way to save their masters in a moment of emergency.

b) Reading warnings of bad events. It is almost legendary that dogs can predict an imminent natural disaster and howl loudly as an alarm. In Japan they raise a special kind of aquarium goldfish which can detect an earthquake a few hours in advance. There is the well known claim of sailors that rats foresee a coming disaster and abandon in advance the ship that is going to sink. Favourite pets know about the death of their masters. Birds do not sing at the site of some former concentration camps. Some farm animals seem to know when they are designated to be killed.

c) Pets foreseeing their master's return. It has been observed that favourite pets know several minutes in advance that their master is going to return home and know also at which entrance they should wait to welcome him/her. Similar knowledge is displayed by little children who know a few hours in advance that their favourite relative is coming and he/she has something good for them.

d) The migration and navigation instincts of animals. The only satisfactory explanation for the migration and navigation instincts of some birds and fish seems to lie in ESP. Sea birds have no orientation points and they still return to their nests without error. There are

known cases of dogs and cats returning home having been taken hundreds of kilometres away in windowless boxes. Some dogs are famous because of finding the way to their owners after those owners changed city or even country.

e) Synchronization of the movements of birds and fish. We may observe flocks of birds and shoals of fish as they manoeuvre simultaneously. No known physiological senses explain such perfect synchronization. A similar effect can also be experienced by two bicycle riders or car drivers who unexpectedly face each other on a collision course. They will repeat exactly the same manoeuvres until they crash.

#5D7. Review of ones own life during the so-called Near Death Experiences (NDE). It is widely documented that the dying person relives again the most important events from his/her own entire life. Mr Mike Irving of 120 Terrace St., Invercargill, New Zealand - one of the numerous people known to the author who has experienced this - describes it thus: "It was not just reviewing a three-dimensional movie of my life. It was as complex as in reality. I was there and I felt, thought and saw everything again. The only difference was that I observed myself as an outside witness and that I could not change anything in this review".

The review discussed here contains one element, confirmed by many participants, which excludes the possibility of the brain origination of these pictures, i.e. their nature is holographic. If the pictures were only a display of the biological memory content, they should present the events exactly in the same form as the eyes of the dying person saw them while they happened. But this is not the case. The review consists also of pictures of the person, presenting him/her as if he/she were filmed by an outside cameraman. Moreover, during the review details also are visible, which could not be noticed in a real experience, because they were inappropriately located towards the subject (sometimes scenes are presented which are happening behind some physical obstacles and by no means could be seen by the person involved). This characteristic indicates that the discussed review can not originate from the brain itself, but is read by the brain from the bank of information stored within the counter-world.

More information about the above phenomena can be found in the book **[1D7]** by R.A. Moody, "Life After Life", Stackpole Books, 1976, ISBN 0-8117-0946-9, pp. 61 to 69.

#6D7. Double or multiple personalities. In the paper **[2D7]** "Multiple Mix-ups", published in OMNI, Vol. 8, No. 2, November 1985, p. 94, some examples of people who experience complete changes of personalities are discussed. It seems that the same body can be occupied in turn by two or more completely different persons. The differences in these personalities can be so significant and their switching so complete that they affect not only the psychological, but also the biological state of a person. For example the different personalities (of the same physical person) may require different optics of glasses, or be allergic to different foods and medicines. The existence of this phenomena provides a further evidence in support of the model of our brain as an input-output device. This is because any rational explanation of multiple personalities must account for the switching of someone's brain to the register of a different person - synchronized with the simultaneous taking control over the entire body by this register (i.e. by the software model of a different person).

#7D7. Reincarnation. The details of previous lives can be recalled. Some children during normal activities, and also various adults during hypnotic regression or dreams, are able to recall details from previous lives. These details are very vivid, and prove themselves correct when verified by historical research or in a field confrontation. In addition other evidence, such as the rapid appearance of non-learned abilities or birth marks corresponding to injuries from a previous life, also confirm the concrete origin of these experiences. The

main puzzle in all these recalls is where the remembered information is stored, as the previous physical bodies (brains also) are dead. The Concept of Dipolar Gravity provides the answer: in the registers from the counter-world. So the recalls of previous lives are simply accessions made to these registers. Numerous cases of recalling past life are documented in the book **[3D7]** by Joe Fisher, "The Case for Reincarnation", Granada Publishing Ltd., London 1984, ISBN 0-246-12650-7.

#8D7. Problem-solving in sleep. There is a well-known method of acquiring solution to our problems during a night's sleep. If we clearly specify just before falling asleep what our problem is and what kind of solution we are looking for, when waking up in the morning we may find out that we know the answer. As the knowledge that is acquired during the night must be input from somewhere, the above phenomenon additionally supports the model of our brain as an input-output device.

#9D7. Superstitions. It is well known that for some people superstitions are a reliable source of information on events that are going to happen. As every person sets his/her own warning signals, thus, making superstitions work must involve some kind of communication occurring between the brain of a superstitious person and the counter-world. The principle of this communication is identical to the one applied in involuntary forms of ESP, only that obtaining a reply does not involve pendulums or divining rods. Therefore, the claim of numerous people that superstitions operate for them is the next confirmation of the correctness of the model discussed here.

The explanation for the operation of superstition derived from the Concept of Dipolar Gravity also reveals why it works for some people, and does not work for others. The reason for this is that one must have a clearly defined interpretation for the signals received. Devoted believers in superstitions adhere to one set of unambiguous signals which they always interpret in the same way. Therefore they work for them perfectly. The scoffers do not have their own signals, and only temporarily adopt someone else's while they are in the right mood or want to prove something. Naturally in such circumstances the superstition may not work for them.

#10D7. People with an undersized brain. Contemporary medicine registers numerous people, who display full intellectual capabilities, but simultaneously have an undersized brain. A number of such cases are documented in the book **[4D7]** by Dr. Benito F. Reyes, "Scientific evidence of the existence of the soul" (Theosophical Pub. House, Wheaton, Ill. 1970, ISBN 835601927). In some cases the size of the brain of these people does not exceed the kernel of a walnut. The existence of such people provides further evidence that the intellectual capacity of a person is not dependable on the size of the brain. This in turn proves that intelligence must originate from another source than the brain (i.e. from the etheric model of a person) and that the brain is only an input-output device (terminal) which links people with their source of intelligence.

D8. ESP - a key to instant benefits from the counter-world

The name Extra-Sensory Perception (or ESP) is assigned to the various methods of acquiring information without employing the physiological senses. Examples of ESP are dowsing (i.e. detection of underground water or minerals), psychic diagnosing of illnesses, predicting the future, telepathy, etc. As hitherto no explanation was known for the source of this information, there has been a generally bad feeling about ESP, and the majority of scientists

qualify it as "scientific heresy".

The model of the brain as an input-output device discussed in subsection D7 provides an excellent explanation for ESP. In accordance with it, ESP is the result of acquiring access to the information contained in the "registers" from the counter-world. The mechanism of operation of ESP is described by the analogy of the counter-world to a huge computer program. Within this program are contained the registers mentioned earlier, which can be compared to the contemporary Data Bases. The human brain is a kind of input device which sets the appropriate "accession programs" (in a Data Manipulation Language of Thought or DMLT) that carry out a search through these Data Bases. The entire body is an output device which intercepts the received answers. Also the information acquired has the exact form of results obtained from a computer program. It can not be a concept or an explanation, but it is a YES/NO answer, a number (quantitative answer), a shape, a sound, or a direction.

The explanation of ESP principles derived from the model of our brain as a input-output device gives better understanding for numerous unexplained facts about this way of gathering information. For example it explains why ESP inquiry may refer to material objects - not to abstracts. (This is because only material objects possess their own etheric models in the counter-world). It is also known that in order to inquire about another person, ESP practitioners must possess some material object belonging to that person. Again, according to the Concept of Dipolar Gravity, in order to access the software model whose address is unknown, we firstly must find the link (address) to this model through reading data from the model of the other object connected to the one searched for.

There are two types of ESP which we will call "cognitive" and "involuntary". They differ from each other because the first of them employs, whereas the second excludes the brain in the perceiving of answers. In cognitive ESP all replies to inquiries are forwarded straight to the brain where they are processed and synthesized into the final forms. To achieve this, the mind of the inquirer must be in a special state, very difficult to introduce in normal circumstances. This state appears mainly during hypnosis, dreams, exaltation, etc. But some naturally inclined people, called "psychics", are able to obtain it whenever it is required. Probably in the future some training techniques will be developed, which will allow everyone to master this ability. Until then this type of ESP seems to be closed to mere mortals. Examples of it are: clairvoyance, precognition, telepathy.

In the second, involuntary type of ESP the answer signals are forwarded directly to the muscles of the inquirer, where they appear in the form of a muscular movement or a change in the electro-magnetic properties of the body (e.g. its electrical resistance). Because these effects are not consciously perceived, they are called involuntary. Examples of ESP utilizing them are: dowsing, and working with a divining pendulum. Involuntary ESP can easily be developed by everyone and the appropriate training techniques is described in subsection D8.2. Moreover, it provides much higher effectiveness than the cognitive one and can be utilized in practically every application, including such technical areas as repairing cars, designing new devices, verifying new ideas, etc. For this reason the examples discussed in the rest of this chapter refer mainly to involuntary ESP. But all the deductions and theoretical models (especially PDB) presented here, can be applied to both types of ESP.

The possibilities of ESP seem to be unlimited, although so-far still remaining untapped. It is likely to provide everyone with a direct and free access to the most powerful Data Base in the whole Universe. Perfectly correct information on every form of matter, i.e. on every object, organism, or person, that ever existed or will exist in the entire Universe, could be at everyone's finger tips. It is difficult to image how dynamic the acceleration of our

progress may be, once we have gained a proper and complete mastery of ESP. For example the completion of new inventions such as the Oscillatory Chamber or the Magnocraft could then require only the time necessary for their technical realization and testing. Almost all our present experiments and developmental procedures would not be necessary at all after the proper application of ESP.

It should be stressed, that in accordance with the Concept of Dipolar Gravity each person projects part of his/her body into the counter-world. Therefore theoretically each of us meets all the requirements necessary to successfully develop and use involuntary ESP technique. But to do this, some clearly recognizable signals, communicated involuntarily by our body must be developed and maintained. Without such signals the required information, after reaching us, can not be interpreted and understood. Therefore to make ESP work, continual practice is necessary, to maintain the same clear answer signals (e.g. in the pendulum-assisted ESP: the clockwise circulating of a pendulum for the answer YES, a swinging movement for the answer NO, and a counter-clockwise circulating for the answer ERROR IN THE FORMULATION OF AN INQUIRY). Since continual training is required, perfection in ESP can be achieved only by extremely strongly motivated hobbyist or people living from it professionally (e.g. dowzers). Only they can afford the time and energy for everyday practice to improve their techniques.

Out of all techniques of involuntary ESP, the greatest potentials for application in science and technology carries instrumental ESPs. Instrumental ESPs are all those techniques in which bodies of ESP practitioners are connected to some kind of instrument (pointer) which displays or interprets involuntary signals perceived by these bodies. Present techniques of instrumental ESP utilize for pointers very primitive equipment (e.g. divining pendulums, divining rods) which have not improved for many centuries. But conclusions from the Concept of Dipolar Gravity, especially those concerning the electromagnetic manifestation of paranormal phenomena (see subsection D5), open the way for utilizing more sophisticated and reliable electronic equipment. Those conclusions indicate that using devices similar to "lie detectors" would increase significantly the reliability of ESP answers.

Presently most popular technique of instrumental ESP involves the application of divining pendulum. This technique seems to be easiest to master, does not require any sophisticated equipment, is universal, and gives quite reliable and repetitive answers. Its disadvantages include: (1) the difficulty of use in open or unstable areas, where the action of wind or waves disturbs the movement of a pendulum (therefore for confirmation in a natural environment, findings of a pendulum are usually supplemented with the use of a divining rod), and (2) the requirement of continual practice to maintain the reliability of signals. Let us now review the evidence accumulated by the author so far, which proves the effectiveness of the pendulum-assisted ESP.

#1D8. Water divining on a map. This is one of the most popular applications of the pendulum-assisted ESP technique. In this application the main part of the search is conducted within the diviner's office. A client is asked to draw or to present the map of a searched area. Then, using a pendulum, this map is oriented towards geographic north, so that the north on the map points northward also in the diviner's office. The next step is finding and marking on this map the course of main streams of water in the searched area. For each of them the efficiency of the flow, the quality (clarity) of water and the underground depth of a stream is determined. After the client decides which stream he/she would like to exploit, the diviner visits the area and points out its exact location (this time using a divining rod). Further details about this application can be learned from numerous books dedicated to water

divining, or from Mr. Brian J. Watson, 145 Tarbert St., Alexandra, New Zealand, who is one of the diviners utilizing it practically.

In the above application of the pendulum-assisted ESP, the drawing of a map is frequently replaced by using an already printed one. But this printed map must be located only on one side of a piece of paper (i.e. the other side should be blank). This is because the information on a map represents an abstraction, whereas the piece of paper on which it is drawn constitutes the material object. So the register belong to this piece of paper whereas the map is stored only as information written into this register. When a paper is printed on both sides its register contains two sets of information which can be easily confused by a diviner searching through it.

It is extremely stimulating to analyze the methods of acquiring quantitative information (i.e. efficiency of the water flow, iron content of the water, underground depth of the stream, etc.) used by various dowzers. Each dowser uses a method which differs from that used by other dowzers, but at the same time each one of them meets the requirements of Perfect Data Base (PDB) described in subsection D8.1. Reviewing these methods reminds one of looking at programs by various authors prepared in such a way that each program applies a different procedure, but all of them access the same Data Base and answer the same questions. An analysis of these methods reveals how accurate and how useful the PDB analogy in describing the ESP phenomena is.

#2D8. Minerals divining. Techniques of instrumental ESP, in a way similar to water divining, can also be used for finding other substances, minerals or objects. The principal requirement in such a case is that the diviner holds in his hand, or looks at a sample of the substance or the identifying attribute of the object that he is searching for. To meet this requirement, diviners frequently use pendulums made of the substance they are searching for. Some of them use a transparent pendulum formed as a kind of bottle into which they put the searched for mineral.

#3D8. Designing new technical devices. In 1985 the author of this treatise met Mr Alan Plank, a professional dowser - see **Figure D1**. Mr Plank spends much of his spare time quite successfully mining gold, for which he utilizes the pendulum technique to locate deposits of gold. For the purpose of this mining, Mr Plank needed a very efficient pump, able to withdraw not only water but also stones, sand and pieces of gold. Everything that industry offers in this matter is not efficient enough, and also the technical solutions used in the commercial pumps are inadequate for the purposes of gold mining. Therefore Mr Plank decided to build a suitable pump by himself. Because he is not an engineer, he asked his pendulum for professional help in designing his pump. On a piece of paper he drew the lines indicated by the pendulum. The pendulum also indicated the dimensions and materials. The final construction is extremely simple. It contains no moving parts, and is run by compressed air supplied from a cylinder or a portable compressor. An hydraulic engineer consulted about the design pronounced that it would not work. But the pump worked perfectly after being built, with the efficiency of about 30 thousand gallons per hour. Mr Plank claims that his design is about 30% more efficient than the Venturi pump, to which its principle of operations is similar. The most unusual aspect in the entire case is that the first prototype of the pump began to work perfectly, immediately after being built. Everyone who deals with the implementation of mechanical designs knows that for each new device it is absolutely necessary to complete a whole series of prototypes, in which every subsequent one is only a slight improvement in relation to the previous, and more faulty ones.

Readers who are interested in learning further technical details about Mr Plank's pump

or his dowsing techniques may contact him at the following address: P.O. Box 7051, Invercargill, New Zealand.

#4D8. Machine diagnostics. Some dowsers use a pendulum-assisted ESP technique to locate the cause of malfunctioning in a particular machine. If they do not know the construction of a checked device, they use a drawing of it (printed on one side of paper only!) presenting every internal detail. If they know the structure of a diagnosed machine they work directly on it. To find the cause of malfunctioning they concentrate on it, element by element, asking the pendulum about its state, until they locate the problem. It is claimed that a diagnosis of cars conducted by the pendulum method can be just as precise as one performed by sophisticated electronic equipment. Examples of practitioners who utilize the above application are: Mr Alan Plank of New Zealand and Mr Wojciech Godziszewski, ul. Szczecińska 32/7a, 72-003 Dobra, Poland.

#5D8. Illnesses diagnosing. The pendulum technique is also frequently used for the location and recognition of illnesses and for curing them. The location of an illness is conducted in an identical manner to the location of malfunctioning in a machine. For the cure, each practitioner uses his own method. An example of practitioner who pursues the medical application of the pendulum technique is: Mr Wojciech Godziszewski of Poland.

* * *

The above examples present only a few of the numerous applications made possible by the mastering of a pendulum-assisted ESP technique. Unfortunately, to utilize the potentials of ESP as a scientific tool, a lot of work still needs to be done. Our use of these abilities to-date has been based more on the empiric discoveries of individual hobbyists and on the enthusiasm of some devoted practitioners than on solid research or proven methodologies. To transform these spontaneous experiments into a reliable tool of scientific investigation, new devices and methodologies need to be developed and the subjective factor needs to be removed or at least significantly reduced. All of these can be achieved only in an atmosphere of recognition and approval of the duality of our Universe (i.e. of the independent coexistence of its hardware and software components). But the effort of promoting new attitudes and intensifying the research on ESP techniques is worth pursuing, as there is a body of evidence indicating that the mastering of ESP may save a lot of unnecessary experiments, errors and expense in the completion of new technical devices, e.g. the Oscillatory Chamber and the Magnocraft (compare the invention of Mr Plank's pump).

D8.1. Perfect Data base (PDB) as a theoretical model of ESP

Generations of ESP practitioners have accumulated some observations concerning the potentials and limitations of this method of acquiring useful information. But hitherto there was no theoretical model available that would provide a tool for the clear prediction of what is possible through ESP and how it should be achieved. The author now introduces such a model which is to be called a "Perfect Data Base (PDB)". The PDB is a purely hypothetical computer containing in its storage the detailed and complete data (registers) for every material object that ever existed or will exist in the entire Universe. The PDB has no data available on principles, concepts, and other non-material abstractions; therefore it does not understand inquiries referring to them, unless these inquiries are referred to the objects that represent these abstractions. The PDB conducts all processing instantaneously, independently of how distant in space or time is the object whose register is being searched,

for the purpose of the completion of this processing. The PDB understands and executes inquiries formulated in a human language, and it inputs the processing commands straight from the brain of an inquirer, when they are still in the form of thoughts. The PDB is able to perform any type of operation that other computers can do, and the results of its processing are always correct.

The introduction of the Perfect Data Base allows us to predict easily the operation, possibilities and limitations of every form of ESP. Each problem that could be resolved by PDB may also be resolved by ESP, and the formulation of a problem for ESP must also be identical to that required for PDB. This means practically, that perfection in ESP requires a mastery of the same rules and principles that programmers utilizing Data Base must know. Therefore for professionals in ESP and for investigators of that phenomena appropriate courses in computer programming would be extremely valuable.

The concept of PDB seems to be a key to understanding, developing and mastering ESP. To realize how helpful it can be, below are listed some of the vital attributes of ESP explained in the PDB example. Those readers who have already had some experiences with ESP, when reviewing the descriptions that follow, will appreciate the benefits provided by the concept of PDB. For other readers these descriptions will perhaps reveal that ESP is only one more of our natural abilities, which instead of being ignored or derided should rather be investigated and utilized.

1°. We are born completely equipped as terminals for PDB. Our brain is the input device, which transmits our wishes, intentions and inquiries, formulated in the Data Manipulation Language of Thought (DMLT). Our entire body is the equivalent of PDB output devices that intercept and display the information received back. In some forms of ESP, additional equipment is used (e.g. pendulum, divining rod, etc.) which performs the function of a pointer that helps to exhibit and interpret the answer signals intercepted by the body. For this equipment no special "magical" requirements are imposed. It only needs to suit the type of involuntary signals developed individually by the body of a particular user. A potato suspended on a string or a branch from the nearest tree, in the hands of experienced user will provide the same correct answers as the most sophisticated divining pendulum or rod.

2°. There exists a kind of universal language (called here DMLT - see subsection D7) that is used by the whole Universe. This language is utilized by the ether for expressing all information recorded within the software registers. Our entire thinking process is conducted in DMLT, and all other living creatures also use this language. DMLT is a language in which we formulate our ESP inquiry. DMLT does not correspond to any human language and when we talk, our expressions are automatically translated from DMLT into the spoken language. Sometimes we recognize that we know something in DMLT but we have forgotten the appropriate word in the spoken language. Also many people who have changed their country and language very clearly experience that their thinking occurs in some kind of universal language, which is different from those which they use for speaking. An illustration for DMLT from the PDB model would be a machine code (machine language) in which contemporary computers "think". This machine code differs from the programming languages in which the same computers communicate with their environment (programmers).

3°. Every ESP inquiry must be formulated in the same unambiguous and resolvable way as do the inquiries to computer Data Bases. It must refer only to recognizable material objects whose registers need to be searched to resolve the problem, and also it must clearly describe the kind of processing that should be done. Correct ESP inquiry may not involve any processing of abstractions, concepts or ideas, as these do not have registers (data) in the

counter-world. For example the question: "What is the temperature of this room expressed in Celsius degrees?" contains an abstraction (Celsius degrees) and therefore the PDB would not be able to understand it nor to answer correctly. But the same inquiry formulated in another way such as "What would be the temperature reading on the thermometer in my office if it were hanging on the wall of this room?" will receive the correct answer expressed in accordance with our first intention (provided that the indicated thermometer from our office is scaled in Celsius degrees). As it is impossible to eliminate completely mistakes and "bugs" in the formulation of our inquiries, every ESP user should develop a clear signal meaning "NO REGISTER AVAILABLE". The lack of such a signal puts ESP inquiry in the situation of a wrongly programmed computer (PDB), which for invalid inquiries must still provide some answers (in accordance with the programming rule "Garbage in - garbage out"). ESP seems to operate perfectly - if the answers are wrong the reason most probably lies in a faulty application of it.

4°. All types of data processing that are possible in our computers are also possible in ESP. To achieve a particular type of processing it is only necessary to provide a thought-definition of what actually should be done. The above also means that the types of inquiries unanswerable to our computers (e.g. formulation of new ideas) are unachievable through ESP as well.

5°. Every object referred to in an ESP inquiry must be unambiguously identified and easily recognizable among the billions of similar objects existing in the entire Universe. Such a strict identification of THE considered object enables us to search in the right register. There are only two ways of identifying the objects: (1) the inquirer must know them personally and imagine their appearance or see them at the moment of inquiring, or (2) the inquirer must think of, or look, at another object that has a material connection with the subject of inquiry and therefore the searching of the latter register will provide the link to the searched-for object. The second object, which enable us to trace the register of the main object of inquiry, is called an ID key. In the case of an inquiry about an unknown or absent person, the ID key can be his/her photograph, hair, blood sample, or a personal belonging. Again it should be stressed here, that the ID key can not be an abstraction (e.g. a name or a spoken description) as abstractions do not have their own registers that can be searched in order to find out the link to the register of a person being sought.

D8.2. How to develop a simplest pendulum-assisted ESP technique

Readers who reached this point of the chapter are sufficiently prepared to initiate their own experiments with the pendulum-assisted ESP. The most difficult part of such experiment is to find out how to start them (once we started we can find further guidance in appropriate books). To assist in this, described below is an initial set of exercises.

To develop a pendulum-aided ESP technique, one must start with preparing, or purchasing, a divining pendulum. Any bullet-shaped object suspended on a thread, which was not used before for this purpose will excellently perform this function. If there is nothing better available, a heavy needle or a ring will do. Professional dowzers are very strict in not allowing other people to use their pendulums. The Concept of Dipolar Gravity seems to justify this behaviour, because it indicates that information about the interpretation of the answer signals can be stored in the pendulum's register. So if it is used by someone else who utilizes a different set of signals, his/her interpretations will be recorded on top of ours,

causing confusion in all subsequent applications. Therefore to succeed with the completion of these exercises we should make sure that the object we have chosen for the pendulum was not ever before used by someone else for the same purpose. Also if we exchange the pendulum for a new one, we should repeat the development procedure from the very beginning, in order to record into its registers the interpretations for our answer signals.

The first stage of our exercise is to develop the signals "NO" and "YES". We begin with development of the signal NO. For this purpose we utilize a bio-field induced by the blood transfer in our veins. To induce this signal we suspend the pendulum over the veins in our left wrist, holding the thread in our right hand - see part (a) in **Figure D2**. The flow of our blood will induce the pendulum to swing along the veins. To check that the line of pendulum's swinging follows the direction of the blood flow, we slowly change the angle of our left hand. The plane of the pendulum's swing should adjust to this new course of the veins. To develop the signal YES we utilize the change of bio-potentials appearing between our left thumb and forefinger. Positioning these fingers into the "U-shape" we form the bio-half-circle which will be followed by the pendulum. When the pendulum is suspended in the centre of this U it starts to circulate in clockwise direction - see part (b) in Figure D2. In future we will interpret such a circulating movement as a YES answer.

The readers who have used a pendulum before and have already developed their own (different) NO/YES signals, should continue to interpret these signals in the manner they were originally defined.

After successfully developing NO/YES signals we can begin the second stage of our exercise, aimed at utilizing these signals to answer our questions. To accomplish this we use two reversed saucers, under one of which we **ourselves** place the sought object. Then we suspend the pendulum above this saucer and, visualizing the object in our minds, we ask whether the object is hidden there. The pendulum should answer YES by circulating in a clockwise direction. Now we suspend the pendulum above the other saucer and ask the same question. The pendulum should swing in a straight line displaying a clear NO signal. Such simulated inquiries should be repeated until the formulation of our question will induce an instantaneous signal of the correct answer.

In the third stage of developing our ESP technique we conduct exercises with an object hidden by someone else under **one of three** sources placed upside down on a table. Now we learn how to concentrate and what kinds of psychic processes lead to the correct answers. The score will initially oscillate around the probability level, as we are still learning the technique. During the exercise we should try to detect, identify and memorize all these processes occurring within us, which lead to the correct answers of the pendulum. Therefore each time we score a hit, an analysis of our inner experiences should be conducted. We should repeat the elements recognized in such an analysis in our next approach. Similarly, when we miss, we should deduce what distracted us and then in the next approach we should try to avoid it. The most destructive tendencies which we must learn to eliminate at this stage are the attempts to guess, using our logic, and the temptation to change the interpretation of the answer signals. Logic will try to tell us where the object is (usually wrongly!), but we must make an effort to ignore any such logical suggestions. Also, when we miss, we will have the temptation to reverse the interpretation of NO/YES signals. We are not allowed to do this and we must keep firmly to the meaning of these signals originally decided upon. If the signals seem to not work and such a temptation becomes strong we should repeat from the very beginning all three stages of our development procedure. We should continue the third stage of our development, described in this paragraph, until we become

aware that the correct signals from the pendulum are always accompanied by the unique feeling of "inner satisfaction". When we learn to recognize this feeling, our technique is finally developed.

In the developing procedure it is extremely important to choose correctly the object to be hidden under the saucers. It should be something unique, possibly existing in only one copy, easy to visualize, having an agreeable shape, inducing pleasant memories, and made of a different substance from that of the dishes under which it will be hidden. It would be a mistake to choose a coin, as there is a lot of similar coins in the world, so when visualizing it, our mind could approach the wrong register (for example the register of a coin from our purse, instead of the one hidden under the saucer).

Although the above developmental procedure was designed for a pendulum-assisted ESP, similar set of exercises can be used for any other kind of instrumental ESP. Therefore people having some mastery of electronics, perhaps should try to build own devices similar to "lie detectors" and then initiate with these devices pioneer research on the development of "electronically-assisted ESP".

D9. How the Concept of Dipolar Gravity explains some mysterious phenomena

Numerous people are experiencing extraordinary phenomena, such as psychic healing, spontaneous human combustion, fire walking, near-death experience, ghosts, etc. All these kinds of experiences were unexplainable in the previous one-world Universe. But the Concept of Dipolar Gravity introduces new quality to our Universe making the explanations of these phenomena quite simple. Below are provided some of these explanations derived from the Concept of Dipolar gravity.

1°. Psychic healing. The Concept of Dipolar Gravity indicates that two types of psychic healing must exist, which are called here: psychokinetic and psychomotive. The **psychokinetic** healing operates on software models (etheric registers) of human bodies. It includes such forms as: faith healing, radionic healing, etc. The **psychomotive** healing operates on physical (material) bodies. This includes such forms as: psychic surgery (opening physical bodies with psychomotive forces, psychic dentistry (growing or filling tooth), etc. For practical details see book [1D2].

The principle of all forms of psychokinetic healing corresponds closely to the principle of telekinetic motion - see subsection D6. In this healing the healer's mind affects the software model (etheric register) of an ill person, thus psychokinetically returning this register to its original configuration. Changes in the etheric body are in turn reflected to the physical body, which subsequently is restored to the health.

Notice that the effective psychokinetic healing must be accompanied by the emission of an extraction glow from the healed body (see the evidence #5D2). Therefore the photographing of the healed body should lead to the detection of this glow. (This also can be used for the distinguishing between the frauders and real healers).

The principle of psychomotive healing differs from that of psychokinetic. In psychomotive healing the healer's mind sends telepathic signals which cause the healed body to display certain reactions (e.g. open itself, grow teeth, etc.). Thus, in this type of healing the psychic processes occurs in the healers body, whereas in the healed body only physical processes occur (which, however, are telepathically induced). Psychomotive healing is NOT accompanied by the emission of the extraction glow from the healed bodies, but the healers

emit the dispersion glow. Therefore photographs of those healers should show a change in the colour of their skin.

2°. Hypnosis. The Concept of Dipolar Gravity defines hypnosis as a state when subject's sense organs are tuned into the reception of signals from the counter-world. For this reason during hypnosis we may access the registers contained in the counter-world, which in conscientious state are inaccessible for our perception.

Notice that according to the Concept of Dipolar Gravity time is motionless, but we move through time (see subsection D3). Therefore during hypnotic regressions (and also during dreams) we can move to any point in time, and "re-live" again the events that took place at this point. Such free manoeuvres through time represent the main reason why hypnotic reconstruction of events can be so accurate. This is because in the hypnotic state a subject can return to events from the past and "freeze time" for the duration that is needed for noticing, examining, and describing all the necessary details.

3°. Spontaneous human combustion. The principles of this phenomenon are similar to that of psychokinesis, except that instead of a physical release, a chemical reaction is completed. This chemical reaction, in a way similar to the carrying on a telekinetic motion down hill, releases enormous amounts of thermal energy which finally burns the subject. The mechanism involved in the release of this energy is explained in subsection D11. Notice that the initiation of this phenomenon is based on a positive (self-perpetuating) loop, i.e. the mind of a person who somehow becomes hot begins to panic that he/she will burn, and this panic psychokinetically escalates chemical reactions that produce more heat, thus creating more panic, etc.

4°. Fire walking. Some people are able to walk through fire and not burn their feet. Various "hardware" explanations for this phenomenon were not confirmed experimentally. The Concept of Dipolar Gravity gives a "software" explanation based on the interpretation of time presented in subsection D3. In this explanation the mind of fire-walkers slows down the speed of time elapse for the hot surface they walk through. Therefore the heat transfer from the ground into feet is also slowed down proportionally to this time elapse. Notice that only extreme psychic tension of the walkers leads to the successful deceleration of time and thus to not-burning their feet.

There is a possibility of experimental confirmation of the above explanation. This is because a number of experiments can be designed which could actually detect the slowing of time elapse in the fire.

5°. Ghosts. Ghosts should be interpreted as the activities carried out by software models (etheric registers) of dead people or animals. Principles of ghost activities are exactly the same as principles of dreams. Also all characteristics of the ghost activities correspond to the those of dreams (see item 6°). Ghosts operate in the counter-world, but some effects of their activities, similarly like some effects of our dreams (e.g. poltergeists), may telekinetically affect the matter. Therefore ghosts may move some objects and create images made of the extraction glow. These images should be possible to observe and to photograph. Ghosts, according to the subsection D5, must also induce some electromagnetic phenomena (see evidence #1D5).

6°. Dreams. The Concept of Dipolar Gravity allows to distinguish between dreams and night visualizations. The night visualizations would be only non-coordinated, colour images created inside of our sleeping brains. Thus, they would occur in the physical world. Dreams would be real activities carried out by our software models within the counter-world. Therefore dreams should display all properties of such activities (e.g. logic, consistency, symbolism,

etc.) and also display the properties of the counter-world (e.g. colours expressed by information not by appearance, lack of physical attributes {weight, blood}, etc.).

Night visualizations are already explained by various theories of contemporary medicine. The Concept of Dipolar Gravity does not change these explanations.

Dreams would not obey the contemporary medical theories. The Concept of Dipolar Gravity would explain them differently than just pictures from our brains. In this explanation, **dreams would be real actions and adventures carried out in the counter-world by software models (etheric registers) of sleeping people**. These adventures would be achievable through temporary separations of our software models from physical bodies. Therefore dreams should be characterized by a number of unique properties which result from their adventures' character and from placing them in the counter-world. Some of these properties include:

- "Software" attributes of dreams. These attributes include: the expressing of colours as an information, not as an appearance (i.e. in dream every object looks as having a sepia colour, but we actually are aware of different colours that various objects have and we can "read" these colours from the registers of these objects), a different structure of our dreamed bodies (e.g. software models of our physical bodies do not contain physical, red blood), indestructibility of our etheric bodies (i.e. in dream we never get killed or loose a part of our body, although we may frequently experience someone or something attempting to hurt us; whatever happens in dreams, our etheric {dreamed} bodies remain unaffected), etc.

- Logic, abstraction, and prophetic nature of dreams. The counter-world is more logical and abstract than our world. It also allows us to insight registers of distant objects, and to see events that these objects will experience at any chosen instant of time, including the distant future.

- Differences in our motion capabilities (the movements in the counter-world obey a different set of principles than those movements from our world; e.g. we can fly and levitate without a movement, or remain in one place in spite of completing rapid mobile actions).

Notice that the defining dreams as "night adventures in the counter-world" provides a perfect means of verifying the correctness of the above explanations. This is because dreams so defined request all people participating in the night adventures of a particular person to also experience the same dream at some stage. Unfortunately there are two factors which make this verification difficult, i.e. (1) forgetting ratio and (2) time shift. It is proven that we remember only a small fraction of our dreams (sometimes less than 1% of what we dream). This practically means that, although all people appearing in a particular dreamed adventure in fact participated in it, only in extremely rare occasions more than one of those people will remember this adventure. Even more obstacles to the verification of the above explanation introduces time shift. The interpretation of time in dipolar gravity (see subsection D3) reveals that in the counter-world we may travel through time, thus experiencing events that happen at different times, i.e. in the distant future as well as in the past. Therefore participants who meet in a dream that occurs at a particular instant of time, may come to this instant from different starting times. This means practically that the same adventure involving time shift can be dreamed in a different time by each one of its participants.

In spite of the above difficulties, the author already found a person (Suzanne Poutu of Dunedin, New Zealand) who claimed that she and her friend both experienced exactly the same dream. The author would be delighted to hear from other people who also discovered that their dreams were exactly repeated by someone else.

* * *

The explanations of mysterious phenomena provided in this subsection have one common denominator, i.e. all of them include some attributes which enable their experimental confirmation. In this way the explanations provided here are more than just hypothesis: they pave the way for gradual finding the truth. Notice that experimental confirmation of any of the above explanations will extend the evidence in support of the Concept of Dipolar Gravity as a whole.

D10. How the Concept of Dipolar Gravity merges science with religion

The Concept of Dipolar Gravity reveals that, as well as a number of physical properties, the ether also displays two intellectual properties. These are: (1) the ability to store information and (2) the ability to think. The ability to store information is manifested by recording in the registers made of this substance: (a) the entire history (events) of the objects that are reflected by these registers, (b) the programs which express the passage of these objects through time (fate). (The history of objects can be later accessed through a long-term memory system, whereas the programs of these objects can only be viewed through ESP, dreams, hypnosis, etc.). The second unusual property of the ether, i.e. its ability to think, reveals itself through the intelligent responses obtained from our memory requests or from ESP inquiries. The characteristics of these responses suggest the computer-like thinking conducted by this substance.

Ether which thinks and memorizes is a novelty for us. It introduces numerous implications of enormous significance to every aspect of our lives. Some of these implications, which concern the most sensitive areas of our intellectual activities, are discussed below.

D10.1. The Universe as a whole possesses its own intellect

The counter-world operates like one huge, self-programming computer, which intercepts, stores and processes information, analyses and replies to inquiries, develops or alters programs that control the course of events in the world of matter, etc. - see subsection D7. All these abilities are the main components of every intellect. Therefore the counter-world seems to possess its own intellect, similar to a human one, i.e. characterized by the ability to communicate, memorize, think, and even perhaps possessing a self-awareness. In this treatise the intellect occupying the counter-world will be called the Universal Intellect.

The deductions from previous subsections revealed the characteristics of this Universal Intellect. Let us summarize below the main elements of these characteristics, making sure that only the attributes which directly result from the Concept of Dipolar Gravity are listed.

(1) The carrier of the Universal Intellect is an omnipresent substance (i.e. ether) which independently from its intellectual functions performs numerous physical functions, e.g. forms mirror reflections of every material object existing in the Universe, creates circulations known to us by the name of magnetic fields, enables the telekinetic motion of objects, etc. For this reason, every event or activity involves participation of the Universal Intellect (e.g. even the ordinary eating of bread, in fact, can literally be interpreted as consuming the "body" of this Intellect).

(2) This intellect is invisible and undetectable to our senses, as it occupies another world, separated from ours. But it can be recognized and investigated by human intellects.

(3) Its dimensions and shape correspond to the dimensions and shape of the entire Universe - see **Figure D3**.

(4) It forms separate software models (registers) for every physical object that has existed, exists or will exist in the entire Universe. The objects which will appear in the distant future seem to have these models already. Evidence also ascertains that such software models are still kept (and can be accessed) after the physical destruction (death) of the object that they describe.

(5) It is superior to human intellects and seems to control them, but at the same time it is also a main component of each of them. This allows the comparison of each person to a tiny droplet of water in a river, i.e. being separate but at the same time being a part of that river.

(6) It maintains a continuous communication with the brains of all living creatures, via input-output capabilities of these brains. Therefore whatever someone's thoughts are, his/her brain conveys these thoughts to the Universal Intellect, which in reply prepares appropriate responses (i.e. memory recalls, intuitive suggestions, ESP answers, responses from moral laws, etc.).

It is astonishing how closely the above characteristics of the Universal Intellect correspond to the idea of God forming the nuclei of every religion. Therefore, on one hand the recognition of the Concept of Dipolar Gravity creates a bridge that merges modern science and religions. On the other hand the same Concept reveals that **the entire universe is a supreme being** whom we can get to know better through scientific investigations. In this way the Concept of Dipolar Gravity also formulates a scientific foundation for universal religion. Of course we must remember that this Concept was formed fairly recently (i.e. in 1985 - see treatise [2F] "d") and that an entire ocean of further knowledge still waits to be scientifically discovered, and investigated.

The existence of the Universal Intellect has been speculatively deduced and intuitively perceived since the beginning of our civilization. Therefore for many readers the conclusions from this chapter will not introduce any surprise. However, the formulation of the Concept of Dipolar Gravity has opened a completely new possibility in this matter, i.e. it allows us to obtain experimental proof that will objectively confirm the existence of the Universal Intellect. Therefore this Concept contains the potentials of transforming religious subjects hitherto considered to be only the matter of revelation, trust and beliefs, into the subject of objective knowledge, certainty, and scientific investigation. To attain such proof, it is enough to design and successfully complete experiments which will prove that:

1°. The counter-world exists.

2°. This world continuously intercepts and stores all information (i.e. it contains the registers described earlier).

3°. This world is capable of effective thinking which provides the solutions for specified problems.

At this point it should be stressed that the first of the above proofs have already been worked out (see subsection D11). The completion of the rest of them seem to be only a matter of time. As well as the above experimental proof, a number of further facts confirming the existence of the Universal Intellect can be indicated. Let us mention some of these facts.

#1D10.1. ESP messages experienced by numerous people. These kinds of experience supply us with the continuous confirmation of the intellectual abilities of the Universe as a

whole. They prove that: (1) the Universal Intellect continuously collects, stores and offers access to all details on every subject; including our thoughts, feelings, attitudes, observations and other data which are our private secrets, (2) this intellect analyses our thought-questions, prepares answers to them and communicates these answers to us.

#2D10.1. The Moral Laws (see subsection D10.2). The existence of these laws is pronounced by almost every religion and confirmed by numerous sources (e.g. folk wisdom, UFO-nauts, etc.). The operation of moral laws indicate that some supreme intellect continuously analyses our actions and thoughts, judges their moral content, and prepares appropriate responses that match our behaviour. Thus the operation of above laws represent a confirmation for the existence of a supreme intellect.

#3D10.1. Near-Death Experience (NDE). Many people who returned to life after experiencing clinical death, remember and report talking to a superior being when they entered the next world. In most of these reports the being is not described as a person, but as a shapeless beam of powerful light directed at the person from a seemingly infinite distance. In the majority of NDE communications, this beam of light seems to represent the Universal Intellect (God). But there are also NDE reports which specifically describe God as a thinking substance, blue in colour, which surrounds people who visit the next world. One of the best descriptions of God as a blue substance comes from the 1968 near-death experience of an Indian girl named Durdana. Her report, illustrated in colour, is published in the book [1D10.1] by Peter Brookesmith (editor), "Life after Death", Orbis Publishing Ltd., London 1984, ISBN 0-85613-613-1, pages 202 to 205.

#4D10.1. The religious evidence. The multitude of religious evidence would be difficult to fit into the most voluminous book. For this reason the readers who wish to collect this class of evidence are advised to study all miracles, revelations and divine blessings, recorded by almost every religion. Notice that as well as spectacular religious events, there is also intimate religious evidence experienced by almost every person and accentuated in almost every family.

#5D10.1. Religion of extraterrestrials (UFO-nauts). The best expression of the religion of extraterrestrials was given in the TV programme "UFO Cover UP" transmitted via satellite from Washington D.C. on 15 October 1988 (a VHS copy of this programme is contained in the author's files). The USA government official using pseudonym "Falcon" describes this religion in the following words: "They have a religion, but it's a universal religion. **They believe in the Universe as a supreme being**". No other words can express more exactly the idea of the Universal Intellect from the Concept of Dipolar Gravity.

D10.2. Moral laws

It has been determined in subsection D7 that our brain operates as an input-output device. Whatever are our thoughts, intentions and actions, these are transmitted to the counter-world and stored in our software models for further use. The communication occurring between our brain and our software model existing in the counter-world is known as long-term memory system, whereas the communication between our brain and other (not ours) software models constituting the Universal Intellect is known by the name of ESP. But it would be very naïve to expect that the Universal Intellect limits its reactions only to our memory requests and answers from our ESP inquiries. Rather it should be expected that this Intellect always takes some action independently of what we think and what we do. Of course

in such a case there must be a set of consistent rules stating what kind of action should be taken to match the content of our thoughts and activities. So just as from the world of hardware all our physical actions receive clearly defined physical reactions, also from the counter-world all our intellectual efforts receive the appropriate intellectual responses. Thus we may conclude that every intellectual cause initiates an appropriate intellectual effect. Because the existence of the cause-effect connections is specific to the laws of nature, the set of rules that define these reactions of the ether on our intellectual activities will be called "Moral Laws". This name stresses the fact that the kind of response we are receiving, must depend on the moral content of our thoughts.

The above deduction reveals that what we consider to be morals, are in fact the laws of the world of intellect. The operation of these laws can be explained on the basis of the model of our brain as an input-output device (compare subsection D7). The parts of the human brain interacting with the counter-world operate in such a way, that they always put themselves in a certain order or pattern unique to the type of thought vibrations that they are giving out. This pattern allows their owners to receive back only the same type of thought vibrations that were given out. Therefore, if someone causes his/her own brain to emit a good thought vibrations, he/she will open the right pattern to also attract a good return. But those who cause much trouble around them and conduct themselves in a nasty way, are open to receive back negative returns appropriate to their behaviour. So, the counter-world makes our morality react like a boomerang - whatever we send out, it will inevitably return back to us. This applies to everything, including the judgments of this theory. It is because whatever kind of consideration someone gives to the ideas of others, he/she should expect exactly the same response to his/her own concepts.

At this point the content of the first of Moral Laws can be defined. Because of the manner in which this law works it will be called here the "Boomerang Principle". The content of the Boomerang Principle can be expressed in a short and a long version. A short version states that:

"whatever you do to others, it will also be done to you".

A long version states that:

"whatever (abstract) thought pattern our brain gives out to the intellectual environment, exactly the same pattern will be returned to us by this environment." The response of the environment to our intellectual activities is characterized by two factors: noise domination and time delay. Noise domination is caused by a quantitative outnumbering of environmental thoughts when compared to solo our intellectual output. The environment, populated by billions of people, provides us with far more returns than the number of thoughts that we are able to produce. So naturally, except for the returns caused by Boomerang Principle, we are bombarded by numerous other signals, randomly good or bad. In this aspect the moral laws are identical to the physical ones, where a particular cause brings back not only the corresponding effect but also a number of other "noise" effects originating from completely different causes. For example when we are walking along a gangway, it will bounce not only because of our weight, but also because of sea waves, wind, the boat's movements, earthquake, etc. In the case of physical laws we have already learned how to distinguish between the answer and the noise. But with regard to the moral laws such distinguishing rules are still waiting to be discovered and mastered.

The time delay in the fulfilment of moral laws appears because the input channel opened in our brain by a particular thought pattern must wait until an appropriate return signal appears in our vicinity, and only then it can intercept this signal. Some people, who as young

children behave disrespectfully towards their parents, must wait until mature age for the appropriate return, when their own children pass through the same stage of development. Because not everyone has the ability to associate facts occurring with a significant time delay, the action of the Boomerang Principle is not realized by many people.

Time delay in the fulfilment of the Boomerang Principle forms also foundations of the eastern idea of "karma". This idea states that all those our intellectual activities which had no time to be returned in the present lifetime, will be returned to us in the next life. Notice that the only requirement for the Boomerang Principle to be extended into the Law of Karma is that the concept of reincarnation is introduced.

The Boomerang Principle is a moral equivalent to the physical Action-Reaction Law. There are some indications that other physical laws also have their own moral equivalents.

On our planet, where hermetic borders, languages, religions, and ideologies separate nations, the moral laws affect not only individual people but also entire countries. It seems that something like a national morality is produced within the countries and that according to its content the particular nation receives an appropriate response from the outside world. The formation of this national morality can be compared to the creation of gas movement within a pipe. Each particle of this gas seems to move in its own direction, but all move together along the pipe. We are used to thinking that military strength is a basis for the security of a nation. But numerous examples from history clearly prove that it is the moral values that decide on glory or destruction. It would be interesting to know if the same moral laws also apply to entire planets, our own as well as others.

The deduction leading to the detection of Moral Laws is justified only after the Concept of Dipolar Gravity has been worked out. Therefore, our present knowledge of moral laws finds itself in the same situation as physics in about 240 B.C. when the famous "Eureka" of Archimedes proclaimed the discovery of the first principle laying the foundations for this science. Further research now needs to be done, and numerous factors need to be distinguished and quantified, to enable us to predict the moral responses for our actions with the same accuracy, with which, after over 2000 years of development, physics is able to foresee the responses from the world of matter. So before we become impatient that the moral laws are still concealing their patterns, we perhaps need to remind ourselves that in the time of Archimedes the physical world also seemed similar, and people were sure that the behaviour of nature was ruled not by any laws but by the caprices of powerful gods.

The most relevant evidence confirming the operation of the Boomerang Principle is reviewed below.

#1D10.2. The folk wisdom of almost every nation recognizes the Boomerang Principle and expresses its content in numerous proverbs and sayings. Examples of such proverbs are: the English proverb: "Curses, like chickens, always come back home to roost", the French saying: "Honi soit qui mal y pense" (i.e. "Evil be to him who evil thinks"), the German: "Was du nicht willst, dass man dir tut, das füg' auch keinem andern zu" (i.e. the Golden Rule: "Do unto others as you would have them do unto you"), the Italian: "Non fare agli altri quello che non vorresti che fosse fatto a te" (i.e. "Don't do to others what you wouldn't like to be done to you"), the Polish: "Jak Kuba Bogu tak Bóg Kubie" (i.e. "One gets paid in one's own coin"), the Turkish proverbs: "Kendin için ne düşünüyorsan arkadaşın için de düşün" (i.e. "Whatever you think for yourself you have to think for your friend") and "Önce iğneyi kendine, sonra çuvaldızı başkasına batır" (i.e. "Firstly experience a needle put into yourself, if you are going to stick a nail into somebody else"), etc. Of course, to provide guidance for all typical life situations every nation uses more than one such proverb. Some idea about the multitude of ways in which

various proverbs express the same content as the Boomerang Principle, can be gained from the following review of common sayings (these English sayings are followed in brackets by their Polish equivalents): "As you give so shall you receive" ("Nie czyń drugiemu, co tobie nie miło"), "As you make your bed, so you must lie upon it" ("Jak sobie pościelisz, tak się wyśpisz"), "Do right and fear no man" ("Nie czyń zła i nie obawiaj się nikogo"), "Good seed makes a good crop" ("Jaką miarką mierzysz, taką ci odplacą"), "Hoist with your own petard" ("Kto pod kim dołki kopie, sam w nie wpada"), "If you play with fire you get burnt" ("Kto igra z ogniem, ten od ognia ginie"), "Love begets love" ("Dobro rodzi dobro"), etc.

#2D10.2. Numerous references to the action of the Boomerang Principle are contained in the Bible. Some of these references so infiltrated the every-day language, that they became popular proverbs. Examples of these are the following biblical verses: "He who lives by the sword dies by the sword" (see Matthew 26:52), "One reaps what one sows" (see Galatians 6:7), etc.

#3D10.2. The content of the Boomerang Principle forms the moral foundations of almost every religion. For example the "Law of Karma" from eastern religions is an equivalent to the Boomerang Principle, but with action extended far beyond one's current lifetime. Also the set of Christian commandments, represents an interpretation of the Boomerang Principle when this is applied to most common life situations. The commandments, in fact, are versions of the Boomerang Principle, only formulated in a manner comprehensible to mere mortals.

#4D10.2. The aliens visiting our planet in UFO vehicles, know, respect, obey, and try to convey to us the content of the Boomerang Principle. They explain the operation of this Principle to numerous people abducted onto UFO decks. Below is quoted an extract from a report under hypnosis, given by a citizen of New Zealand abducted on a UFO deck in December 1980 for a medical examination (a written copy of this report is provided in appendix Z - see phrase N-116):

"WHATEVER YOU DO comes back to you because you, your brain works in a certain way and when it gives out its work, it ... puts your brain in a certain order or pattern which means that it's, it is open to receive the same type of thing that you actually made your brain give out. So therefore if you make your brain give out good things you'll make your brain be in the right pattern to bring in good things".

Notice that the above quotation indirectly confirms the correctness of the model of the brain as an input-output device (compare also subsection D7).

D10.3. Consistency - the measure of intellectual perfection

The term consistency is defined as "conforming to a single set of universal principles". When analysing this term it become obvious that it expresses the abstract essence of Moral Laws, reality, etc.

Consistency incorporates all the attributes of intellect. Someone who is consistent must also be: intelligent, worth trust, dependable, communicative, etc.

Consistency can be quantified. It is possible to work out a test which would reveal how consistent a particular person is. Such a test would be a measure of his/her intellectual perfection. The consistency test would probably be a much better measure of intellectual perfection from contemporary IQ coefficient.

The need for consistency is permanently build into our minds. We seek it everywhere and from everyone, although not always we are aware of this. All forms of our intellectual progress are expressed in the increase of our consistency.

D11. Experimental confirmations of the existence of the counter-world

The deductions and evidence presented in the previous subsections of this chapter seem to provide sufficient rationale for removing all possible doubts that the counter-world exists. But for scientific exactitude it is also necessary to design and complete some objective experiments which could prove this formally. From a vast number of properties of the counter-world which could be used for such experiments only these will be considered here, which can be detected by every person, including people having no previous interest in this kind of phenomena.

The most simple, objective, and fully repetitive experiments proving the existence of the counter-world can be based on the Postulate of Interchanging Thermal Energy, described in subsection D2. It is well known from physics that every work completed in the (our) world of hardware must obey the Conservation of Energy Principle (i.e. the completion of physical work must always involve the consumption of energy). But the Concept of Dipolar Gravity states that affecting the matter through introducing some telekinetic changes into configurations from the counter-world (see the "telekinetic" manner of introducing changes into our world, described in subsection D2) does not consume any energy, in its physical understanding. This means that the energy requirement for such telekinetically caused works must be somehow satisfied through its exchange with the environment. Therefore every telekinetic work must cause the conversion of thermal energy occurring along the paths of the affected objects. Such a conversion in turn must result in two physical effects detectable for our contemporary instruments, i.e. (1) a **temperature change**, and (2) an "**extraction glow**" or a "**dispersion glow**". A first set of experiments involving these two effects was already described in subsection C3. Discussed below is their more popular version.

The only form of energy which is available everywhere and which therefore will be the subject of telekinetic conversion, is thermal energy. Thermal energy can be extracted or yielded according to the type of telekinetic action that converse it. As a result, the temperature of the affected area will drop or rise. There are 2 types of telekinetic actions. These are called here: (1) telekinetic work, and (2) telekinetic release. Telekinetic work depends on shifting objects against any natural force such as gravity (i.e. an object is lifted), elasticity (i.e. an object is bent), buoyancy (i.e. an object sinks), friction, etc.. Therefore telekinetic work consumes energy which must be extracted from the environment. This kind of action causes the temperature of the environment to drop. Telekinetic release depends on moving objects in line with a force (i.e. an object is put down, expands, etc.). Telekinetic release produces a thermal energy which therefore will raise the environmental temperature. There are also examples of telekinetic actions (usually a cyclic nature which comprises both: work and release) whose total effect will be neutral, so it will not affect the temperature at all. Examples of such neutral works are: the swinging of a suspended object, bending and then straightening a V-shaped divining rod, an idle running of a telekinetic motor (the consumption of heat resulting from the completion of a telekinetic work will be compensated here by the production of heat resulting from the friction), etc.

It should be stressed that if telekinetic phenomena operate according to the Concept

of Dipolar Gravity then the conversion of thermal energy described above must occur. On the other hand no different explanation for psychic abilities provides a theoretical base for this heat conversion. Therefore the experimental confirmation that such conversion in fact appears, will also represent a formal proof for the existence of the counter-world. To complete this type of experiments, a significant telekinetic work should be done within a small, thermally insulated space. Thus the temperature change could be measured and the obeying of the Conservation of Energy Principle could be checked. Let us hope that these of the readers who still have some doubts about theories presented in this chapter are able to complete such an experiment and experience in person the astonishing results.

In order to give here some idea as to how this type of experiment should look like, let us briefly review its course if completed with the use of a biological telekinesis. Firstly a subject who is able to complete a significant telekinetic work needs to be found. Such a subject should be able to either telekinetically lift upwards heavy furniture (e.g. wardrobes), like Miss Joanna Gajewska of Sosnowiec (Poland), or cause such furniture to move from one place to other like it does Mrs. Jan Searle of Ross (West Coast, South Island, New Zealand). Then it is sufficient to either just subjectively experience the temperature drop that will occur in the room, or even measure this drop with some sensitive instruments. Even if the temperature is not measured, for a significant telekinetic work being done, all eye witnesses present in the room will notice a significant temperature drop, reaching almost freezing level.

The conversion of thermal energy by telekinetic action will also cause to appear another pair of effects called here an extraction glow and a dispersion glow. If we rapidly decrease the amount of energy contained within an atom, its electrons must fall from higher orbits to lower ones. This, according to quantum physics, must in turn cause the emission of photons. Such an emission should be observable as a kind of subtle, white glow, called here the extraction glow. Therefore every telekinetic absorption of thermal energy should be accompanied by an extraction glow that should be detectable on a sensitive photographic film. To detect this glow, it suffice to take a photo in the dark of a telekinetically moved object which completes some work (i.e. acts against a force). By using an infra-red camera the intensification of effects could be achieved, but also the interpretation of results become more difficult. If the time of exposure is long enough, the object is able to cross through, and to affect a larger area, making the glow more evident. Note, that extraction glow should be also manifested in cases where the total thermal effect is neutral. This gives a flexibility about the kind of moved objects to be selected for experiment. For example such frequently used telekinetic objects as V-shaped divining rods can also be used for the detection of the extraction glow. Practically this means that both: the equipment (i.e. a camera and film) and the object of experiment are not difficult to find.

The extraction glow is produced only during telekinetic work. A telekinetic release produces another kind of glow, which is called here a dispersion glow. The dispersion glow is greenish in colour, whereas the extraction glow is white. Unfortunately cases of telekinetic motion which produce dispersion glow are very difficult to obtain.

Notice that the more energy is converted during a particular telekinetic motion, the more powerful is the emission of the extraction or dispersion glow. Therefore, in order to obtain spectacular photographs of the extraction glow, a powerful telekinetic phenomena should be photographed (e.g. lifting very heavy objects).

The author has already completed some preliminary experiments concerning the registrations of the extraction glow. He has already taken numerous photographs of this glow. Although the author's photographs are not spectacular enough to convince sceptics, they

sufficed to reassure him that the discussed proof is easily achievable. Moreover, reviewing numerous books on paranormal phenomena (e.g. dowsing, psychokinesis) he has found photographs taken by other people, which also perfectly illustrate the extraction glow. Some more spectacular of these pictures are shown in Figures D4 and D5.

If readers are interested to find examples of telekinetic work which produces the registrable extraction glow, in subsection C3 listed are the most frequent sources. In order to check on the statistical availability of these sources, in December 1985 the author took the opportunity during his vacation trip around the South Island of New Zealand to determine a distribution of people who have mastered some kind of psychokinesis. The instances were unexpectedly high. Statistically one such person was found per about 100,000 citizens living in the areas searched. And the search was rather brief, hasty and completed only as a hobby. Most of the cases were dowsers utilizing a V-shaped divining rod, bent in the telekinetic manner. The psychic forces created by some of them amounted even to an equivalent of about 1 kilogram of mass suspended on the end of their rods. For example Mr. Desmond W. Scarlett (Forrest Downs, Cattle Valley, Fairlie, New Zealand) as a divining rod uses a strong clock spring, which, in the position indicating a "find", is bent down with a force of approximately this range. Different examples of telekinesis were also revealed. For example Mr. Richard Simpson of Torquay Tec., Hamner Springs, N.Z.; by exercising the strength of his mind causes suspended objects to swing. To summarize the author's findings in the form of a message for the reader: "Unless you live on a sparsely populated area, there is minimum one person with telekinetic abilities living not further then 50 kilometres from your home. Thus, to register the extraction glow, you only need to find this person and to photograph the effects of his/her telekinetic actions".

* * *

We seem to be built in that way that we don't accept a theoretical Concept until we prove its correctness to ourselves. Proofs supplied by other people usually do not convince us. It was determined at the beginning of this subsection that the photographic registration of the extraction glow represents one example of the conclusive proofs that the counter-world do exist. Therefore, this final part of the Concept of Dipolar Gravity was to show that everyone can obtain such a proof. Since the objectives, subjects, and the ways of achieving this proof are clearly defined, it lies in the hands of readers to accomplish this breakthrough into another world. As the problem is almost untouched, everyone has an opportunity to also contribute into perhaps an important discovery. So why not try it?

D12. To conclude

As it is shown in this chapter, the recognition of the Concept of Dipolar Gravity will have enormous impact on almost every aspect of our lives. Most disciplines will be affected, including those presently considered to be unrelated to gravity, e.g. religion, medicine (e.g. justification for acupuncture, psychic healing, etc.), parapsychology, philosophy, etc.

The Concept of Dipolar Gravity, in spite of its clarity, rationality, and all evidence in support, seems to be accepted with great difficulty by contemporary scientists. This is quite understandable, as the Concept destroys present views of reality which science has formulated so laboriously. Thus, it is predictable that not all the evidence and explanations presented in this chapter will gain instant recognition, and some of them will be subjected to

well organized criticism (present science is so advanced that an appropriately motivated scientist can put in doubt even the best idea or the strongest documented evidence). But for those who are prepared to accept new ideas, the Concept of Dipolar Gravity provides a conceptual foundation, supported by a solid body of evidence, to initiate his/her independent investigations. Thus, the key that opens our access to a completely new world finally seems to have been found. Now it is everyone's responsibility, how this key will be put to use.

Fig. D1. Mr Alan Plank with the pump he invented and designed by the means of a pendulum-assisted ESP technique. He read all the technical details of this pump directly from the ether by finding and accessing the register that this device possesses in the counter-world. There is a high chance that scientifically reliable techniques of instrumental ESP will soon be developed, which will open the commercial applications for the ESP procedure discovered by Mr Plank (P.O. Box 7051, Invercargill, New Zealand). In such reliable ESP techniques, electronic devices similar to "lie detectors" could probably replace divining pendulums. After this new manner of gathering technical information is mastered, our present way of introducing new steps of technical progress could be completely revolutionized. For example the time-consuming laboratory experiments and expensive research of prototypes could then be replaced by reading out from the ether all the necessary technical details about the best completed version of a device. Thus, introducing new inventions could be less expensive, faster, and more dependable than at present.

Fig. D2. A technique for developing the **NO and YES answer signals in the pendulum-assisted ESP.**

(a) A NO answer is interpreted here as the pendulum swinging in a straight line. To induce this signal a bio-field accompanying the flow of blood through our veins is utilized. If we suspend the pendulum above the veins in the wrist of our left hand it soon starts swinging along the direction of the blood flow. If we change the angle of the left hand, the plane of the pendulum's swinging will adjust to this new direction of our veins. Notice that there is a certain length of thread, which induces the soonest and the most vigorous swinging of the pendulum. It seems that, for this length the frequency of the pendulum's oscillation is in resonance with the frequency of our vibration (different for every person). We should try to find this length and then hold the pendulum according to it.

(b) A YES answer is interpreted here as the movement of the pendulum in a clockwise direction. To induce this signal a change in bio-potentials appearing between the thumb and the forefinger of our left hand is utilized. If we form a U-shape with these fingers and then suspend the pendulum in the middle, it should begin to circulate in a clockwise direction. Notice that for some people the same configuration of hands may produce a counter-clockwise circulation of the pendulum. These people should also accept the obtained signal as a YES answer.

Fig. D3. A three-dimensional map showing **a wedge of the Universe**. This map was prepared at the Centre for Astrophysics, Harvard College Observatory and Smithsonian Astrophysical Observatory, by Margaret J. Geller, John P. Huchra and Valérie de Lapparent. It was published in Scientific American, March 1986 (Vol. 254, Number 3), page 49. The map reveals a cluster of galaxies which takes the apparent shape of a human figure. This human shape may gain special significance with the Concept of Dipolar Gravity stating that our Universe is composed of two parallel worlds (the world of hardware and the counter-world), which exactly copy each other like an object and its mirror reflection. The non-material one of these two worlds (i.e. the world of software) is made of a substance (ether) that is able to think in its natural constitution. This thinking substance forms the Universal Intellect whose shape must reflect the shape of our Universe, and whose capabilities correspond to those of God. This in turn invokes a question as to whether the above human shape is a pure coincidence or astronomic confirmation to the biblical statement that "God created man in his own image".

Fig. D4. Photographs of **two heavy tables levitated in various séances by a psychokinetic medium named Eusapia Palladino**. Along the surface of both tables a strong emission of the "extraction glow" is clearly registered. The telekinetic power of this medium was so extremely high that almost all photographs taken at her séances demonstrate the evident emission of the extraction glow. Therefore the photographs provide a consistent confirmation that the "Postulate of Interchanging Thermal Energy" is in operation. Sceptic scientists investigating Palladino's abilities suspected her of producing some fraudulent effects, for this reason at many séances she was restrained. However, even when she was held tightly, the tables still rose.

(Upper) A photograph published in [1FigD4] the Journal "The Unexplained", Vol 4 Issue 41, page 801; and republished in the book [2FigD4] edited by Peter Brookesmith, "The Enigma of Time", Orbis Publishing Limited, London 1984, Page 21. It presents a table levitated in London in 1903. Note also the transparency of the table.

(Lower) A photograph published in the book by Roy Stemman, "Spirits and Spirit Worlds", The Danbury Press, London 1975, ISBN 0-7172-8105-1, page 52.

Fig. D5. The photograph of **a table that was levitated by members of the Society for Research into Rapport and Telekinesis (SORRAT)** - see photo (b). The entire surface of this table is covered with a thin layer of glowing air, representing the so-called "extraction glow". If it is considered that divining rods are the most popularly available source of the extraction glow, the levitation of heavy furniture would be the second. A number of photographs showing such subtly glowing levitated objects are already published in various books from "The Unexplained" series. The above photographs originate from the Journal "The Unexplained": (a) Vol 6 Issue 61, page 1211, (b) Vol 5, Issue 59, page 1171. They are also re-published in the book edited by Peter Brookesmith, "Against all reason", Orbis Publishing, London 1984, (a) - page 14 and 15, (b) - page 45. Notice that the photograph (a) presents the same table only this time the extraction glow was not registered allowing the natural texture of the surface of the table to be seen.

Chapter E.

PHILOSOPHICAL REQUIREMENTS FOR GIVING RECOGNITION TO NEW IDEAS

This chapter defines the philosophical climate and intellectual requirements necessary for people to give recognition to new ideas and inventions (see subsection B1). In turn, such positive climate should stimulate the more rapid acceptance and completion of the Oscillatory Chamber and the Magnocraft. Through the explanation of the philosophical principles behind the attitudes of people, this chapter also tries to provide a key to understanding why so many excellent inventions and ideas are continually wasted, and why history quotes so many famous people being wrong in their priori negating judgment of inventions that later were implemented successfully. A simple rule provided near the end guides our personal philosophies towards the selection of positive principles that are worth adopting and implementing in everyday life.

Perhaps, before any specific deductions are made, it should be stressed how our everyday philosophy impacts the perception of all aspects of our lives. To illustrate this impact let us consider **the case of two hungry people** with identical baskets of fruit but different philosophical attitudes. The first person always picked the best fruit left in the basket. So he/she enjoyed eating the whole basket full of the best fruit. But the second person always chose the worst fruit left in the basket, so he/she suffered because he/she ate a basket full of the worst fruit. Although the fruit in both baskets was exactly the same, the philosophy behind their consumption made an enormous difference. The person who enjoyed his/her fruit utilized the positive, or as we would say, "totalistic" approach, whereas the suffering person chose a negative, although in the opinion of the majority of people, a fully "logical" approach.

People's philosophies are revealed clearly during their involvement in intense discussions. The development of the Theory of the Magnocraft put the author in the fortunate position of organizing and conducting many public and numerous person-to-person discussions. The participants in most of them were highly educated people, i.e. scientists, industrial experts, interest groups, etc. Many of them refused to accept the idea of the Magnocraft only because this vehicle could not fit into their personal philosophies. During these discussions a number of observations concerning the everyday philosophy of people with such a "conservative" attitude was collected. (The name "everyday philosophy" or "ruling philosophy" is used here to describe the philosophy which defines the day-by-day conduct of people in real life, not for any of the philosophies formulated on paper which are supposed to describe their conduct.) The author extracted some of the essential (in his opinion) doctrines of this philosophy as listed below. It is important to bear in mind that these doctrines are not meant to be a representation of anyone's personal philosophy. Rather, they constitute a "model" - i.e. a composition of the common elements found in the philosophies of many "conservative" individuals whose key attitude is to deny or not accept any new idea. The doctrines are as follows:

1. Only those things are possible which we already know how to achieve.
2. The universe is not permitted to display facts extending beyond our horizons (or: scientific administrators have the authority to divide facts into "permissible" which should be

investigated and "heretic/taboo" which should be ignored or denied).

3. Everyone else is wrong until he/she proves that he/she is right. (Another version is: "I will believe you when I see it".)

4. Our present knowledge is complete and perfect - any outstanding research is illegitimate (or: all those scientists who do not conform and investigate "heretic/taboo" areas should be "burned on stake").

5. The main purpose of studying is to collect diplomas that will allow us to find a cosy job free of any responsibility (or: "gaining education releases us from responsibility").

If we analyze the above doctrines, we come to the conclusion that each of them represents an implementation of the well known natural tendency for "taking the line of least resistance". Therefore the everyday philosophy of "conservative" people who utilize this tendency can be called the "philosophy of taking the line of least resistance" or the "easy way out philosophy". The tendency to select the line of least resistance is a characteristic of untamed nature. The intellect acts according to the different rule of "selecting what is rational to select". The principles of the philosophy outlined in this chapter and called "totalism" represent an implementation of this rationalized rule.

The "easy way out" philosophy is oriented towards stagnation. It impedes the promotion of anything that is new, and maintains a lazy, grasping and selfish style of living. It seems that our civilization has now reached the point where any further progress is extremely difficult, if not completely impossible, without replacing the "taking the line of least resistance" philosophy with one more oriented towards progress. In the sections that follow, a justification and outline of such a replacement is presented.

The author also extracted essential principles adhered by people who display an "open minded" and accepting attitude towards new ideas. As it turns out their philosophy represents an exact reversal of the doctrines of the "easy way out" philosophy. Listed below are the more important of these positive principles (compare the list that follows with the previous one).

#1. Everything is possible - we only need to find out how to achieve it.

#2. All facts are equal - each of them deserves the same consideration.

#3. All statements of others are true unless they are proven to be untrue.

#4. Everything can be improved further - and the obligation of every person is to leave things better than he/she found them.

#5. Knowledge is responsibility.

All people who can identify their personal philosophy with the above list of principles never have any difficulty accepting new ideas.

E1. Everything is possible: we only need to find out how to achieve it

Although no one is willing to admit this, many of highly educated people act and behave in accordance with the doctrine that "only those things are possible which we already know how to achieve". The above statement was, in the past, and still is at present, the unofficial foundation for the ruling philosophy of institutional science. All eras know scholars who followed this doctrine, attacking every new invention and every new discovery. This doctrine is responsible for an unknown number of inventions being abandoned half way in their development and for the successful prevention of a more rapid advancement of our civilization.

There are a number of publications available which quote well-known and respectable

people whose claim "it's impossible" was later proved to be completely wrong. The content of these claims now sounds ridiculous, but at the time when they were stated they caused a lot of harm and confusion. We must remember that they originated from people having high authority and important positions, whereas their destructive power was usually directed against young and unknown inventors. Let us remind ourselves of some of these statements.

"Nothing made of iron could possibly float" - scoffers in 1787 on the first ship of iron built by John Wilkinson (quoted from the book [1E1] by J. Penry-Jones, "The Burke Book of Ships and Shipping", Burke Publishing Company Ltd., August 1965, page 10).

"Gentlemen, I would rather believe that those two Yankee professors would lie than believe that stones would fall from heaven" - President Thomas Jefferson on the observation of a great meteorite in 1807 in Weston, Connecticut (quoted from the book [2E1] by H.H. Nininger, "Find a falling star", Paul S. Eriksson, New York 1972, ISBN 0- 8397-2229-X, page 4; see also [6E1] below, page 296).

"A grip of a smooth iron wheel on a smooth iron rail would not suffice to haul a train. A locomotive must horse itself along on mechanical legs or winch along a rack rail with a pinion wheel" - John Blenkinsop and others on William Hedley's theoretical solution of the adhesion problem proved correct experimentally in 1813 by the locomotive "Puffing Billy" - see **Figure E1** (the author's summary of the historic analysis presented in the book [3E1] by E.L. Cornwell, "History of Railways", Hamlyn-Nel, London 1976, ISBN 0-600-37587-0, page 14).

"Heavier-than-air machines, flying machines, are impossible!" - Lord Kelvin 1895 (one statement from a large list of quotations proved wrong that has been compiled by Robyn Williams in [4E1] "Australian Science Magazine", Vol. 1, No 1, 1985; see also [6E1] below, page 236).

"Very interesting, Whittle my boy, but it will never work" - a Cambridge professor of aeronautical engineering to jet engine developer, Sir Frank Whittle, about 1930 (one of numerous examples of how wrong educated people can be, collected in the paperback [5E1] by Graham Nown, "The World's Worst Predictions", Arrow 1985). The above quotation explains why the first jet engine was not built in England, but in Germany (1939 - Heinkel "He 178"), and why Sir Whittle was allowed to develop his invention only after German jet aeroplanes proved to be superior to English propeller fighters.

"There is not the slightest indication that nuclear energy will ever be obtainable. It would mean that the atom would have to be shattered at will" - Albert Einstein, 1932 (one quotation from a number of mistaken predictions of some authoritative sources, compiled in the paperback [6E1] by Christopher Cerf and Victor Navasky, "The Experts Speak - the definitive compendium of authoritative misinformation", Pantheon Books, New York 1984, ISBN 0-394-71334-6 (pbk.), page 215).

These claims, along with many others, have proved that almost every idea which at a particular time has been discredited and scoffed at, is completed a few years or decades later. This means that **the statement "impossible" is relative, and only applies to a particular level of our development**. Therefore the existence of such faulty claims in the past is not only an indication of the mistakes of judgment by individuals, but also proof of an error existing in the ruling doctrine of the philosophy of science. The universe seems to be built in such a manner that **"everything is possible: we only need to find out the way to achieve it"**. In all actions and discussions of scholars the above principle should replace the doctrine reported earlier. This new principle should become an essential foundation for the future philosophy of reformed science.

Scholars, acting in accordance with this reformed principle, would not discuss goals,

but concentrate their efforts on verifying the ways of achieving them. By this means, the respect and authority of many people would be secure when the inventions or ideas they tried to disqualify became reality. To prevent us from repeating the same errors with regard to the Oscillatory Chamber and the Magnocraft, perhaps we should implement this reformed principle immediately, beginning with the content of this treatise.

E2. What is totalism?

"Totalism" is defined as a rationalized reversal of the philosophy of "taking the line of least resistance". The previous subsection of this chapter have revealed the **primary rule** for formulating the principles of totalism. To apply this rule requires us to take two steps. In the first step we identify and define a harmful doctrine from the "easy way out" philosophy. Then in the second step we reverse the meaning of this doctrine. The more destructive the original doctrine, the more powerful and positive is the principle of totalism resulting from it.

The primary rule of totalism can also be expressed in the form of a simplified recommendation for everyday use. This recommendation states:

"in all matters concerning intellect, always do the opposite from what the philosophy of taking the line of least resistance suggests you should do".

Because in almost every such matter it is quite clear what the "easy way out" would be, therefore it is also easy to determine (using the above recommendation) what we should do according to totalism. This makes the philosophy discussed easy to utilize and very useful in everyday situations. Moreover, its practical application always seems to prove extremely effective (e.g. during the handling of conflicts, discussions, reviewing new ideas and inventions).

Of course there is much more to totalism than can be presented in such a brief chapter. The other important rule which applies to this positive philosophy is that of "adopting **relevant** principles from the operation of our universe". This rule advises that the best solution to every problem is that which copies the essential laws and mechanisms controlling the same problem in our universe. For this reason the more closely people's actions imitate the operation of the universe, the more effective, successful, and progressive these actions become. For example, the law of competition between "negatives" and "positives" provides the mechanism for keeping stability and progress in the universe, therefore also in all human activities aimed at stability and progress similar competition should be imitated (e.g. countries whose governments are based on two parties mutually competing for power are more stable and progressive from those with many parties and those having only a single party); the law that "the best reaps most benefits" allows evolution and progress in nature, thus opening the same encouragement to societies stimulates their wealth and development (this is why, in the long run, economic intervention, protection, financial subsidiary, and monopolies, have destructive impacts). Further details about totalism are presented in treatise [3F].

By explaining in this chapter the essential principles and rules of the "open minded" attitude, the author hopes to reveal to readers that the acceptance of new ideas is not only dependent on the correctness of these ideas, but also on the philosophical attitudes of people faced with them. Therefore if a description which induces our doubt is encountered while reading the chapters that follow, perhaps the question should be asked: "is this because there is a technical error in this description which we are able to pin-point and

forward to the author, or because our philosophical altitude is a priori rejection". The honest answering of this question would not only do a lot of good for new ideas presented in this treatise, but it would also indicate that we are on a path to adopting principles of totalism for guiding our everyday life.

Fig. E1. **Blenkinsop's engine built in 1811.** As the illustration shows, this locomotive was propelled by a pinion wheel winched along a cast-iron rack rail. The experts of that time were so used to thinking in terms of horse-power that they totally rejected and derided Hedley's idea of propelling a train by a smooth iron wheel. Therefore, if this young creator had not been lucky enough to find the authoritative sponsor who financed his revolutionary invention, locomotives would probably still be using a solution similar to this illustration. Perhaps if this had not happened, our contemporary cars would also be running with legs like horses. Because of William Hedley our civilization won this battle with close-minded people. But no-one knows in how many other areas conservatism has predominated, so that "horse-type" solutions still hold sway.

Chapter F.THE OSCILLATORY CHAMBER
(Copyright © 1994 by Dr Jan Pająk)

Let us visualize a small and perfectly shaped transparent cube which represents a new device for producing a super-powerful magnetic field. It would look like an ideally formed crystal of some transparent mineral, or like a cube cut beautifully from shiny glass and showing its content through transparent walls. With dimensions not larger than those of a handy Rubik's cube it would produce magnetic field thousands of times exceeding the power of fields so-far produced on Earth, including fields from the most powerful magnetic cranes and fields from the largest electromagnets in leading scientific laboratories. If we take this glass cube in our hands, it would demonstrate extraordinary properties. For example, in spite of its small dimensions it would be unusually "heavy" and after being switched onto its full magnetic output even the strongest athlete would not be able to lift it. Its "heaviness" would result from the fact that the magnetic field it produces would attract the cube in the direction of Earth's centre, thus a force of magnetic attraction so created would add to its real weight. The cube would also oppose our attempts to rotate it, and similarly like a magnetic needle of a compass it would always try to point into the same direction coinciding with a magnetic north-south meridian. However, if we somehow could manage to turn it into the orientation opposite to this natural alignment simulating a magnetic needle, then to our surprise it would take off and begin to lift us into space. In this way just on its own this crystal cube would be capable of propelling our space vehicles.

After this crystalline chamber is examined at close range it would show countless electric sparks flickering inside. The gradual displacement of these sparks onto different trajectories would appear as if in suspended animation. Further observation would reveal that they all orderly jump in the same direction around the perimeter of the cube, "slipping" along inner surfaces of the four transparent side walls. (The remaining two frontal walls of this cubical crystal would be occupied by outlets/poles of the magnetic field which this device produces, and thus they would allow insight into the interior because they would not be crossed by any sparks.) The jump of each individual spark would occur only between two opposite walls of the cube. But because parts of the trajectories of these individual sparks would mutually overlap each other, in the final effect they would create a kind of "vortex made of sparks" which would rotate immensely fast around the magnetic axis of the device. However, this vortex would not follow circular trajectories like this is done by the majority of other rotary phenomena, but it would move along square paths. In turn the rotation of this spark-vortex around the peripheral of a square would produce a powerful magnetic field. The production of this field would not be much different from that occurring during the flow of electric current along coils of a square-shaped inductor.

The explanation above discloses the appearance and operation of the "Oscillatory Chamber", i.e. the device which is the subject of presentation in this chapter. It realizes that the name "Oscillatory Chamber" is ascribed to a completely new principle of magnetic field production, unknown previously on Earth, and invented by the author of this treatise. This principle employs effects of the synchronized oscillations of electric sparks occurring within two oscillatory circuits formed into the shape of a cubical chamber.

The structure of the Oscillatory Chamber which accomplishes or implements the above

principle of magnetic field production will take the shape of a cubical chamber made of transparent materials and empty inside (i.e. filled only with a dielectric gas). The six walls of this chamber will be prepared from an electric insulator (e.g. a glass) which is also magnetically neutral, melted together at edges. Two couples of side walls will hold packets of conductive electrodes. These four packets of electrodes, joined to the inner surfaces of four side walls of the chamber, perform alone the function of two oscillatory circuits with a spark gap. Each one of these two circuits is created by a different couple (i.e. two separate packets) of electrodes attached to two opposite walls.

The operation of the Oscillatory Chamber summarized briefly will be as follows. The packets of electrodes located on the walls of the chamber are charged with the opposite electric charges. These charges try to neutralize each other thus they form electric sparks oscillating between electrodes. Because the subsequent sparks are forced to jump at appropriately synchronized moments, they form a kind of electric arc which circulate around the inner perimeter of the cubical chamber. Thus the appropriate formation of the oscillatory discharges occurring in both these circuits allows for the production of a dipolar magnetic field. The principles applied for this production not only eliminate the drawbacks of today's electromagnets, but also provide the Oscillatory Chamber with a variety of unique operational advantages.

The complete elimination of drawbacks inherent in the electromagnets is ensured by the following attributes of the Oscillatory Chamber:

1. The neutralization of electromagnetic forces acting on the structure of the chamber.
2. Leaving to the user's choice the time and amount of energy supply (i.e. each portion of energy, whatever its amount and whenever it is delivered, is collected, stored, converted into a magnetic field and released when necessary).
3. The recovery and conversion back into electricity of all the energy dissipated by sparks.
4. The channelling of the destructive consequences of the accumulation of huge electric charges into the direction which reinforces the chamber's proper operation.
5. The independence of the power of control devices from the power involved in field production (i.e. a weak control signal will cause a change in the enormously powerful field produced by the chamber).

The Oscillatory Chamber displays also the following unique advantages unknown in any other appliance built by man to date:

- A. The ability to absorb and store theoretically unlimited amounts of energy.
- B. Full control over all properties and parameters of the field produced, achieved without any change in the level of energy contained in it.
- C. Producing the kind of magnetic field which does not attract, nor repel, ferromagnetic objects (i.e. which behaves like a kind of "antigravity field", not a magnetic one).
- D. Multidimensional transformation of energy (e.g. electricity - magnetic field - heat) which allow the Oscillatory Chamber to take over the function of almost every other conventional energy-converting device (e.g. electromagnets, transformers, generators, accumulators, cells, combustion engines, heaters, air conditioners, and many more).

As the final result of such a formation of the Oscillatory Chamber, this device, when completed, will be able to raise the value of a produced magnetic flux to a level unlimited by theoretical premises. Practically it also means that this source of field will be the first one able to lift itself as the effect of a repulsive interaction with the environmental magnetic field (i.e. the

field of Earth, Sun, or Galaxy). Thus the Oscillatory Chamber become our "arkway to the stars".

F1. Why there is a necessity to replace the electromagnet by the Oscillatory Chamber

When we observe the blinding achievements in one discipline, without a delay we assume that our progress is equally spectacular in all directions. However, if we examine the matter closely, we may discover the areas where almost no progress has been achieved in the last two centuries, and where we are still treading in the same place. In order us to realize one of the most frequently encountered areas of such a inventive stagnation, let us ask now the following question: "What progress has been achieved recently in the area of principles of the controlled magnetic field production?". To our surprise the answer is "none". At the beginning of the Mars exploration era we still use exactly the same principle of the magnetic field production as that one which was used over 170 years ago, i.e. the principle discovered in 1820 by the Danish professor, Hans Oersted, and depending on the application of the magnetic effects created by an electric current flowing through the coils of a conductor. The device utilizing this principle, called an "electromagnet", is now one of the most archaic inventions still in common use because of the lack of a more suitable solution. We can realize how outdated its operation is from the following example: if the progress in propulsion systems were equal to that of magnetic field production devices, our only mechanical vehicle would still be a steam engine.

Electromagnets possess a whole range of inherent drawbacks, which make it impossible to raise their output above a particular - and not very high - level. These disadvantages can in no way be eliminated, because they result from the principle of operation of these devices alone. Below the most significant of these inherited and thus totally **unremovable drawbacks** of electromagnets are listed. Their explanation with more details will be provided in subsection F5 which presents the way in which each of these drawbacks is eliminated in the operation of the Oscillatory Chamber.

#1. Electromagnets create **deflecting forces** which tense their coils in the radial direction trying to tear these coils apart. These forces are produced as the result of mutual interaction between the magnetic field produced by an electromagnet, and the same coils of the conductor which created this field. The field tries to push these coils out from its own range (according to the action of the "left-hand rule" often called the "motor effect"). Thus the deflecting forces so formed in coils are of a type identical to the ones utilized in the operation of electric motors. In order to prevent the electromagnet from being torn apart, these electromagnetic containment forces must ultimately be opposed by some form of physical structure. The mechanical strength of this structure counter-balances the deflecting forces resulting from the output of a given electromagnet. Of course this structure significantly increases the weight of any really powerful steady-field magnet. Furthermore, when the current's flow in electromagnets exceeds a certain level, the deflecting forces grow to such an extent that they are not able to be balanced further by the mechanical strength of the structure. Thus, the gradual increase in output of electromagnets eventually causes coils to explode. In this way too high an increase in the output of electromagnets results in their **self-destruction via an explosion**. Such explosions of electromagnets are quite frequent occurrences in scientific laboratories, therefore the most powerful electromagnets must be

placed in special bunkers which confine their possible explosions.

#2. Electromagnets require the **continuous supply of electric energy** if they are to produce a magnetic field whose all parameters are controllable (i.e. a field whose parameters can be changed in accordance with the application requirements). If continuous energy supply is cut off, the control over the electromagnet's field finishes. This requirement of controllability causes that during the production of powerful magnetic fields, a single electromagnet consumes the output from a whole electricity plant.

#3. Electromagnets cause significant **energy losses**. The electric current flowing through coils of a conventional electromagnet releases a vast amount of heat (see Joule's law of electric heating). This heat not only decreases the energetic efficiency of the magnetic field production, but also, when the energies involved are high, it leads to a melting of the coils.

The superconductive electromagnet removes the heating from a current flowing through resistance. However, it introduces another loss of energy resulting from the necessity to maintain a very low temperature of the coils. This also causes a permanent consumption of energy which decreases the efficiency of such a magnet. Moreover, it should be noted here that the high density of magnetic fields cancels the effect of superconductivity and thereby restores a resistance to the coils. Thus the superconductive electromagnets are only capable to produce magnetic fields the density of which is lower than the threshold value causing the return of electric resistivity to their coils.

#4. Electromagnets are prone to **electric wear-out**. The geometrical configuration of electromagnets is formed in such a way that the direction of the greatest electric field strength does not coincide with the path of the conductor through the coil (i.e. forces of this field try to short-cut the flow of current across coils, whereas the layer of insulation channel the current to flow through the coils and along a spiral). This directs the destructive action of electric energy into the insulation, causing its eventual damage (short-circuit followed by the electric breakdown) which initiates the destruction of the entire device.

#5. Electromagnets have a **limited controllability**, e.g. can not be controlled by weak signals. The parameters of their magnetic field can be controlled only through the changes in the power of the electrical energy supply. Therefore controlling the electromagnets requires the same powers as those powers involved in the production of a magnetic field.

The only way to eliminate the five disadvantages listed above is to apply a completely different principle of magnetic field production. Such a principle, invented by the author, will be presented in later sections of this chapter. Because this new principle utilizes the mechanism of oscillatory discharges occurring inside a cubical chamber, it is called an "Oscillatory Chamber".

The principle of the Oscillatory Chamber avoids the limitations which prevent an increase of output in electromagnets (the way it is achieved is presented in subsection F5). Also, it promises a more effective and convenient preparation and exploitation, long life without the necessity of maintenance, a very high field-to-weight ratio, and a wide range of applications (e.g. as an energy storage, propulsion device, source of magnetic fields, etc. - see Table F1). The explanations that follow (especially the one from subsection F6) will describe the mechanisms for achieving all these additional advantages. Therefore, it appears highly desirable to promote the fast development of this device, so that in the not-too-distant future it may replace electromagnets presently in use.

F2. The principle of operation of the Oscillatory Chamber

The electric current flowing through a wire is not the only source of a controlled magnetic field. The other well-known source is the phenomenon manifesting the flow of electric energy in its purest form, i.e. an electric spark. There are many different methods for the creation of electric sparks, but the purpose considered here is best served by the so-called "oscillatory circuit with a spark gap". The unique property of such a circuit is its ability to absorb, total and utilize the energy supplied to it. This energy then appears in the form of a gradually diminishing sequence of oscillatory sparks created by the circuit.

The discovery of the oscillatory circuit with a spark gap was achieved in 1845 by the American physicist, Joseph Henry, who noticed that when a Leyden jar was discharged through coils of wire, the discharge and a spark were oscillatory. A few years later Lord Kelvin, the great English physicist and engineer, proved mathematically that the discharge in a circuit so constituted must manifest itself in the oscillatory form.

At this point it should be stressed that Henry's circuit was the first circuit discovered on our planet which produced electrical oscillations. Thus its completion had the same revolutionary consequences for our civilization as for example the development of a first steam engine. This is because Henry's circuit provided the foundations for the formulation of a number of scientific disciplines which are based on electric oscillations, such as electronics or cybernetics. Furthermore, the principle of electric oscillations is utilized presently in a vast number of technical devices, for example in radio, television, computers, measuring instruments, and many more. Thus we should honestly acknowledge that if not for Henry's discovery our civilization would not be at the level it is now.

F2.1. The electrical inertia of an inductor as the motive force for oscillations in a conventional oscillatory circuit with a spark gap

Figure F1 (a) shows a conventional configuration of the oscillatory circuit with a spark gap, i.e. the configuration discovered by Joseph Henry. The most distinctive characteristic of this configuration is that it is constituted by connecting together into one closed circuit the configuration of three vital elements, i.e. L, C_1 and E, which have the form of separate devices. These elements are: (1) inductor L, containing a long wire wound into many coils, which provides the circuit with the property called an "inductance"; (2) capacitor C_1 , whose property, called a "capacitance", allows the circuit to accumulate electric charges; (3) electrodes E, whose two parallel plates E_R and E_L , separated by a layer of gas, introduce a "spark gap" to the circuit.

When the electric charges "+q" and "-q" are supplied to the plates P_F and P_B of the capacitor C_1 , this forces the flow of an electric current "i" through the spark gap E and the inductor L. The current "i" must appear in the form of a spark "S" and must also produce the magnetic flux "F". The mechanisms of consecutive energy transformations occurring within the inductor L (which apart from this subsection is also described in numerous books on electronics and physics) causes the spark "S", since once created between electrodes E, to continue oscillating until the energy involved is dissipated.

The oscillatory circuit with a spark gap represents an electric version of the device which produces one of the most common phenomena of nature, an oscillatory motion. The

mechanical analogy of this device, well-known to everyone, is a swing. In all devices of that type, the occurrence of oscillations is caused by the action of the Conservation Energy Principle. This principle compels the initial energy provided to such an oscillating system to be bound in a continuous process of repetitive transformations into two forms: potential and kinetic. In the case of an oscillatory circuit the "potential energy" is represented by the opposite electric charges "+q" and "-q" carried within both plates of a capacitor - see Figure F1 (a). The electric potential difference introduced by the presence of these charges causes the flow of an electric current "i" through the circuit. In a swing, the same potential energy is introduced by slanting the arm of it away from the vertical position. As a result, a load (e.g. a swinging child) is raised to a particular height, later forcing its own acceleration down into the equilibrium position. The second form of energy, the "kinetic energy", within the oscillatory circuit manifests itself in the form of a magnetic flux "F" produced by the inductor L. In a swing this kinetic energy appears as the speed of a load's motion.

The mutual transformation of the potential form of energy into a kinetic one, and vice versa, requires the involvement of an agent which activates the mechanisms of energy conversion. This agent is introduced by the element possessing the property called "inertia". Inertia is a motive force maintaining the oscillations within any oscillating system. It works as a kind of "pump" which forces the transformations of energy from a potential form, through a kinetic one, back into a reversed potential form. This "pump" always restores the initial amount of potential energy existing at the beginning of the oscillation's cycle, decreased only by its dissipation occurring during the transformations. Therefore the inertial element is the most vital component of every oscillating system. In the oscillatory circuit its function is performed by the inductor L, whose inductance (expressed in units called "Henry") represents electrical inertia. In the swing, mechanical inertia is provided by the mass of a load (expressed in kilograms). This is the reason why the inductance in the electric oscillations is considered to be the equivalent of the mass from the mechanical oscillations.

To increase mechanical inertia it is necessary to join additional mass to that which is already involved in the energy transformations. The increase of electrical inertia requires the extending of the length of an electric current flow, exposed to the action of its own magnetic field. Practically this is obtained by building an inductor containing many coils of the same wire, closely wound, so that each of them is within the range of the magnetic field produced by the other coils.

Let us review the mechanism of oscillations within the oscillatory circuit shown in Figure F1 (a). We assume that in the initial time $t=0$ the plates P_B and P_F of the capacitor C_1 carry the opposite electric charges "-q" and "+q", and that the current "i" within the inductor L is zero. At this instant the whole energy of the circuit is stored in the potential form in the capacitor C_1 . The opposite charges accumulated on the plates of the capacitor C_1 create an electromotive force which activates the current flow "i". To facilitate the interpretation of the sparks' behaviour, in this publication **the electric current is defined as a movement of electrons from negative to positive**. The current "i" appears on the electrodes E in the form of a spark "S", whereas in the inductor L it produces a magnetic flux "F". As the difference of charges "q" on the plates of the capacitor C_1 decreases, the potential energy stored in the electric field also decreases. This energy is transferred to the magnetic field that appears around the inductor because of the current "i" that is building up there. Thus in the first phase of oscillation, which we can call the **active** phase, the electric field decreases, the magnetic field builds up and energy is transformed from the potential to the kinetic form flowing from

the capacitor C_1 to the inductor L . When all the charge on the capacitor C_1 disappears, the electric field in the capacitor will be zero, and the potential energy stored there will be transferred entirely to the magnetic flux " F " of the inductor L . The electromotive force which before caused the current " i " to flow is now eliminated. But the current in the inductor continues to transport the negative charge from the P_B plate of the capacitor C_1 to the P_F plate, because of the electrical inertia. This inertia preserves the current " i " (therefore also the spark " S ") from extinction and maintains its flow at the cost of the kinetic energy contained in the magnetic field. Thus in this second phase of oscillation, which we can call the **inertial** phase, energy now flows from the inductor L back to the capacitor C_1 as the electric field there builds up again. Eventually, the energy will have been transferred back completely to the capacitor C_1 . After this transfer is completed, at the time $t=1/2T$ the situation reached now is like the initial situation at the time $t=0$, except that the capacitor is charged in the reverse way. In the next phase of oscillation the capacitor will start to discharge again, and the whole process will repeat itself, this time in the opposite direction. After the time $t=T$ (where " T " is the so-called "period of pulsations" of a given circuit) the situation returns to the original state as it was at the moment $t=0$. Thus once started, such oscillations continue until the resistance of this process dissipates the energy involved.

F2.2. In the modified oscillatory circuit with a spark gap,
the inductance of a stream of sparks
replaces the electrical inertia of an inductor

It is known that an electric spark alone introduces a high electric inertia. Therefore a spark is able to replace the inductor in providing the inductance to the oscillatory circuit. But there are two conditions of such a replacement, i.e. (1) that the spark must possess the appropriate active length, and also (2) that its path must follow a course within the range of its own magnetic field. To achieve both these conditions, it is impossible to repeat the solution used in the inductor, for the simple reason that an electric spark is reluctant to wind itself into the form of consecutive coils. However, the same effect can be achieved in another way. **The required inductance can be supplied by a whole stream of sparks jumping simultaneously along parallel paths.** Each single spark in such a stream will be the equivalent of one coil of wire within an inductor. Therefore, if the number of sparks reaches the required level, all sparks will together provide the necessary inductance to the circuit.

Figure F1 (b) shows the author's modified version of the oscillatory circuit with a spark gap, which makes use of the electrical inertia of the stream of parallel jumping sparks. The most distinctive characteristic of this version is that all three vital components of Henry's circuit, i.e. inductance L , capacitance C_1 and spark gap E , are now provided by a single physical device, which simultaneously performs three different functions. The modified device consists of only a couple of conductive plates P_F and P_B , attached to the inner surfaces of two opposite walls of a cubical chamber made of an electric insulator and filled with a dielectric gas. Each of the plates is divided into a number of small segments each insulated from the other (in the diagram marked by 1, 2, 3, ..., p). Each pair of facing segments marked by the same number, e.g. "3" or " p ", forms a single elementary capacitor. In turn, after receiving a sufficient electric charge, this capacitor transforms itself into a couple of electrodes exchanging the electric spark, e.g. " S_3 " or " S_p ". The total number of all electric sparks jumping

simultaneously in the form of a single compact stream provides the device with the required inductance.

To summarize the modification described above, one can say that the three separate devices, each of which has provided the conventional circuit with one selected property, are now replaced by the single device (i.e. a pair of plates each subdivided into a number of small segments) simultaneously providing all three vital properties, i.e. L, C and E.

If the principle of operation of this modified oscillatory circuit is considered, it becomes obvious that it is identical to Henry's circuit. After all segments of both plates are uniformly charged, the potential energy of the circuit is built up. When the difference of potentials between plates overcomes the breakdown value "U", the discharge is initiated. This discharge will take the form of a stream of parallel sparks $S_1, S_2, S_3, \dots, S_p$, joining segments of the plates which face each other. Thus in the first, **active** phase of the oscillations' cycle, the magnetic field produced by these sparks will gradually absorb the energy stored initially within the electric field. When both plates P_F and P_B reach the equilibrium of potentials, the electrical inertia of sparks will continue the transmission of the charge between them, transforming the kinetic energy contained within the magnetic field back into the potential energy of the electric field. Therefore at the end of the second, **inertial** stage of the oscillation of sparks, the plates will again contain the initial charge, but of the opposite kind. Then the whole process repeats itself but in the reverse direction. If the slight dissipation of energy occurring in this device is somehow compensated for, the process described above will be repeated endlessly.

Operation of the modified oscillatory circuit liberates all the electric phenomena from material ties. In effect the electric current does not need to flow through a wire and its value is not the subject of limitation by the properties of the materials used. Also the electric phenomena are exposed to a controlling action that allows them to be channelled into the desired course. These are very important achievements, and as will be proved later, they are the source of many of the advantages of this device.

The sequence of sparks that oscillate in the device shown in Figure F1 (b), will produce an alternating magnetic field. Because the stream of sparks follows the same path in both directions, this field will also be a vortex - similar to that formed around a segment of a straight wire (i.e. have all force lines lying on parallel planes). Such a field will not display clear polarity, because its magnetic poles N and S are not fixed. To create a bipolar magnetic field with the steadily positioned magnetic poles N and S, it is necessary to continue one step further in the development of this modified oscillatory circuit.

F2.3. The combining of two modified circuits forms an "Oscillatory Chamber" producing a bipolar magnetic field

The final form of the circuit considered here is shown in Figure F1 (c). This is the form to which the name "Oscillatory Chamber" has been ascribed. The Oscillatory Chamber is constituted by combining together two circuits indicated as C_1 and C_2 , both identical to the one presented in the previous subsection and illustrated in Figure F1 (b). Therefore it consists of four segmented plates, i.e. twice as many as in the modified oscillatory circuit in Figure F1 (b), indicated as P_F, P_B, P_R and P_L (i.e. front, back, right and left). Each of these plates contains the same number of segments "p", and faces the other identical plate, together with this other plate forming one of the two cooperating oscillatory circuits. Both of these circuits produce the

four streams of sparks marked as S_{R-L} , S_{F-B} , S_{L-R} , and S_{B-F} , which oscillate between opposite plates. These sparks appear in succession, one after the other, having the mutual phase shift between them equal to one quarter of a period (i.e. " $1/4T$ ") of their entire sequence of pulsations.

Before the mechanism of the discharges in this final configuration is analyzed, we should remind ourselves of the action of the electromagnetic containment forces which will try to deflect the sparks away from the range of the bipolar magnetic field. They are the same forces which cause the explosion of coils in powerful electromagnets (we already discussed them in item #1 of subsection F1). In the case of the Oscillatory Chamber, these forces will push the stream of sparks against the left plate along which the discharge occurs. For example all sparks within the stream S_{R-L} jumping from the plate, let say, P_R to the plate P_L will be pushed to the surface of the plate P_F (at this moment the plate P_F increases its own negative charge). For this reason the individual sparks forming consecutive streams S_{R-L} , S_{F-B} , S_{L-R} , and S_{B-F} , instead of crossing the paths of the other sparks, will bend themselves towards the left walls of the chamber and produce a kind of orderly rotating arc. Notice that the plate along which the sparks are jumping is prevented from being entered by them. This prevention mainly depends on the formation of the plate from a large number of small segments (needles), each insulated from the other, and therefore the resistance against conduction along the plate is not less than the resistance of the discharge through the dielectric gas in the chamber.

Let us assume that the initial charging of the Oscillatory Chamber is provided in such a way that at the moment of time $t=0$ the stream of sparks marked as S_{R-L} will occur first, and then after a period of time equal to $t=1/4T$ - the stream S_{F-B} will follow (compare part (c) of Figure F1 with part (a) of Figure F3). Let us also assume that right from this initial time $t=0$, along the vertical (magnetic) axis "m" of the chamber already prevails the magnetic flux "F" produced by this device. This flux pushes sparks against the wall located at their left sides. After the initial charging of the C_2 capacitor, at the time $t=0$, the **active** stream of sparks S_{R-L} will appear, which will jump from plate P_R to plate P_L . These sparks produce their own magnetic flux " ΔF " which is totalled to the flux "F" already existing in the chamber. The flux "F" bends the paths of all these sparks, pushing them close to the surface of their left plate P_F . At time $t=1/4T$ the potentials of plates P_R and P_L reach an equilibrium, but the inertia of sparks S_{R-L} still continues transporting charges from P_R to P_L , at the cost of the kinetic energy accumulated in the magnetic field. Thus the stream S_{R-L} enters its **inertial** stage. At the same instant ($t=1/4T$) the operation of the second circuit begins, and the active jump of the S_{F-B} stream of sparks is initiated. Similarly this stream produces its own magnetic field " ΔF " which adds to the entire flux "F" already prevailing in the chamber. The flux "F" pushes sparks against the surface of the plate P_L located on their left side. So in the timespan $t=1/4T$ to $t=1/2T$, there are two streams of sparks present in the chamber (S_{R-L} and S_{F-B}), the first of which (inertial) transfers energy from the magnetic to the electric field, whereas the second (active) one transfers energy from the electric to the magnetic field. At time $t=1/2T$ the plates P_L and P_R reach a difference of potentials equal to the initial one (at $t=0$), but with the opposite location of charges. Therefore the stream of sparks S_{R-L} disappears, whereas the stream S_{L-R} jumping in an opposite direction is now initiated. This stream is pushed by field "F" to the surface of plate P_B . At the same instant ($t=1/2T$) the plates P_F and P_B reach the equilibrium of potentials, so that the stream of sparks S_{F-B} passes into its inertial stage. In the timespan $t=1/2T$ to $t=3/4T$ there are again two streams of sparks, i.e. S_{F-B} and S_{L-R} , the first of which - inertial consumes the

magnetic field, whereas the other - active produces it. At the instant $t=3/4T$ the sparks S_{F-B} disappear and the sparks S_{B-F} are formed (pushed against plate P_R), whereas the sparks S_{L-R} are passing into their inertial stage. At time $t=1T$ the sparks S_{L-R} also disappear and the sparks S_{R-L} are created (pushed against the plate P_F), whereas the sparks S_{B-F} pass into their inertial stage. With this the whole cycle of the sparks' rotation is closed, and the situation at time $t=1T$ is identical to the one at the initial moment $t=0$. The process that follows will be a repetition of the cycle just described.

The above analysis of the sequence and paths of the sparks reveals a very desirable regularity. The streams of sparks turn into a kind of electric arc combined from the four separate segments. This arc rotates around the inner perimeter of the Oscillatory Chamber. Such a process, in accordance with the rules of electro-magnetism, must produce a strong, pulsating, bipolar magnetic field. The obtaining of such a field crowns the long and difficult search for the new method of the magnetic field production presented here.

F3. The future appearance of the Oscillatory Chamber

It is not difficult to satisfy the requirements of the Oscillatory Chamber for construction materials. This device can be made of practically anything, provided that its housing is a good electric insulator and its electrodes made of good electric conductors. Moreover, all parts should be magnetically neutral, as in the case of using for example steel it would be destroyed with the magnetic field produced by this device. So even ancient materials available thousands of years ago, such as wood and gold, can be used. If made out of these, the Oscillatory Chamber would look like an ordinary wooden box or cube. Its appearance would not indicate its hidden power.

At our present level of technological development there are available transparent nonconductors, which are also excellent robust construction materials and are magnetically neutral. One of the most frequently used examples of them is an ordinary glass or plexiglass. If the housing of the chamber (i.e. all six walls) were made of glass, it would reveal to the observer the processes occurring in the interior of this device, e.g. the jumps of electric sparks, the density of energy, the operation of control devices, etc. Contemporary electronics has also created a high demand for transparent conductors, which can already be found in some watches and calculators. The quality of these conductors will gradually improve and we may soon expect their properties to be comparable to those of metals. Let us assume that the Oscillatory Chamber will be made wholly of such transparent materials (i.e. both conductors and nonconductors). Therefore the casual observer of the chamber in operation will notice a typical "crystal" lying in front of him/her. It will take the form of a shiny transparent cube nicely cut from a glassy material - see **Figure F2**. Along the inner surfaces of the plain side walls of this crystal cube, bright gold shimmering sparks will flash. Although these sparks will flicker, they will appear to be frozen in the same positions. From time to time they will make rapid movements like a tumbleweed of sleeping fiery snakes. Their paths will closely follow the inner surface of the side walls, because of the electromagnetic containment forces pushing the sparks against the sides of the chamber. The inside of the cube will be filled with a dielectric gas and an extremely concentrated magnetic field. This field, when observed from the direction perpendicular to its force lines, will be impenetrable to light, looking like dense

black smoke which fills the interior of this transparent crystal.

It is very noticeable in any scientific exhibition or "open day" in a laboratory, that when a demonstrator starts up an apparatus producing sparks, for example a Tesla coil, an Induction coil or a Van de Graaff machine, spectators irresistibly gravitate towards the display. Claps of thunder and lightning flashes have always possessed a kind of mysterious, hypnotic power which acts on everyone and which provides memorable experiences. The power emanating from inside the Oscillatory Chamber will similarly capture the attention and imagination of people witnessing it. Future observers of the operation of this device will have the impression that they are facing an unknown living creature, absorbed in the fulfilment of its own fascinating and mysterious physiological functions, rather than seeing a piece of machinery engaged in its ordinary process of operation. The wealth of energy, trapped, curbed and waiting within the walls of the chamber will fascinate witnesses, leaving them with a multitude of vivid impressions, indelibly etched on their memories.

Observing this transparent cube, one will find it difficult to imagine that to reach the point of its creation, this device, so simple in structure, required the accumulation of almost 200 years of human knowledge and experience.

F3.1. Three generations of the Oscillatory Chambers

The analysis of the principles of the Oscillatory Chamber reveals that the operation of this device does not require the implementation of a strictly cubical shape. In this publication, however, for simplicity in deduction, only the cubical shape is considered. But in a similar way, this operation can also be executed in a number of other shapes. Thus approximately at the same time as the **cubical chamber**, a **rectangular chamber** in the shape of a square bar will probably be completed on Earth as well. It will consist of four rectangular side walls of identical dimensions and two square front walls (top and bottom) of identical dimensions. The best example of application of such a chamber is the main chamber (M) in the spider configuration shown in Figure F7. Because the cubical and rectangular chambers will be firstly build on our planet, they will be called here the "**chambers of the first generation**". The main design condition for all chambers of the first generation is that their cross-section in a plane perpendicular to the magnetic axis "m" must be a square. Thus we can call them also the "**square chambers**".

The appearance of all chambers of the first generation will be similar. As this has already been described in the previous subsection, they will all make an impression of transparent crystals, square in the cross-section, the interior of which is filled with gold sparks frozen in their flickering and with dense magnetic field resembling a black smoke.

Unfortunately, at a certain level of development of our civilization, the chambers of the first generation will become insufficient to fulfil all the requirements imposed on them. Building of teleportation vehicles will impose totally new requirements concerning the much more strict control over the "variation in time" of the field pulsations produced by them. (By the "variation in time" one should understand the mathematical function " $F=f(t)$ " which expresses the changes of magnetic flux "F" as depending on the elapse of time "t" - e.g. see Figure F6.) In order to satisfy these further requirements the building of a new, second generation of the Oscillatory Chambers must be initiated. It can already be foreseen that the **chambers of the**

second generation will implement their principles of operation in an octagonal shape. Such **octagonal chambers** will consist of eight rectangular side walls of identical dimensions and two identical front walls (top and bottom) shaped into equilateral octagons. Unfortunately the control over these chambers and the technical problems with their construction will be many time more complex than those involved into the development of chambers of the first generation. Therefore their development will be possible only when we reach much higher level of our development, long after the construction and control of ordinary chambers of the first generation is mastered. However, the octagonal chambers will produce the magnetic field the characteristics of which will be much more precise from the field produced by the square chambers. For example, the constant magnetic field produced by the twin chamber capsule formed from two such octagonal chambers will be much more "constant" than the constant field produced by an ordinary capsule formed from two square chambers (for the justification see the impact the increased number of segments in a Fourier equation has on the resultant value from such an equation).

The Oscillatory Chambers of the second generation will have a similar appearance to chambers of the first generation. They will look like transparent crystals shaped into octagonal bars, with all eight side walls of equal sizes and dimensions. Similarly to the chambers of the first generations they will be filled with golden sparks rotating around their inner peripherals (i.e. around the octagonal frontal walls) and with powerful magnetic field which will look like a black smoke.

After chambers of the second generation the turn in completion will come into **chambers of the third generation**. These will also look similarly to the previous ones. At the moment it is possible to deduce that their operation will be implemented in the **"sixteen-gonal" chambers**. These chambers will take the shape of bars containing sixteen identical rectangular side walls, plus two identical frontal walls shaped into equilateral "sixteen-gons". Their development should be started when our civilization initiates the building of time vehicles.

From the deductions provided above it should be obvious that the external shape a given Oscillatory Chamber takes is the direct indicator of the level of advancement reached by the civilization which has completed it. Thus it is vital for us to know about these shapes, as they allow us to identify the level of technological advancement that a given civilization represents, and also the principles utilized for flights in the vehicles build by this civilization (i.e. if these vehicles operate in the magnetic, teleportative, or time travel convention - see subsection J3).

F4. Mathematical model of the Oscillatory Chamber

Our present knowledge of magnetic and electric phenomena enables us to deduce the equations expressing the values of the resistance, inductance and capacitance of the Oscillatory Chamber. Further combination of these equations will lead to the prediction of the behaviour of this device.

This subsection is just intended to describe the Oscillatory Chamber in such language of mathematics. Therefore it supplies the vital interpretative foundations for all the researchers experimenting with this device. Unfortunately for the readers less oriented towards

mathematics, it may spoil the pleasure of familiarizing themselves with the content of this monograph. For this reason, those readers who experience a revival of sleepiness each time they encounter a mathematical equation are recommended to shift from this point directly into the beginning of subsection F5.

F4.1. Resistance of the Oscillatory Chamber

The general form of the equation for the resistance of any resistor of cross-section "A" and length "l" is as follows:

$$R = \Omega \cdot \frac{l}{A}$$

In this equation the " Ω " represents the resistivity of a material from which the resistor is made. In our case it will be the maximal resistivity of the dielectric gas that fills the Oscillatory Chamber, determined for the conditions of the initial moment of electric breakdown.

If in the above general equation, we replace the variables by the specific parameters determined for the Oscillatory Chamber, i.e. $l=a$ and $A=a^2$ (compare with Figure F1 "b"), this gives:

$$R = \frac{\Omega}{a} \quad (F1)$$

The equation (F1) received here represents the resistance of the Oscillatory Chamber, which is a function of the chamber's side wall dimension "a".

F4.2. Inductance of the Oscillatory Chamber

The determination of the chamber's inductance is an extremely difficult and complex task. Completing it with total accuracy is beyond the author's knowledge of the subject. Also a number of experts consulted in this matter were unable to help. (Perhaps some of the readers know how to resolve this problem - in such a case the author would warmly welcome a review of their deductions and the final equation they derived.) Being unable to find the exact solution, the author decided to apply temporarily a simplified one. To justify this simplification it should be stated that the deducted equation (F2) for the value of inductance will be used only once in the entire treatise, when the meaning of factor "s" (see (F5)) is interpreted. Therefore all the vital equations in this work remain unaffected.

In the simplified deductions of the chamber's inductance an **assumption** is made that a unitary inductance of a stream of sparks (i.e. the inductance related to the unit of a spark's length) will be equal to the inductance of the equivalent strand of wires. This assumption allows for the application of a well-known equation for the inductance of a solenoid (see the book [1F4.2] by David Halliday et al, "Fundamentals of Physics", John Willey & Sons, 1966):

$$L = \mu \cdot n^2 \cdot l \cdot A$$

When in this equation we substitute: $n=p/a$, $l=a$, and $A=a^2$ (where "p" is the number of segments in each of the chamber's plates, whereas "a" is the dimension of the chamber's walls), the simplified equation for the inductance of the Oscillatory Chamber is derived:

$$L = \mu \cdot p^2 \cdot a \quad (F2)$$

It can be theoretically asserted that the unitary electrical inertia of a stream of sparks should be greater than such an inertia in the equivalent strand of wires. The justification for this assertion can be obtained from the analysis of the inertia mechanism. The inertia reveals itself only when the motion involves the reversible phenomena or media which absorb energy in the initial stage of the motion's development, and which release this energy when the motion declines. The greater the number of such phenomena and media involved, and the higher their energy absorption, the larger is the resultant inertia. The stream of sparks jumping through gas in every aspect manifests better potentials for causing an inertia higher than the one of a current flowing through wires. The first reason for this lies in the more efficient energy absorption and releasing by sparks, occurring because:

- a) The speed of electrons in a spark can be higher than in a wire,
- b) The contiguous sparks can pass closer to each other because they do not require thick insulation layers in between them (as is the case for wires).

The second reason for the higher inertia of sparks in gas results from them involving a variety of reversible phenomena - not appearing at all during flows of currents through wires. These are:

- c) The ionization of surrounding gases. This, due to the returning of the absorbed energy, supports the inertia of the process at the moment of the sparks' decline.
- d) The motion of heavy ions, whose mass absorbs and then releases the kinetic energy.
- e) The initiation of hydrodynamic phenomena (e.g. dynamic pressure, rotation of the gas) which also will be the cause of the charges' dislocation and energy return at the moment of the sparks' decline.

The above theoretical premises should not be difficult to verify by experiments described in subsection F7.2 (e.g. stage 1c).

F4.3. Capacitance of the Oscillatory Chamber

When we use the well-known equation for the capacitance of a parallel-plate capacitor, of the form:

$$C = \epsilon \cdot \frac{A}{l}$$

and when we apply the substitutions: $A=a^2$, $l=a$, this yields the final equation for the capacitance of the Oscillatory Chamber:

$$C = \epsilon \cdot a \quad (F3)$$

F4.4. The "sparks' motivity factor" and its interpretation

Each of the equations (F1), (F2) and (F3) describes only one selected parameter of the Oscillatory Chamber. On the other hand, it would be very useful to obtain a single complex factor which would express simultaneously all electromagnetic and design characteristics of this device. Such a factor is now introduced, and will be called a "sparks' motivity factor". Its defining equation is the following:

$$S = P \cdot \frac{R}{2} \cdot \sqrt{\frac{C}{L}} \quad (F4)$$

Notice that, according to the definition, this "s" factor is dimensionless.

Independently from the above defining equation (F4), the "s" factor has also an interpretative description. This is obtained when in (F4) the variables R, L and C are substituted by the values expressed by equations (F1), (F2) and (F3). When this is done, the following interpretative equation for "s" is received:

$$S = \frac{1}{2a} \cdot \Omega \cdot \sqrt{\frac{\epsilon}{\mu}} \quad (F5)$$

Equation (F5) reveals that the "s" factor perfectly represents the current state of all environmental conditions in which the sparks occur, and which determine their course and effectiveness. It describes the type and consistency of the gas used as a dielectric, and the actual conditions under which this gas is stored. It also describes the size of the chamber. Therefore the "s" factor constitutes a perfect parameter which is able to inform exactly about the working situation existing within the chamber at any particular instant in time.

The value of the "s" factor can be controlled at the design stage and at the exploitation stage. At the design stage it is achieved by changing the size "a" of a cubical chamber. At the exploitation stage it requires the change of the pressure of a gas within the chamber or altering its composition. In both cases this influences the constants Ω , μ and ϵ , describing the properties of this gas.

F4.5. Condition for the oscillatory response

From the electric point of view the Oscillatory Chamber represents a typical RLC circuit. The research on Electric Networks has determined for such circuits the condition under

which, once they are charged, they will maintain the oscillatory response. This condition, presented in the book [1F4.5] by Hugh H. Skilling, "Electric Network" (John Willey & Sons, 1974), takes the form:

$$R^2 < 4 \cdot \frac{L}{C}$$

If the above relation is transformed and then its variables are substituted by the equation (F4), it takes the final form:

$$p > s \tag{F6}$$

The above condition describes the design requirement for the number "p" of segments separated within the plates of the Oscillatory Chamber, in relation to the environmental conditions "s" existing in the area where the sparks appear. If this condition is fulfilled, the sparks produced within the Oscillatory Chamber will acquire an oscillatory character.

To interpret the condition (F6), a possible range of values taken by the factor "s" should be considered (compare with the equation (F5)).

F4.6. The period of pulsation of the chamber's field

From the RLC circuits we know that the period of their oscillations is described by the equation:

$$T = \frac{2 \cdot \Pi}{\sqrt{\frac{1}{LC} - \left(\frac{R}{2 \cdot L}\right)^2}} = 2 \cdot \Pi \sqrt{\frac{L \cdot C}{1 - \frac{R^2 C}{4 \cdot L}}}$$

If the defining equation (F4) on the factor "s" replaces in the above a combination of R, L, and C parameters, whereas equation (F1) and equation (F3) provide the values for R and C, then this period is described as:

$$T = \frac{\Pi \frac{p}{s} \cdot \Omega \epsilon}{\sqrt{1 - \left(\frac{s}{p}\right)^2}} \quad (F7)$$

The final equation (F7) not only illustrates which parameters determine the value of the period of pulsations "T" in the Oscillatory Chamber, but also shows how the value of "T" can practically be controlled. Thus this equation will be highly useful for the understanding of the amplifying control of the period "T" of field pulsation described in subsection F5.5.

If we know the period "T" of chamber's field pulsations, then we can easily determine the frequency "f" of pulsations of this field. The well known equation linking these two parameters is as follows:

$$f = \frac{1}{T} \quad (F8)$$

Of course, according to the above equation (F8), the control over the frequency "f" of the field's pulsations will be achieved via influencing the value of the period "T" of this field pulsations.

F5. How the Oscillatory Chamber eliminates the drawbacks of electromagnets

The operation of the Oscillatory Chamber is formed in such a way that all drawbacks significant for electromagnets are completely avoided in this device. The descriptions that follow present the principle of elimination for each inherent disadvantage of electromagnets listed and briefly discussed in items #1 to #5 of subsection F1.

F5.1. Mutual neutralization of the two opposite electromagnetic forces

One of the most significant drawbacks of electromagnets is the deflecting force formed in their coils (which was already described in item #1 of subsection F1). In the final effect this force leads to the explosion of electromagnets if they exceed a certain (and not very high) threshold value. In the Oscillatory Chamber this dangerous force is completely neutralized. This is because the unique operation of the Oscillatory Chamber leads to the formation of two reciprocally counter-acting forces: (1) the Coulomb's attraction force, and (2) the electromagnetic deflecting force (i.e. the same one which tended to explode electromagnets). Both these forces, acting one against the other, mutually neutralize themselves. This

subsection is to explain the principles on which this mutual neutralization of forces is achieved.

The Coulomb forces are created in the effect of mutual attraction of opposite electric charges, which are accumulated on the facing walls of the chamber. They cause the formation of electrostatic forces that compress this device inwards, trying to squash it. In turn the electromagnetic containment forces are created by the interaction of the magnetic field and the sparks. They cause the tension of the Oscillatory Chamber outwards. Therefore it is possible to select the design and operational parameters of this device, so that both kinds of forces mentioned above will mutually neutralize each other. As the final result, the physical structure of the chamber is liberated from the obligation to oppose any of these two forces.

Figure F3 presents the mechanism of reciprocal compensation of these two interactions described above. For simplicity, all the courses of phenomena within the chamber are shown as linear, independently of how they occur in reality. But it should be noticed that these phenomena are symmetrical. It means that, for example, if the current in the sparks changes in a particular way, the potentials on the plates must also change in exactly the same way. Therefore the variation in time of the forces analyzed here will display some kind of an inherent regulation mechanism, in which the course (not the quantity) of the first phenomenon always follows the course of the other phenomenon opposite to this first one. In this way, independently what is the real variation in time of the force interactions described here, the principle of mutual neutralization explained here on the example of linear course will also be valid for all other variations which may occur in reality.

Part (a) of Figure F3 shows the four basic phases forming the full cycle of the chamber's operation. The description of these phases is already provided in subsection F2.3 of this chapter. Significant for each phase is that two streams of sparks co-exist, the first of which (in the diagram F3 (a) indicated by the continuous line) transmits energy from the electric field into the magnetic field (**active** sparks). The second stream (in the diagram indicated by a broken line) in this instant consumes the magnetic field to produce the electric field (**inertial** sparks).

Part (b) of Figure F3 illustrates the relevant changes of electric charges "q" on the R (right), L (left), F (front) and B (back) plates of the chamber, occurring during each phase of the device's operation. These charges create the Coulomb's forces that attract the facing plates inwards. In this part of the diagram it is visible that, when one pair of plates reaches the maximum of its potentials differences - initiating a discharge between them, the other pair is just in its equilibrium of potentials. Then simultaneously with the growth of the discharge current flowing between this first pair of plates, the opposite charges on the other pair of plates also grow. Thus the containment forces that tense the chamber outwards are growing accordingly with the value of the discharge current. On the other hand the Coulomb's force of the reciprocal attraction of these other facing plates is growing as well, together with the quantity of opposite electric charges accumulated on them. So as the result both counter-acting kinds of forces are growing at the same pace.

Part (c) of Figure F3 shows the changes in the electromagnetic containment forces $M=i \cdot a \cdot B$, trying to push out the particular sparks from the field's range. Because these forces are proportional to the product of the sparks' current "i" and the magnetic flux density B, where $B=F/(a \cdot a)$, the maximum of the chamber's tension will occur at the instant of time when the discharging plates reach the equilibrium of their potentials. At this same instant of time the other pair of plates, along which the discharge occurs, reaches the maximum of potentials

difference (compare with part (b) of this diagram) as well as the maximum force of their reciprocal compression. Thus in the maximums both kinds of forces also mutually compensate each other.

In part (d) of Figure F3 the mechanism of mutual compensation of the forces described above is shown. The upper side of this diagram presents the changes in the tension forces "T" which try to pull the Oscillatory Chamber apart. These forces are caused by the interaction of the magnetic field and the current from the sparks (compare with part (c) of this Figure). The lower side of diagram (d) presents the changes in the compression forces "C". This compression is caused by the mutual Coulomb's attraction occurring between the facing plates which accumulate the opposite electric charges "q" (compare with part (b) of Figure F3). Note that whenever a tension force appears (e.g. from the sparks S_{B-F}), there is always also formed a counteracting compression force (e.g. from the Coulomb's attraction of charges q_{R-L}). Both of them act in opposite directions, and follow the same course of changes in time. Therefore both neutralize each other.

It is natural that the compensation of forces, displaying inherence in their course as described above, still requires values to match. Therefore further experimental research will be necessary, to select such design and exploitation parameters of the Oscillatory Chamber that will provide the full equilibrium for the counteracting forces. As a result of this research, a device can be completed in which the production of a magnetic field will not be limited by the action of any kinds of forces. Thus the field produced by this device can be increased to an unlimited value, even many times higher than the value of the "starting flux".

F5.2. Independence of the magnetic field production from the continuity and efficiency of the energy supply

One of the most basic attributes of the oscillating systems is their capability for the discrete absorption of the energy supplied, which is then bound into a continuous process of oscillations. An example of this is a child on a swing, which, once pushed, then swings a long time without any further work. Practically it means that energy once supplied to the Oscillatory Chamber will be tied up within it for a period of time until circumstances occur which will cause its withdrawal. As will be explained in item F5.3.1 of this chapter, such withdrawal can appear only when the chamber is involved in performing some kind of external work.

The other attribute of the oscillating systems is their ability to change the level of energy accumulated in them by periodic totalling of further portions of energy to the resources already stored. In the previous example of a swing, to cause the slanting of a child at a particular height, it is not necessary to apply all effort at once. It is sufficient to keep pushing gently over a longer timespan to periodically maintain this addition of energy. The consequence of this attribute will be that the Oscillatory Chamber will not require the supply of its full reserve of energy at once. The energy supply to this device can be gradual, spread over a very long period of time.

Together both of these attributes give us a practical chance to supply any quantity of energy that may be required for the production of a magnetic field, without introducing any requirements or limitations concerning the source and the channel which provide this supply.

To help us realize the advantage of the above method of supplying energy to the

Oscillatory Chamber over the one used in electromagnets, we should consider the following example. A child on a swing and an athlete both try to lift a heavy load to a specific height. The child does it almost without effort by accumulating the energy during consecutive oscillations, whereas the athlete needs to use all his/her strength and still may not achieve his/her aim.

F5.3. Elimination of energy loss

Sparks are well-known for their inherent dissipation of energy. There is no doubt that such an intensive circulation of sparks, like the one appearing within the Oscillatory Chamber, must convert an enormous amount of electrical energy into heat. In an ordinary device such a conversion would become a source of significant energy loss. But in the chamber unique conditions appear which make possible the reversed conversion of heat directly into electricity. This conversion allows for recovery back into the opposite electric charges of all the energy previously dissipated into the heat produced by the sparks. So within the chamber two opposite processes will simultaneously occur: (1) the energy dissipation in (and around) the sparks, manifesting itself as the conversion of electrical energy into heat, and (2) the energy recovery by the direct conversion of heat back into electrical energy. Both these processes will mutually neutralize each other's effects. Therefore no matter how high the energy dissipation by the sparks themselves, the Oscillatory Chamber as a whole will fully eliminate their energy loss. As the result of such an elimination, all energy provided to this device will be preserved within it forever, unless some kind of external work is done which will cause its retrieval.

In the Oscillatory Chamber three elements co-exist, which in the same configuration were not present in any other device. These are: (1) the magnetic field force lines of which are accelerated and decelerated by sparks' motion, (2) electrodes whose charges fluctuate, and (3) a dielectric gas which is highly ionized by the discharges and caused to rotate by the circulating streams of sparks. Furthermore, during the operation of the device these three elements assume states which are required for the "Telekinetic Effect" to occur. For this reason the Oscillatory Chamber provides all the conditions required to employ the Telekinetic Effect for the direct conversion of heat (produced by sparks) into electricity.

Principles involved in the telekinetic method of heat conversion into electricity are explained in chapter C, whereas the description of devices already working which employ such a conversion is provided in a separate treatise [6]. In this method heat is converted directly into electricity through the application of telekinetic motion. Chapter D (and subsection J1) of this treatise describe the Concept of Dipolar Gravity which explains the difference between the physical and telekinetic motion. According to this concept, the telekinetic motion is caused not by the action of a force, but by the action of the so-called "Telekinetic Effect". The action of this effect can be released technologically through the acceleration and deceleration of magnetic fields. As the Telekinetic Effect represents a reversal of friction, i.e. it spontaneously absorbs environmental heat and produces motion (friction spontaneously converts mechanical motion into heat), it is capable of converting the heat induced motion of gas particles into electric potentials difference.

Principles involved in the direct conversion of thermal energy produced in the chamber back into electricity via the Telekinetic Effect are explained in subsection C2. However, for the consistency of presentation they will be briefly summarised also here. The Telekinetic Effect allows for the controlled release of two mutually opposite thermal phenomena which,

amongst others, cause the emission of the so-called "extraction glow" and "dispersion glow". During the release of the first of these two phenomena the thermal energy from the environment can be directly transformed into motion, whereas during the second one - motion can be directly transformed into the thermal energy. The direction and intensity of these "heat/motion" transformations depends on the direction and value of the vector of momentary accelerations or decelerations of magnetic field force lines which pass through the volume of the chamber (or more precisely from the mutual proportions and orientation of this vector in relation to the momentary vectors of motion of electric charges in the chamber). Thus by appropriate selection of the curvature of momentary pulsations of the field, the temperature of the chamber can be maintained on a constant, unchangeable, and controllable level - see the descriptions from subsection C2. The principle of this maintenance depends on such a control of the curvature of momentary field changes in the chamber that the individual half-pulses of this field would release the Telekinetic Effect required. In turn this Effect would cause the appropriate acceleration of the electric charges rotating in the chamber, thus consuming the thermal energy. In this manner the entire heat from sparks' energy losses would be converted back into the rotation of electric charges of these sparks. As the final result the Telekinetic Effect would transform the heat produced by the sparks into motion of electric charges of these sparks, thus maintaining the temperature of the chamber on a constant and defined in advance level.

The author is aware that his statements concerning the recovery of heat dissipated by electric sparks may be accepted reluctantly by people so-far unfamiliar with the action of the Telekinetic Effect. For this reason, in the subsection that follows he will present arguments indicating that even without the knowledge of the Telekinetic Effect, present science in special circumstances recognizes the possibility of the direct conversion of all heat into electricity. In order to support these arguments with some empirical findings, the author would like to also indicate here that according to the content of chapter L the idea of the Oscillatory Chamber is already implemented in a technical manner. The observers of the already operational models of this device never reported that it displays overheating or even a slight warming up. This in turn means that the direct conversion of all heat into electricity discussed here is in fact achievable.

F5.3.1. Premises for the recovery of all heat dissipated by sparks

One of the stereotyped opinions which prevail among scientists is that the conversion of thermal energy into any other form of energy must always obey the Carnot principle of thermodynamical efficiency. The adherents of this view automatically carry it over to the Oscillatory Chamber without considering the unique conditions occurring within it, whereas any mechanical application of the laws of thermodynamics to the Oscillatory Chamber is a gross over-simplification, overlooking the following factors of extreme importance:

1. The so-called "laws" of thermodynamics are in fact not laws, but statistical predictions of the total cause of numerous **chaotic** events.
2. The behaviour of gas particles in the presence of a strong magnetic field displays **order**, not chaos. Therefore the course of the energy conversion within the Oscillatory Chamber can not be described by the laws of thermodynamics.
3. Even without considering the future ways of direct conversion of heat into electricity,

such as the application of telekinetic motion, at our present level of knowledge such perfectly efficient methods are already known. For example, the principle of the magneto-hydro-dynamic energy conversion assures perfect efficiency in thermal energy recovery. Therefore, if such conversion is deprived of the thermodynamic (chaotic) factor, as this will be the case in the Oscillatory Chamber, such a perfect recovery can be obtained.

Because these three factors are vital to the Oscillatory Chamber, and they don't seem to be realized by some readers, let me explain their meaning more precisely.

Refer 1.

The statistical character of the laws of thermodynamics has been acknowledged for quite a long time. James Clerk Maxwell (1831-1879), the author of the famous equations of electromagnetism, presented proof based on the action of the so-called "Maxwell's demon", which demonstrated that the validity of these laws may be abolished in some exceptional situations. Quoted below is what B.M. Stableford writes about the second of these laws in his book **[1F5.3.1]** "The Mysteries of Modern Science" (London 1977, ISBN 0-7100-8697-0, page 18):

"The law of thermodynamics was shown to be the result of the statistical aggregation of a large number of events rather than an inviolable principle ruling the world with an iron hand. ... we can begin to see that although the law of thermodynamics always works out in practice, it could, in fact, be subverted by an extremely unlikely combination of chance happenings - it is not a law so much as a statistical prediction."

Refer 2.

It is a well-known phenomenon that a strong magnetic field stops the chaotic behaviour of the particles of a gas (fluid) and arranges them into an ordered pattern. This phenomenon is the basis for operation of some computer memories, and it is also applied to so-called "magnetic cooling" - see the book **[2F5.3.1]** by J.L. Threlkeld, "Thermal Environmental Engineering" (Prentice-Hall, Inc., N.J. 1962, page 152). Therefore a magnetic field itself carries the capability of performing the function of "Maxwell's demon", able to abolish the validity of the laws of thermodynamics. So it is justified to expect that, in the presence of such a field, energy conversion will not obey the Carnot principle.

Refer 3.

The principle of magneto-hydro-dynamic energy conversion contains the potential for perfect energy recovery. This potential is very well expressed in the following quotation taken from the book **[3F5.3.1]** by J.P. Holman "Thermodynamics" (McGraw-Hill, Inc., 1980, ISBN 0-07-029625-1, page 700):

"From an energy point of view, the movement of force through a displacement (mechanical work) is converted to electrical work (current flow against potential difference) by means of the electromagnetic induction principle. This is a work-work energy conversion and is not limited by the Carnot principle."

The unique conditions occurring within the Oscillatory Chamber eliminate the thermodynamical (chaotic) factor which reduces the efficiency of this process in ordinary circumstances, and allows the energy conversion to achieve perfect efficiency.

The deduction presented above shows that there are quite realistic and well-based premises signalling the possibility of a complete recovery of the energy loss within the Oscillatory Chamber. All that is needed now is that we do not close our minds to such a possibility, but implement it practically in this device.

The elimination of loss of energy is not the only advantage of the direct conversion of

heat into electricity which may be achieved within the Oscillatory Chamber. This conversion also introduces an easy method for maintaining the energy supply to the device. To increase the energy resources contained within the Oscillatory Chamber the additional heating of its dielectric gas will alone be sufficient. This heating can be obtained, for example, by the circulation of the dielectric gas through a heat exchanger, or by concentrating a beam of sunlight on it.

Combining the lack of energy loss with the independence of the magnetic field production from the continuity of energy supply (compare with item F5.2 of this chapter), provides the Oscillatory Chamber with the property at present characteristic only for permanent magnets. The magnetic field, once created in this device, will maintain itself through the centuries, if the external consumption of energy does not occur. Of course, because of the lack of internal energy losses, the operation of this device alone will not be capable of causing any decrease in its energy resources.

F5.4. Releasing the structure of the chamber from the destructive action of electric potentials

The distinctive property of the Oscillatory Chamber is that it accumulates on facing plates electric charges of equal value but opposite sign (i.e. the same number of negatives as positives). Under such circumstances the force lines of an electric field from facing plates will mutually bind themselves together. This causes the charges to display a tendency to jump along the shortest trajectories joining these electrodes. Therefore in the chamber the tendency for a natural flow of electric charges will coincide with the trajectories required for the operation of this device. As a result, the material of the chamber's casing is freed from the action of the electric charges, whereas all the power of the device's energy is directed towards the production of a magnetic field (contrary to electromagnets where the electric potentials are mainly directed at the destruction of insulative materials these devices were made of).

In the channelling of the electric energy flow described above, the Oscillatory Chamber is entirely different from electromagnets. In the chamber this channelling is achieved by employing natural mechanisms of electrostatic attraction. In electromagnets it was forced artificially by the appropriate formation of the insulator's layers, which pushed the current to flow along the coils, whereas the action of the electric field's force lines was trying to push it across the coils and through the insulation. Therefore there is reason to expect that the Oscillatory Chambers will possess a life incomparably longer than that of electromagnets, and that their lifespan will not be limited by an electrical wear-out.

How destructive such an electrical wear-out of insulation is we may learn by analysing the lifespan of coils working under high voltages. A well-known example is the ignition coil in cars, which usually breaks down after about 7 years of usage, while still displaying no sign of mechanical defect. In low voltage electromagnets this process is slower, and therefore may not be noticed by users. But it will appear eventually.

F5.5. Amplifying control of the period of field pulsation

The Oscillatory Chamber will manifest a very high controllability. As in more details this will be explained in subsection F6.1, the key to controlling the entire chamber's operation is the period "T" pulsations of its output. Through changing this period also all other parameters of the chamber's operation can be altered. Practically the whole activity of controlling the Oscillatory Chamber will be reduced to influencing the value of period "T" of the chamber's field pulsations.

The final equation (F7) already discussed in subsection F4.6 shows how easily the value of "T" can be controlled in the Oscillatory Chamber. At the exploitation stage it is sufficient to limit the entire controlling activities to the change of the "s" factor. By changing the pressure of the gas filling the chamber, or by altering its composition, the "s" factor is influenced. The change in "s" factor in turn introduces the changes in period "T" of the field's pulsations.

To illustrate the essence of the above principle of the chamber's output control, we would need to imagine a hypothetical electromagnet in which all configuration parameters, i.e. the resistivity of wire, the number of coils, and also the geometrical make-up of a conductor, could easily be changed during its operation. Only such an imaginary electromagnet would allow for the output control in a manner used by the Oscillatory Chamber, i.e. through the appropriate manipulation of its configuration parameters, and without the necessity of controlling the power of a current supplied to it. Of course, in reality such an electromagnet is impossible to build. This in turn realizes how much better is the principle employed in controlling the Oscillatory Chamber in comparison to that employed in controlling electromagnets.

The above illustration shows that the chamber uses a very different (and much more convenient) control of oscillations than the one used in real electromagnets. In the Oscillatory Chamber the changes of the dielectric gas constants: Ω , μ and ϵ - causing the change of "s", are not dependent on the necessity to manipulate the amounts of energy contained in the electric and magnetic fields. Therefore in this device all controlling activities no longer involve wrestling with the power contained inside the chamber. As a result, the power of the control devices is independent from the power of the produced field (i.e. weak control devices can effectively alter the parameters of a powerful field). But in electromagnets every change in a magnetic field requires manipulations to be conducted on highly energetic currents. Thus control of electromagnets involves the same powers as that required for the field production.

Of course, every method of control introduces its own disadvantages. This is also the case in the tuning system described above. We already may predict here some limitations in the range of control - caused by critical damping, and the influence on the intensity of heat generation - caused by changes in the resistivity of gas. But these disadvantages can be overcome technically, and they are insignificant when compared with the advantage of making the power of a controlling device independent from the power of the controlled energy flows.

F6. Advantages of the Oscillatory Chamber over electromagnets

The elimination of the inherent drawbacks of electromagnets is not the only achievement of the principle of the Oscillatory Chamber. This device introduces in addition a number of unique advantages which are not provided by any other device built by man to-date. Let us review the most important of them.

F6.1. Formation of the "twin-chamber capsule" able to control the output without altering the energy involved

Further possibilities of controlling the output from the Oscillatory Chamber are created when two such cubical devices are arranged together to form a configuration called the "twin-chamber capsule" - see **Figure F4**. This capsule consists of one small inner chamber "I" freely suspended (floating) in the centre of the outer chamber "O". To insure the free flotation of the inner chamber without the danger of distending and damaging the outer one, the side dimension "a_o" of the outer chamber must be $\sqrt{3}$ times larger than the dimension "a_i" of the inner one, i.e.:

$$a_o = a_i \cdot \sqrt{3} \quad (F9)$$

The equation (F9) expresses the requirement that the longest diagonal dimension of the inner cube can not exceed the shortest distance between two parallel walls of the outer cube.

Both chambers are arranged so that their central axes coincide with the magnetic axis "m" of the entire capsule. But the magnetic polarities of both chambers are reversed, i.e. the poles of the inner chamber are oriented exactly in opposition towards the poles of its host (i.e. "S" of the inner chamber is directed towards "N" of the outer one, and vice versa). This opposite polarity of both chambers causes their outputs to mutually cancel (subtract) each other. The effect of this cancellation is that most of the force lines of the magnetic field produced by one chamber do not leave the capsule, but are circulated back into the other chamber. Therefore the magnetic field yield out to the environment by such a capsule represents only the difference between the outputs produced by its inner and outer chambers.

In the so-formed twin-chamber capsule the appropriate control of the chambers' periods of pulsation "T" allows the energy content in both chambers to be either maintained unchanged, or to be transferred from one chamber to the other. Therefore both chambers can either produce the same output, or a greater output can be produced by any of the component devices (i.e. by the outer "O" as well as by the inner "I" chamber). Technically, the balance or the transfer of energy between both chambers depends only on a phase shift between the periods "T_o" and "T_i" of their pulsations. (As this was described in subsection F5.5, these periods in turn are controlled, according to the equation F7, solely by changing the "s" factors of the chambers' dielectric gases.) In general, when both chambers pulsate in harmony (i.e. have their mutual phase shift equal to 0°, 90°, or multiple of 90°) they maintain their energy content without any change. But when the phase shift between their pulsations is formed, the magnetic energy begins to flow between both chambers. The more this phase shift differs from 0° or 90° (and thus the more it nears to ±45°), the more energy flows from one chamber to the other. The direction of flow is from the chamber whose pulsations obtain the leading phase shift (i.e. whose period "T" was speeded up in relation to the period "T" of the other chamber) to the chamber whose pulsations are slower.

To illustrate the above principle of energy flow with an example, let us imagine two people on separate swings bound together by an elastic (rubber) rope. Both swings in this example represent two chambers of a given twin-chamber capsule, whereas the elastic rope represents the magnetic field which links these chambers. When they swing with zero phase

shift (i.e. when their movements exactly correspond) the energy of their oscillations remains unaffected. But when they form a phase shift in their oscillations, the person whose swing is ahead will pull the other one through the elastic rope. In this way the energy will flow from the faster swinger to the slower one.

When both chambers of a twin-chamber capsule yield exactly the same output, the force lines of a magnetic field produced by the inner chamber "I" are forming a close loop with the magnetic field produced by the outer chamber "O". This loop is locked inside the capsule. Therefore in such a case both chambers may produce an extremely high magnetic field, but this field will be entirely "circulated" inside of the capsule, and no magnetic flux will appear outside of the capsule. The magnetic flux trapped in such a looping and hermetically locked inside a twin-chamber capsule is called the "circulating flux". In illustrations from this chapter it is labelled (C). The circulating flux performs an important function in the twin-chamber capsules, as it bounds and stores the magnetic field which later may be used as the capsules' energy supply. Therefore the circulating flux in twin-chamber capsules of the future will represent the equivalent to "fuel" from the contemporary propulsion systems. Probably in the future twin-chamber capsules will be built, their main and only function will be to accumulate energy. The entire energy stored within such accumulators of the future will take the form of the circulating flux, so that outside these capsules there will be no noticeable magnetic fields.

When the energy content in both chambers of a capsule is unequal, as illustrated in Figure F4, the magnetic flux produced by this chamber, which has a greater output, is divided into two parts, i.e. (R) the "resultant flux" conducted to the outside of the twin-chamber capsule, and (C) the "circulating flux" involved in internal looping within the chamber having a smaller output. At the same time the magnetic flux produced by the device having a smaller output is entirely involved in the circulating flux and is not conducted outside the capsule. In Figure F4 the greater output is produced by the outer chamber "O", therefore its flux is divided into (C) and (R) parts. But the entire output of the inner chamber "I" in this Figure is involved in the circulating flux (C). Of course in real capsules, depending on the necessity, it is possible to control their chambers in such a manner, that either chamber can produce the higher output, i.e. the outer "O" or the inner "I". Therefore also either of these two chambers can provide the resultant flux.

Because the greater magnetic flux can be produced either by the inner or the outer chamber, the twin-chamber capsules can operate in two **modes** called: (1) the "INNER flux prevalence", and (2) the "OUTER flux prevalence". In the mode of INNER flux prevalence, the resultant flux is produced by the inner chamber, whereas the outer chamber circulates its entire output inside the capsule. In the mode of OUTER flux prevalence, the resultant flux is produced by the outer chamber, whereas the inner chamber bounds its entire output into the circulating flux. The visual appearance of capsules operating in these two modes is shown in **Figure F5**. The differences in their appearance result from the fact that a highly dense magnetic field is transparent only to an observer who looks at it along its force lines. For the observer looking from any other direction such a field is nontransparent, and resembles black smoke. Therefore an outside observer looking at the twin-chamber capsule's outlet should see only the interior of that chamber which produces the resultant flux running into his/her direction, whereas the outlines of the remaining chamber which produces a circulating flux would appear to be black.

The twin-chamber capsule puts into the environment only the resultant flux that

represents the difference from the outputs of both chambers. The circulating flux is always locked inside this capsule and never reaches the environment. Therefore, this configuration of chambers allows the fast and efficient control over the resultant magnetic flux conducted to the environment. This control is achieved without a change in the total amount of energy contained in the capsule, and only through shifting this energy from the outer to the inner chamber and vice versa. Practically, this means that the output given by the capsule to the environment can be easily changed, while the energy content of the capsule constantly remains at the same level. In order to realize the enormous capabilities of such control, the most important states of the magnetic field put into the environment by the twin-chamber capsule are described below.

(1) The complete extinguishing of the capsule's output. If the inner and the outer chambers contain the same amount of magnetic energy and produce equal magnetic fluxes, their entire production is looped inside of the twin-chamber capsule and no field is conducted to the environment. Of course, in such a case the enormous magnetic energy of the capsule still remains trapped inside, and can be redirected outside at any time by simple alteration to the capsule's controls.

(2) A smooth change of the capsule's magnetic output within the range from its minimal (i.e. zero) to maximal value. Such a change in the resultant output requires only appropriate transfer of the magnetic energy from one chamber into the other. The maximal output from this capsule is achieved when one of its chambers concentrates almost all of the energy, whereas the output from the remaining chamber is almost zero.

(3) The production of a magnetic field that has any required orientation of the magnetic poles. Depending on which of the two chambers (inner or outer) reaches a dominating (prevailing) output, the polarity of the resultant flux (R) will reflect the polarity of this dominating chamber.

(4) An almost instant reversal of polarity for the capsule's resultant magnetic output (e.g. the exchange of its north pole into the south pole, and vice versa). This reversal can be achieved merely by shifting quickly the magnetic energy between two chambers and without any need for a mechanical rotation of the capsule.

The ability to strictly control the variations in time (curvature) of the resultant flux is another advantage of the twin-chamber capsules. An example of such control, concerning the resultant flux whose variations in time follow a beat-type curve, is shown in **Figure F6**. When the frequencies of pulsations in both chambers are different (e.g. when the inner chamber produces a flux " F_i " whose frequency is two times higher than the frequency of the flux " F_o " produced by the outer chamber), the algebraic subtraction of both these fluxes produces a beat-type variation in time of the resultant flux " F_R ". In this way, a wide range of resultant flux variations in time can be obtained, through the simple altering of frequencies of inner and outer fluxes (or more strictly through altering periods of pulsations " T " which are bound with frequencies " f " by equation (F8): $f=1/T$). It is equally simple to produce a pulsating resultant flux following one of many possible beat-type curves, as well as a number of alternating fields of different courses. In each of these cases the period of the resultant flux variation can be controlled at the required level.

Probably the most significant advantages of the control described here is that it enables twin-chamber capsule to produce a **constant magnetic field**. When the frequencies of oscillations in both chambers are the same, then the two counter-oriented magnetic fluxes mutually suppress their pulsating components. If this coincides with the equal amplitudes of

fields from both chambers, the resultant flux " F_R " is then non-oscillating (constant in time), identical in character to the one provided by the permanent magnets. This capability to produce a constant magnetic field will further enlarge the already extensive scope of applications for this configuration of Oscillatory Chambers.

Because of the direct relationship existing between the frequency " f " and the period " T " of the field pulsation (see equation (F8): $f=1/T$), the entire control over the resultant flux curvature is achieved solely through the alterations of the " s " factor, as has already been described in subsection F5.5.

The above explanations demonstrate how easy and versatile the control capabilities of twin-chamber capsules are. This will have a definite bearing on the future applications of such arrangements of chambers. It is easy to predict that almost all advanced magnetic propulsion systems of the future will utilize twin-chamber capsules instead of just single Oscillatory Chambers. Out of all the propulsion systems described in this treatise, such capsules will be used in the propulsors of the Magnocraft (see descriptions in chapter G) and in Magnetic Personal Propulsion (see descriptions in chapter I).

F6.2. Formation of the "spider configuration"

The twin-chamber capsule is not the only configuration into which a number of Oscillatory Chambers can be arranged in order to increase the controllability of their resultant flux (R). The other configuration displaying even wider possibilities is the so-called "spider configuration", shown in **Figure F7**. In the spider configurations the chambers are arranged so that one of them, called the main chamber (M), is surrounded by the four side chambers indicated by the letters U , V , W , and X . Each of these five chambers possesses the same cross-section, but the volume (thus also the length) of the main one is equal to the sum of the volumes of all four side ones. The magnetic poles in the main Oscillatory Chamber (M) are directed in opposition to the orientation of the poles in the side chambers (U , V , W , X).

This new configuration of the Oscillatory Chambers is a simplified model of the Magnocraft's propulsion described in the next chapter of this treatise (the Magnocraft contains a single twin-chamber capsule (propulsor) placed in its centre, and a multiple of four of twin-chamber capsules arranged around its peripherals). Also the operation of the spider configuration closely imitates the operation of the Magnocraft's propulsion. Therefore this configuration in fact constitutes a kind of miniature Magnocraft. As well, the magnetic field produced by it displays all the attributes of the Magnocraft's field, for example its force lines may spin around the magnetic axis of the main chamber. The above reasons decide that the spider configuration found its best application in the propulsion of the so-called "four propulsor spacecraft", described in chapter H, the operation of which just requires the spinning magnetic field.

From the technical point of view, the production of spider configurations is much easier to achieve than the production of twin-chamber capsules. This is because in a twin-chamber capsule there are technical difficulties with controlling the inner chamber, to which the controlling signals must pass through powerful sparks and the magnetic field of the outer chamber. These difficulties are absent in the spider configuration, in which the access with the controlling devices is equally easy to all chambers. Therefore, in the first period after the completion of Oscillatory Chambers, most probably our civilization will be able to combine

them only into spider configurations. Therefore, even that the propulsion of the Magnocraft is more effective when this vehicle utilizes twin-chamber capsules for the propulsors, the technical difficulties described above may cause, that the first discoidal Magnocraft build on Earth will utilize spider configurations for the propulsors.

The above also applies to all other civilizations which already have operational Magnocraft at their disposal. From which configuration of Oscillatory Chambers they utilize in the propulsors of their discoidal Magnocraft, it is possible to estimate their level of development. In the first period after the completion of Oscillatory Chambers each civilization most probably will just utilize spider configurations, and only later it will shift into the use of twin-chamber capsules. In the course of further development the civilization will transfer into the use of twin-chamber capsules of the second generation which utilize octagonal Oscillatory Chambers (instead of square chambers being much easier to produce and to control), to finally shift into the use of chambers of the third generation - see subsection J3.

The control over the value of a field produced by the spider configuration is almost the same as it is in the twin-chamber capsule. In a similar manner this configuration will produce a circulating flux (C) and a resultant flux (R). Both these fluxes are circulated through the environment and thus the only difference between them depends on the paths their force lines cross, and on the number of chambers they circulate through (a circulating flux "C" loops through two chambers - main and side, whereas a resultant flux "R" through the main chamber only - see Figure F7). Therefore the magnetic field yield from the spider configuration also displays the same control over all its properties and parameters as the field from the twin-chamber capsule. The only additional capability of spider configurations which does not appear in twin-chamber capsules is that spider configurations are able to produce a whirling magnetic field, whose axis of rotation lies on the magnetic axis "m" of the main chamber (M). The production of such a whirling field is explained for the Magnocraft in subsection G7 of this treatise, therefore this explanation will not be repeated here.

The spider configurations, however, display a significant drawback in comparison of the twin-chamber capsules, which will decide their limitations. This drawback is that the magnetic field they produce can not be "extinguished" entirely and must be circulated through the environment. Therefore, even if the entire output of a spider configuration is bound in the circulating flux "C", this flux is still looped through the environment (i.e. can not be locked inside the configuration as is the case with twin-chamber capsules). For this reason spider configuration can not be used in numerous applications in which the presence of the magnetic field is undesirable (e.g. as energy accumulators). Therefore, apart from a short period when our civilization will still not be able to produce twin-chamber capsules, in the majority of cases the utilization of the spider configurations will be limited only to applications where the whirling magnetic field is necessary (e.g. as propulsors for the four-propulsor vehicle described in chapter H).

F6.3. The non-attraction of ferromagnetic objects

We are accustomed with the fact that every source of magnetic field should attract ferromagnetic objects. Thus, when we realize the power of the field produced by every Oscillatory Chamber, immediately comes to mind the picture of our kitchen appliances, shavers and coins flying to our neighbour because he/she decided to switch on a powerful

chamber just purchased. At this point it is the right time to expel our fears: one of the most unusual properties of twin-chamber capsules and spider configurations is that they produce a magnetic field which does not attract ferromagnetic objects, even if their output reaches the full power required. This property causes the field produced by such configurations of Oscillatory Chambers to behave rather like a kind of "antigravity" described by authors of science fiction books, not like a magnetic one. The following descriptions explain how it is possible to achieve this unusual property.

The framed part in **Figure F8** shows approximately the curve of variation in time for the typical field produced by the twin-chamber capsule. It takes the course of a beat-type curve, containing the constant component " F_0 " and the varying component " ΔF ". It is widely known that the source of a constant magnetic field attracts the ferromagnetic object in its vicinity. Therefore it is obvious that the constant " F_0 " component of the chamber's output will also cause such an attraction. However, not many people are familiar enough with magnetodynamics to know that a field varying in time with sufficient frequency " f " induces in conductors the so-called eddy currents. These currents produce their own magnetic fields which, according to the "contradiction rule" applicable to electro-magnetism, are repelled from the original field which induced them. As a result, fields of sufficiently high variation in time will repel metallic ferromagnetics. Therefore the varying component " ΔF " of the chamber's output will cause repulsion of all ferromagnetic objects in the vicinity. This repelling force grows with the increase of amplitude " ΔF " and also with the increase of frequency " f " of the field variations. Therefore, if the control of the twin-chamber capsule or spider configuration changes the ratio " $\Delta F/F_0$ " of the output, holding constant the frequency " f " of pulsations, then three different kinds of force interaction with ferromagnetic objects can be achieved - see diagram in Figure F8. (1) When the varying component " ΔF " dominates over the constant " F_0 " one, then the total interaction with such objects is **repulsive**. (2) When the constant component " F_0 " is the dominating one, then the resultant interaction is an **attraction**. (3) However, if balance between both these components is reached, then the attraction and repulsion come into equilibrium and neutralize each other. In this case **no action** of any magnetic force is affecting ferromagnetic objects from the environment of a given configuration.

The curve of equilibrium between the attraction and repulsion, shown in Figure F8, will frame the parameters of work of the twin-chamber capsule and spider configuration. It is expected that in the majority of cases the field produced by the advanced magnetic propulsion systems will lie on this curve. Such a field will not influence in any noticeable way the ferromagnetic objects within its range, but will still be able to perform all work imposed on it. When used in flying vehicles, such a field will cause their flight, but will prevent any force interactions between these vehicles and nearby ferromagnetic objects. Because of this property, outside observers of such vehicles, who have no knowledge of this equilibrium of their magnetic interactions, will probably be convinced that the propulsion of these vehicles utilizes some kind of "antigravitational" field instead of a magnetic one.

In special circumstances, however, the field produced by a configuration of chambers can be redirected into a chosen interaction. For example, if a militarily oriented magnetic vehicle is chasing a missile or aeroplane, to intercept it, it will change its neutral field into an attracting one. Thus its attraction force will disable and overpower the object pursued. Similarly, when a magnetically propelled flying vehicle intends to abduct a motor car and its occupants, it could simply pick it up from the road by changing its own magnetic interaction

from that of equilibrium into an attraction. Of course, there will also be situations when a repulsive magnetic interaction will be used. For example, in free space the production of a repelling force should be dominant. Then all dangerous objects, such as meteorites (in most cases containing iron), cosmic dust, missiles or satellites, will be repelled from the path of magnetic vehicles. Also, while flying above a hostile planet where inhabitants are known to shoot and launch missiles at any foreign vehicle, the crew of a magnetically propelled vehicle could switch on the repulsive action of its field. Then all bullets and missiles would be repelled from the vehicle without having a chance of reaching and damaging it.

F6.4. Multidimensional transformation of energy

The energy within the Oscillatory Chamber co-exists in three different forms as: (1) an electric field, (2) a magnetic field, and (3) heat (i.e. a hot dielectrical gas filling the inside of the chamber). These three forms are in a state of continuous transformation from one into the other. Furthermore, the Oscillatory Chamber is able to: (4) produce and absorb light, and (5) produce or consume motion (i.e. mechanical energy). Finally the chamber can also (6) accumulate and store huge amounts of energy for any length of time (i.e. work as an enormously capacious accumulator of energy). Such a situation creates a unique opportunity for the chamber to be utilized in many different ways (not just only as a source of magnetic field), while one type of energy is supplied to it, another type is obtained from it. The following kinds of energy can be supplied to, or obtained from, the Oscillatory Chamber: (a) electricity transferred in the form of an alternating electric current, (b) heat accumulated in a hot gas, (c) magnetic energy transferred through the pulsations (changes in density) of a magnetic field, and (d) mechanical energy transferred in the form of the motion of the chamber in relation to another chamber or in relation to the environmental magnetic field, and (e) light which either can be absorbed by the circulating flux of the chamber (see the description of "black holes" provided in subsection G9.2) or produced after turning the Oscillatory Chamber into a kind of a fluorescent bulb (see descriptions in subsection G1.3). Depending on which one of these forms of energy is supplied to the chamber, and which one is drawn from it, the Oscillatory Chamber can act as almost any energy producing (or converting) device built to date, e.g. as a transformer, generator, electric motor, combustion engine, heater, photo-cell, searchlight supplied with its own battery lasting for thousands of years, etc. **Table F1** combines the most utilitarian applications of the Oscillatory Chamber, exploiting its capacity for multidimensional transformations of energy.

F6.5. Continuous oscillating - a unique electromagnetic phenomenon allowing the Oscillatory Chamber to absorb unlimited amounts of energy

Let us return to the example of a swing, and consider what happens when we increase the kinetic energy supplied to this device. The amplitude of oscillations increases proportionally to the energy supplied. We may intensify this process to the point when the top horizontal bar will prevent any further increase of amplitude. If we still keep providing energy

beyond this point, the conventional swing will be destroyed, as its arm will hit the top horizontal bar and one of these two parts must break.

The above design limitation in the amount of kinetic energy that a conventional swing can absorb has already found a technical solution. Someone has already dropped into the idea of building a swing without a horizontal bar. Thus if we use a modified swing of appropriate design (without a top horizontal bar, but having a rotary horizontal axle instead), a further increase of energy will lead to a unique phenomenon of "continuous oscillating" (which, because of its uniqueness, in this treatise will be called "**perpetual oscillating**"). Swings built especially for high performance usually achieve this. In the "perpetual manner of oscillating" the modified swing's arm follows a circular course, instead of slanting back and forth like in a conventional swing. The energy transformations still exist in it, but the whole oscillating phenomenon obeys different kinds of laws. Thus, the most important attribute of systems capable of perpetual oscillations is that their capacitance for potential energy does not limit the amount of kinetic energy absorbed by them.

If we now analyze the work of a conventional oscillatory circuit with a spark gap, we notice that it behaves in a way identical to the conventional swing described above. Thus such a conventional circuit is the equivalent of the swing with a top horizontal bar. If we start adding magnetic energy to its inductor, then the growing amplitude of oscillations will lead to breakdown within the capacitor and to the destruction of the circuit. The Oscillatory Chamber, however, is the equivalent of the modified swing allowing for perpetual oscillations. If we add further magnetic energy to the energy contained in a stream of sparks (jumping let us say from plate P_R to P_L) then this stream will not terminate at the moment when the opposite plates reach the breakdown difference of potentials "U". This is because the inertia of the stream will still keep "pumping" electrons from plate P_R to P_L , until all the magnetic energy transforms itself into the electric field. However in this instant both plates also start a discharge in the opposite direction, i.e. from P_L to P_R . Therefore there will be a period of time when two sparks jumping in opposite directions will appear simultaneously between the same pair of segments. The first of them - inertial - will jump from plate P_R to P_L , whereas the other one - active - will jump from plate P_L to P_R . This simultaneous appearance of two sparks jumping between the same pair of electrodes will be the electromagnetic equivalent to perpetual oscillating. Because the completion of this unique phenomenon is only possible if various rigorous design conditions are met, the Oscillatory Chamber is the first and so-far the only circuit which allows for the appearance of such phenomenon.

In general we can assert the definition that "**the perpetual type of oscillations are attributed only to those oscillating systems whose ability to absorb the kinetic form of energy significantly overcomes their capacitance for potential energy**". Such an ability is purely an attribute of design. It is conditioned by the selected parameters and the appropriate structuring of the system. In the case of the Oscillatory Chamber it will be determined by the number of sparks which the device is capable of creating. This number in turn depends on the number of segments "p" separated within the plates. Let us determine the minimal value of "p" required for the perpetual type of oscillations.

The condition required for causing perpetual oscillating is that the kinetic energy contained in the magnetic field must be greater than the potential one contained in the electric field. Knowing the equations deduced for the oscillatory circuits, this can be written as:

$$U^2$$

$$\frac{1}{2}L \cdot \frac{1}{R^2} > \frac{1}{2}C \cdot U^2$$

If we transform the above relation and substitute the received combination of variables by the one extracted from the equation (F4), we will obtain:

$$p > 2 \cdot s \tag{F10}$$

Condition (F10) expresses the number of segments "p" separated within the plates of the Oscillatory Chamber, sufficient to cause perpetual oscillating.

If we are capable of building and using the chamber in such a way that this condition is always met, then the capacitance of the Oscillatory Chamber will not be able to introduce any limitations on the amount of energy absorbed by this device. This property, combined with independence from the continuity and efficiency of the energy supply, will allow the Oscillatory Chamber to increase the amount of energy contained in it to a theoretically unlimited level.

F6.6. Function as an enormously capacious accumulator of energy

The perpetual oscillating described above introduces the ability of the chamber to absorb unlimited theoretically amounts of energy. This property, combined with the capability of the twin-chamber capsule to extinguish completely the produced field (i.e. to turn its entire magnetic energy into the circulating flux - see subsection F6.1), enables Oscillatory Chambers to be enormously capacious accumulators of energy. The appropriate calculations completed for the Magnocraft can be useful for illustrating what level of capacitance this device provides. For example the author has determined the amount of energy contained in the field of the Magnocraft type K3 (compare subsection G5.5). The result, obtained on the assumption that this vehicle produces only the starting flux, was 1.5 TWh (Tera-Watt-hours) - i.e. the present equivalent of two months' energy consumption for a whole country such as New Zealand. Because in the K3 type of Magnocraft the total volume of its Oscillatory Chambers is about 1m³, this enormous energy will be stored in a device approximately one cubic meter in size. If such a capsule measuring one cubic metre explode by accident, then the destruction caused by the release of magnetic energy it stores would be an equivalent to the exploding of one megaton of TNT.

The magnetic field is already recognized as a perfect means of collecting and storing a large amount of electrical energy. By using cryogenically cooled conductors, even contemporary inductors can store huge amounts of energy for a relatively long period of time. There are a number of research projects investigating this possibility (e.g. Australia National University in Canberra, The University of Texas at Austin, USA). One of the commercial applications seriously considered was to build a heavy cryogenic electromagnet near Paris, which would accumulate electric power in no-load hours and release it to the city at peak-consumption hours.

The ability of the Oscillatory Chamber to store energy completely resolves the problem of energy supply during its operation. For the majority of applications it will be sufficient to charge it fully at the moment of production, and then simply use the device until this energy is fully withdrawn. The amounts of energy able to be stored in such devices allow them to be

continuously operative for hundreds of years without the need for recharging.

F6.7. Simplicity of production

The Oscillatory Chamber will probably represent one of the most sophisticated devices human technology will ever complete. However, its sophistication will concern the amount of knowledge involved in its proper design and the amount of research required to appropriately shape its operation. Since its technology is once worked out, this device will not be difficult to produce. From the manufacturing point of view it will consist mainly of six plain walls, which will need to be precisely dimensioned, finished and assembled. The chamber has no moving parts, no complicated shapes and no intricate circuits. Practically, if the knowledge of its production was there, we should have been able to produce this device not only now, but thousands of years ago with the tools, materials, and technology of our ancestors.

F7. Advancements in the practical completion of the Oscillatory Chamber

The author invented the Oscillatory Chamber in the first hours of the 3rd January 1984. Soon afterwards, its description was distributed to a number of publications written in three languages and available in four different countries, i.e. New Zealand, Poland, USA, and West Germany (see publications number [2F] (a), [1F] (c), [2F] (b), and [2F] (c) in the list provided at the end of this chapter). The wide availability of the chamber's description prompted significant interest in this device. A number of individual amateurs in the scientific field and small companies initiated the developmental work with the aim of completing a working model of the Oscillatory Chamber. Of course, as is usually the case with new developments, the list of interested parties has included not even one single representative from institutions that are supposed to be most concerned about the progress in magnetic field producing devices, i.e. any magnet laboratory or science laboratory (in spite of strong encouragement and literature provided by the author to a number of these institutions). The majority of the amateurs interested in the chamber were from West Germany, Poland, Switzerland and Austria.

As can be predicted from the description of the Oscillatory Chamber, the building of the operational model of this device is a difficult task. Therefore, one after another, individual developers has given up. The only person who finally overcame various difficulties in achieving his goal was a Polish hobbyist, Mr Ryszard Zudzin (ul. Karpacka 56 m. 75, 85-164 Bydgoszcz, Poland). In May 1987 he supplied the author with a photograph of his first working model of the Oscillatory Chamber, which captured a stream of sparks that rotated around the peripherals of a square. A photograph of his model is shown in **Figure F9**. Looking now from the prospect of time at the achievements of various chamber's developers, the contribution of Mr Zudzin exceeded the input of other experimenters, and it paved the way for more advanced projects. If someone ever prepares a list of people especially meritorious for the development of the Oscillatory Chamber, the name of Mr Zudzin deserves an honorary position.

The problem which from very beginning discouraged the majority of initial developers of the chamber is illustrated in **Figure F10** (a). Following the descriptions available to them,

in the first models they tried to use plate-shaped electrodes, as shown in Figure F1 (b). But when such electrodes are used, instead of jumping along the trajectory in Figure F10 (c) marked by S', sparks prefer to follow the line of least resistance and to jump along the trajectory S". Various developers tried to resolve this problem in a number of ways, starting from placing the electrodes inside "honey-comb" cells, and finishing with covering their surface with an insulating layer. It was Mr Zudzin who finally found the solution. Through following clues contained in chapter L of this treatise, he studied ancient descriptions of the Ark of the Covenant. The conclusion he derived from these studies was that the Ark did not contain inside any plate-shaped electrodes. Only tips of gold nails driven through its wooden walls protruded inside. He decided to experiment with needle-shaped electrodes in his chamber. It worked. Such needles repel sparks passing by, therefore these sparks are unable to take short cuts. In this way, the model of the Oscillatory Chamber which used the needle-shaped electrodes instead of plates - as shown in Figure F10 (b), was the first one which successfully produced orderly streams of sparks. Thus this model provided experimental proof that the principles of the Oscillatory Chamber are correct and that they can be implemented technologically in a working device, concluding in this way the stage #0 from the procedure of the chamber's development - see subsection F7.2.

F7.1. Experimental devices

The experience gained by Mr Zudzin and other researchers during the completion of their devices paves the way for more advanced research on the development of the Oscillatory Chamber. For example, this research determines the main components of a laboratory station that should be set up to conduct experiments on the chamber. Such a station must include a minimum of four devices, i.e. (1) a chamber, (2) a power supply, (3) an electromagnet or permanent magnets used to deflect path of sparks in the direction of chamber's left walls, and (4) a measuring equipment. The most important details on each of these are summarized below.

(1) A **chamber**. Experience accumulated so-far shows that the optimal shape for the experimental chamber is a completely closed cube. The selection of dimensions is a task rather difficult and responsible, as from one hand the larger the chamber is, the simpler is to manufacture and also the easier it is to observe all phenomena that occur. But on the other hand a larger chamber requires unproportionally a higher voltage of power supply, more electrodes, expensive materials, workmanship, etc. Therefore, practically the size should not exceed the cube with a side dimension of around 100 mm, whereas probably the most optimal is a chamber with the side dimension of only around 30 mm. According to the present findings, in the first phase of experiments the best material for the six walls of the chamber is an ordinary plexiglass (i.e. organic glass), because it allows for easy machining. In advanced models some more robust materials need to be used, e.g. quartz glass, or even pure quartz plates. Gas used in the models of the Oscillatory Chamber built so far is just ordinary air under ambient pressure (the type of gas used will be important only at the more advanced, fine-tuning stage of the Chamber's development - see stage number #4 in next subsection).

The most important elements of the Oscillatory Chamber are **electrodes**. They need to be made from material that is magnetically neutral, stiff, robust, and resistant to the

destructive action of active ozone and electric sparks. They should be "needle-shaped" (not plate-shaped), as already explained before. The thinner they are the better, as the thick needles support the induction of eddy currents. The electrodes should be packed densely as it is only possible without mutually contacting each other. Upon their density depends on one hand the majority of the chamber's attributes and work parameters, such as the inductance of the streams of sparks or the capacitance of the chamber, and on the other hand, of course, also the majority of undesirable effects, for example the value of Hall currents. The mutual positioning of needles is also important - all of them should be placed the same distance from each other. To comply with the last condition they should be placed in a hexagonal configuration, i.e. when each electrode is placed in the centre of an equilateral hexagon, the corners of which are formed from the surrounding electrodes. The most important part of electrodes are their tips which emit electric sparks. From the shape of these tips will depend the success of the first experiments. The tips should be rounded in almost perfect hemispheres, as the sharp edges would cause the escape of charges which would make impossible the production of sparks, whereas the flat parts would cause the undesirable edge phenomena. The assembly of needles in walls of the chamber should be so designed that during the first phase of experiments it would allow for an easy exchange of electrodes and for the regulation of their height, length, shape, etc.

(2) A **power supply**. In the first two stages of the chamber's development, the power supply should yield the current capable to produce a spark of the length at least equal to the width of the chamber. From correspondence with Mr Zudzin it seems that the power source he used in his experiments was a high voltage DC impulse generator, similar to that used in electronic car ignition systems. It produces DC impulses, the variation in time of whose approximately follows a square curve. A diagram of his generator can be supplied on request. The voltage of his impulses was about 300 kV. However, it should be stressed that after passing the second stage of the chamber's development (as this is described in the next subsection), the manner of energy supply to the chamber will be drastically changed. This in turn will reevaluate the requirements imposed on the energy supply. For example, instead of the value of voltage and the shape of impulses it may produce, the accuracy of the synchronization of energy pulses with the frequency of the chamber's own oscillations begins to be important.

At this point it should be added that in the first two stages of the chamber's development the power supply may constitute a difficult and rather expensive part of the experimental station's set up. From correspondence with Mr Zudzin it appears that before building the successful DC impulse generator described above, he built four different AC power systems, including a Tesla Coil, and various high voltage AC generators. But each of these AC systems proved to be unsuitable. For example, sparks produced by Tesla Coil seem to jump in uncontrollable directions and resist being put into any order. On the other hand, sparks from high voltage AC generators seem to keep open their ionic channels long after they diminish, so that the voltage can not build up on the electrodes.

The author's opinion, however, is that after appropriate designing and correct completion of the developmental procedure (e.g. as this is explained in subsection F7.2) the power supply can be simplified. He believes that in the first two stages of experiments on the Oscillatory Chamber even a Wimshurst electrostatic machine, Van de Graaff machine, or just an ordinary combining of an induction coil from a car with a battery should suffice. After all, when in 1845 Joseph Henry conducted experiments on his oscillatory circuit, the only known

means of charging objects with electricity was their rubbing together (the Wimshurst electrostatic machine was invented over 30 years later in 1878) - but it did not stop him from completing his revolutionary invention. Of course, the use of more sophisticated high voltage generators will increase the convenience of research. But it will not get us nearer to the goal of our research which is to develop an effectively operating solution for the Oscillatory Chamber, not for an energy supply.

(3) An **electromagnet** (or a system of permanent magnets) used to deflect sparks. During experiments the chamber must be placed between N and S poles of a strong electromagnet. The magnetic field produced by this electromagnet would run along the chamber's (m) axis and thus push all sparks towards the surface of the left side walls. This push would cause them to rotate orderly in a clockwise (or counter-clockwise) direction. Without this initial magnetic field extended along the (m) axis, the sparks would not rotate orderly around the chamber's peripherals, but would rather jump chaotically in all possible directions. As the effectiveness of the chamber's operation will increase (see the end of stage #3 from the next subsection), this deflective function of the external magnetic field will gradually be taken over by a field produced by the chamber itself. In order to produce a sufficiently strong external field, the best solution would probably be to use a powerful DC electromagnet. However, perhaps it could also be effective to use a magnetic circuit formed from a number of permanent magnets assembled onto a curved ferromagnetic core the both sharp ends of which would point at the chamber's magnetic axis.

(4) **Measuring equipment.** The sparks jumping through the Oscillatory Chamber are an extremely fast phenomenon which is almost impossible to be observed with the naked eye, and resist the traditional measuring methodologies (starting from stage #3 of the developmental procedure described in the next subsection these measurements begin to gain special importance). For this reason the experimental station must include some measuring equipment suitable for fast processes, for example an oscilloscope, a built-in camera with an electronic trigger, magnetometers, thermometers, etc.

At the conclusion of this description of experimental devices, it is worth reminding about general rule of the inventive activities that "simplicity is the key to success". This applies not only to the devices, but also to the manner of conducting experiments. These experiments should depend on a gradual introduction of subsequent improvements to the chamber, which should obey the principle "divide large goals into a series of small steps". After all the paths of even the greatest travellers are always made up of individual steps taken one after the other. Thus the most optimal completion of the Oscillatory Chamber should resemble the building of a house from small bricks, which always starts with laying foundations, then is followed with systematically placing subsequent layers of bricks on top of previous layers. Looking backward into the current course of research on the development of the Oscillatory Chamber it appears that the first builders of this device got bogged down just because of the complexity of solutions they tried to implement in one go, and the tendency to jump through initial experiments which in their opinion were unnecessary (e.g. directly to stage #2 "b" or even #3 "b" below).

F7.2. Stages, goals, and ways of achieving success in the experimental building of the Oscillatory Chamber

Because no research on this device has been done before, the major difficulty with the completion of the Oscillatory Chamber is that almost all details need to be discovered and worked out. The consequence of this is that the development of the chamber must be gradual, and according to a thoroughly designed master plan. The basic element of this plan is a stage which is designed so as to solve a given, but always only one, problem. In turn each stage can be subdivided into a series of steps, the first of which usually use a simple model to find a solution searched for (i.e. the first step is always completed on the simplest possible simulator/model of a given problem), whereas all following steps are to check and to implement this solution into the chamber. Finally, depending on the equipment used, problems encountered, and results obtained, each step should be subdivided into a number of phases, each one of which has an individual and well defined goal and the manner of achieving it.

After a thorough analysis of the mutual relationships between the subsequent attributes of the Oscillatory Chamber, it can be envisaged that the completion of a fully developed prototype of this device must involve not less than eight simple developmental stages numbered #1 to #8, plus one additional confirmation stage (i.e. non-developmental) numbered #0. In the case of such a subdivision, each stage has a different and strictly defined goal and its own way of achieving this goal, as it serves superimposing on the final construction only a single new attribute. Therefore the fulfilment of the goal of each stage can be achieved by a simple means and with the use of a transparent research methodology. The eight stages of the developmental master plan are as follows:

#0. The **confirmation** of the chamber's principles. This stage does not serve the building of the Oscillatory Chamber, but rather reassures the builder and other people who provide finance for this project that they invested into the right device. The major goal of this stage is to prove (or re-prove) that general principles of the chamber's operation do not run against any law of electromagnetism and can be implemented in a technical manner. The fulfilment of this goal can be achieved in a number of ways. At the present stage of the chamber's development, with the first confirmative experiments already successfully completed, probably the most rational approach is to undertake the completion programme (i.e. to follow the developmental stages described below as #1 to #3) and then to use for additional confirmation purposes all devices and models producing the orderly streams of sparks obtained during the completion of this programme. The componential goals in such a case would include the confirmation that for example the streams of sparks: (a) are deflected always towards the same wall - e.g. left (i.e. that in the presence of a magnetic field they display a natural tendency to form orderly streams that rotate around the walls of a chamber), (b) produce their own magnetic field during this rotation, which is added/totalled (not subtracted) to the field already prevailing in the chamber, (c) withstand as independent sparks during the jumps (i.e. subsequent sparks do not join each other before reaching the opposite electrodes), (d) contribute an additional magnetic inertia (inductance) to the circuit, etc.

It should be indicated that Zudzin's experiments with his prototype shown in Figure F9 have already achieved the main goal of this stage, although they were deprived the rigours, systematics, and precision of completion characteristic for scientific research. Of course, all further experiments which could widen, reconfirm, verify, formalize, or just simply repeat the main goal and the componential goals of this stage would be warmly welcomed (e.g. it would be especially desirable if someone completed a spectacular "model of the chamber" with

rotary sparks, as described in step (a) of stage #2).

#1. The **finding of a basic configuration** of the chamber, capable of producing a stream of self-sustained sparks. The main goal of this stage is to find such a configuration of the chamber's elements, which would be capable of producing oscillatory electrical discharges similar to these formed by a conventional Henry's circuit. In order to expedite the achievement of this main goal, the completion of this stage should be done on a maximally simplified model of the chamber having one set of electrodes only. This model would contain only two independent plates of plexiglass which imitate the chamber's two opposite walls. Both plates would be temporally positioned towards each other by the means of inserting between them a cubical separatory box with an easy to regulate thickness, and then holding them in a steady mutual orientation by some kind of a simple handling device (e.g. an ordinary vice or clamp). The model would contain only a single oscillatory circuit (i.e. it would have only two sets of needle-shaped electrodes fitted in these two plates and being permanently held one in opposition to the other). In order to accomplish a gradual, progressive, and thoroughly structured development of the chamber's basic configuration, the fulfilment of the main goal of this stage should occur in at least four separate steps. The author's proposal for these steps is as follows:

(a) Building the circuit that initiates the experiments. The goal of this step is the formal initiation of the research, combined with the practical familiarization of an experimenter with the behaviour and properties of oscillatory circuits with a spark gap. For the first circuit, a conventional oscillatory circuit with a spark gap (i.e. Henry's circuit illustrated in part "a" of Figure F1) should be build, only that instead of the pair of Henry's conventional electrodes it should utilize the simplified model of the chamber as described above. In this model all needles on each of its two opposite walls should be connected together and linked to one branch of the circuit (e.g. to an inductor and one of the (two) plates of a capacitor). Therefore in this (a) step the electricity will be supplied to all electrodes simultaneously. After the circuit is built, its various parameters/elements need to be manipulated, so that when being charged it starts to produce a few alternating streams of sparks. These sparks should oscillate between electrodes of the chamber's model for a longest time possible. The longer the sparks oscillate, the easier it will later be to observe the course of experiments with this chamber. It should be stressed that success in this step, amongst others, will also depend on the shape and properties of tips of needle-shaped electrodes. Therefore working out the most proper form and the best technology of preparation for these tips will be the contribution of this initial experiment into the next stages of research.

(b) Finding the configuration of electrodes which produce self-replenishing sparks. In the previous step (a) the impulses of electrical energy were simultaneously supplied to all electrodes of the chamber. However, the solution used for this purpose is not usable in further research as it requires connecting together all electrodes of a given wall. Thus the correctly constructed chamber must exchange electrical energy between subsequent electrodes on a different principle. It must display a capability to self-distribute the energy of oscillations amongst electrodes and thus to self-replenish the number of sparks. This property means that even if impulses of power will be supplied to a couple of needle-shaped electrodes only (i.e. to a single electrode located at each of two opposite walls), then because of the mutual induction between subsequent electrodes of the same wall the electrical energy will self-distribute from these two electrodes to all electrodes of the chamber. This step is to provide the construction of the chamber with this particular property. Therefore its goal is to find

geometrical and configuration parameters of the electrodes, such that they will provide the Oscillatory Chamber with the ability to self-distribute its sparks. In order to achieve this goal, in the electrodes of the chamber worked out during the completion of step (a) further geometrical and configuration modifications are now necessary. The key to success will be the active length of the electrodes (it should be noted that the total length of electrodes can be increased not only within the chamber, but also outside it - through lengthening the parts of the electrodes which protrude on the other side of the walls). Thus for example parameters increased should be: the ratio of the length of electrodes to the gap between their tips, the ratio of the length of electrodes to their mutual distance, etc. After the attribute of self-distribution of sparks is obtained, the goal of this step is achieved. However, the resultant oscillatory circuit should be saved for later, as it will be useful in further stages of the research (see step (a) in stage #2 and step (a) in stage #3).

(c) The replacement of an inductor from Henry's circuit with the inductance of sparks. The goal of this step is to find the design and geometrical parameters of electrodes, such that the inductance of a given oscillatory circuit will be produced solely by the streams of sparks and without the need for any inductor. Achieving this goal depends on manipulations on the shape and properties of the electrodes used in a simplified model of the chamber (e.g. through adding insulative spheres of glass at the ends of each needle-shaped electrode), on their active length, diameter, mutual distances, and manner of distribution, that the needed increase in the inductance of the sparks will be obtained. The final inductance required for the completion of this step must allow the resultant circuit to produce the self-oscillating sparks even if the inductor is disconnected from it completely. After the goal of this step is reached, the inductor should be permanently eliminated from further prototypes of the chamber. Thus for all following experiments electrodes only just worked out should be used, for which sparks instead of the inductor provide the circuit with the inductance needed for the operation.

(d) The replacement of a capacitor from Henry's circuit with the own capacitance of the chamber. The goal of this step is the increase of the chamber's capacitance to the required value through a change in configuration parameters. In order to achieve this goal the model of the chamber obtained in the effect of step (c) should be further transformed by altering all the parameters that may have influence on its capacitance. The goal will be achieved if after the elimination of the external capacitor, the model of the chamber will still produce self-oscillatory sparks. For example the parameters which should be altered to achieve the goal are: the ratio of the gap between electrodes (i.e. the mutual distance between tips of electrodes placed in two opposite walls) to the mutual distance of electrodes from each other, the ratio of the height of electrodes to their mutual distance, the ratio of uncovered to the insulated parts of electrodes, the total number of electrodes, the shape of electrodes, etc. After the parameters which allow for the self-oscillatory sparks to be produced even after an external capacitor is completely disconnected, the basic configuration of the Oscillatory Chamber is found. This configuration, after its two single electrodes on both opposite walls are charged with electricity, will produce streams of oscillatory sparks (i.e. give the "oscillatory response") without containing either an external inductor nor external capacitor. This basic configuration is now to be used for the completion of stage two in this developmental master plan.

#2. A self-regulation of the phase shift between two streams of sparks. The next stage of the chamber's development is to combine together two basic configurations obtained as the result of stage #1. Unfortunately, these two circuits after being joined together into a single

chamber, instead of orderly oscillations with the required phase shift of 90° they will tend to produce a chaos of sparks jumping in all directions. Therefore the goal of this stage (#2) is to alter the chamber's configuration (shape) and internal electrical interactions of its elements in such a way that both circuits will self-regulate and self-maintain a 90° phase shift between the two streams of sparks they produce. This means that both these streams of sparks must jump orderly between both sets of opposite walls (i.e. both oscillatory circuits constituting the chamber) and their mutual phase shift must be self-maintained at a 90° level all the time. The way of achieving this goal is through introducing to the chamber's structure some additional features or elements, for example: insulated plates connected to each column of electrodes, which would overlap with the electrodes of the next walls, thus forming a capacitance between them (see Figure L7); cavities inside electrodes similar to those forming stationary waves in microwave ovens; coils similar to starter coils in electric motors; etc. For simplicity, similarly like in the previous stage, the accomplishment of this goal should occur in at least two following steps:

(a) Working-out an effective system for self-regulation of the 90° phase shift in two independent oscillatory circuits, achieved through research on models. The goal of this step would be to find an effective system which would provide such self-regulation using two Henry's circuits which are very simple to design and to operate.

In order to achieve this goal, two conventional Henry's circuits, prepared previously in the result of step #1 (b) or even #1 (a), should be combined together in such a manner that they would produce a "model of the chamber". In this model two sets of electrodes assembled at two pairs of opposite side walls of a cubical chamber would be used as electrodes of conventional Henry's circuits. These circuits would need to oscillate with the mutual phase shift equal to 90° . Therefore in the presence of the external magnetic field they would form streams of sparks that would rotate around the peripherals of a square. A simple system which would be capable effectively maintain the required 90° phase shift between the oscillations of both these circuits, most probably would also provide a principle for the self-regulation of sparks' phase shift, which is searched for. Thus, after this principle is adopted to the Oscillatory Chamber, it should provide an orderly rotation of the sparks there. It should be added here that the above "model of the chamber" should already produce a small magnetic field, therefore just on its own it would be a significant scientific and technical achievement suitable for publishing and popularization.

(b) The practical implementation of the principle of self-regulation just being worked-out. The goal of this step would be to adopt the system developed in step (a) so that it would perform the same effectively when included into the actual configuration of the Oscillatory Chamber. Correctly adopted such a system still should produce two oscillatory streams of sparks alternatively jumping with the 90° phase-shift as required, even if the power supply would be directed to just one of these two circuits (i.e. the second of these circuits should self-absorb the required electrical energy from the first circuit).

#3. Making the chamber absorb and store the amount of energy sufficient for the **production of a useful magnetic field**. The goal of this stage is to find a technique and to develop a device for passing to the chamber any required amount of energy by supplying it directly via magnetic impulses (i.e. not via electrical impulses as in previous stages). This increase in the level of chamber's energy would in turn have the following consequences. (a) It would introduce the possibility of unlimited extending of the time-span of the sparks' rotation (i.e. it would allow to achieve streams of sparks which are self-oscillating for any required

period of time). (b) It would enable the chamber to produce a useful magnetic field which this device would output to the environment. (c) It would also allow for the elimination of the external source of a deflecting magnetic field which during short impulses of the chamber's operation was necessary to maintain the orderly rotation of the chamber's sparks (thus now the deflecting magnetic field would not be needed any more and sparks would still rotate orderly because of their own field). The principle on which the goal of this stage could be accomplished is to reverse the direction of the energy transformation occurring in the chamber. Previously the chamber transformed the electrical current being supplied to it into its own magnetic field, now it is going to transform the magnetic field being supplied to it into its own electrical current (sparks), and then transform again this electrical current into a magnetic field.

To achieve the goal of this stage would need to include the following actions. (1) To determine the conditions for a most effective energy supply to the chamber (e.g. finding a point in the chamber's own oscillations which is the most suitable for supplying an energy impulse, determining exactly the value of a phase shift between the frequency of the external power supply and the chamber's own (resonance) frequency so that this phase shift would make the chamber to absorb energy from an external power supply and store it, establishing the most effective difference of amplitudes, etc. - see the relevant part of subsection F6.1). (2) To find principles for automatic (electronic) detection of the required point in the oscillatory cycle of the chamber's operation (i.e. the point that we have chosen for the supply of energy impulses). (3) To find a technique for the synchronized release of energy impulses being supplied from an external source (this release must occur exactly at that point of the chamber's own oscillations cycle that we have chosen for the energy supply). (4) To build a controlling device which would effectively implement this technique for the combination of our chamber and the energy source.

If the goal of this stage is achieved, the chamber will be able to absorb any required amount of energy and transform it into a magnetic field. In turn this energy will enable the chamber to produce a magnetic field of the required density and will also allow this device to work for a required period of time. In effect it will make possible the practical utilization of the magnetic field that the chamber will produce. Thus after the completion of this stage the prototype of the Oscillatory Chamber will have the capability of being used for the first commercial applications.

The most important steps in the realization of this stage are as follows:

(a) The determination of the conditions for an effective transfer of energy to the chamber, completed on models. The aim of this step would be to determine for example: (1) the value of the difference between the frequency of the external power supply and the resonance frequency of the chamber, which would cause the chamber to absorb the required amount of energy and store it; (2) the optimal phase shift between pulsations of these two elements (i.e. the chamber and the power source); (3) technical manner of "tuning" of the power supply to the required frequency and phase shift, etc.

In order to simplify the task, the completion of this step should be achieved on a model. This model would be obtained if two conventional oscillatory circuits are magnetically linked with each other. This magnetic linking would occur via their inductors, which because of the character of the future applications would need to not have an iron core but air clearance instead (i.e. both inductors would have an empty space running through their centres). Two solutions are possible for these models, i.e. (1) a model imitating a twin-chamber capsule,

or (2) a model imitating a transformer. In the first solution of a model imitating a "twin-chamber capsule", the magnetic linking would be obtained through inserting a smaller, active air inductor into the centre of a larger passive inductor (during the implementation of this model, the active inductor which would supply the chamber with energy would be inserted inside of this chamber). In the second solution both inductors of approximately the same length and size would be placed next to each other, similar to the primary and secondary coils of a transformer (during the implementation of this model the active inductor used as a power supply would be placed at the extension of the chamber's magnetic axis). After such a magnetic linking, one of these two circuits (i.e. the active one) would provide the energy to another circuit (i.e. to the passive one). The passive circuit for this step could simply be any conventional Henry's circuit, for example the one built from step (b) or step (a) of stage #1. In that manner the conditions for the most effective transfer of energy from the active circuit to a passive one could be defined. The advantages of using such simplified models is that as an active circuit practically any circuit allowing for the regulation of frequency within the range of the chamber's own frequency could be used. Thus, it may not be necessary to build an active circuit, but for example to use a ready-made tuning circuit from an old radio or TV set. Furthermore, after the completion of this step, the research station and the active circuit could later be reused with only minor adaptations for supplying energy to a prototype of the Oscillatory Chamber that we are currently working on.

(b) Testing the system just being developed. The goal of this step would be to test on a current prototype of the Oscillatory Chamber the energy supply system we have just developed. For the completion of this step, a simplest possible automatic controller would need to be built, which would control the transfer of energy from an external source (e.g. our active oscillatory circuit) to a prototype of the Oscillatory Chamber we actually are working on. The methodology of developing this controller would be similar to that applied in step (a) of this stage, only that instead of determining the optimal conditions and manners of energy supply, we would now try to develop devices that would effectively implement these conditions in practice.

(c) The practical implementation in a prototype of the Oscillatory Chamber the optimal conditions of energy supply and newly developed devices which make effective use of these conditions (i.e. a controller and the active supply circuit). In order to achieve such a successful implementation of the results, three corresponding devices must be built and combined together into an effectively cooperating system. These are: (1) a chamber whose components (e.g. sensors, coils) and longevity must allow for the continuous operation and supply of energy in a manner just developed, (2) an external source of pulsating magnetic energy (i.e. a power-supply device), which is to cooperate with this chamber in a manner required by our technique, and (3) an effective control device which will coordinate the recharging of the chamber by this power-supply device, allowing in this way the continuous operation of the whole system for a desired period of time.

It should be stressed at this point that after this stage of the developmental master plan is completed, a further energy supply to our prototypes of the Oscillatory Chamber will be achieved via this system of magnetic impulses, and previous devices for electrical energy supply will not be needed any more. In this new method of supply, the prototype of the Oscillatory Chamber will represent a kind of secondary coil of a transformer, the primary coil of which will be the inductor of the supplying (active) oscillatory circuit which provides to the chamber the appropriately synchronized pulses of magnetic energy.

#4. Controlling the chamber's period of pulsations. The goal of this stage is to learn how to control the chamber's period of pulsation (thus also its frequency - see equations F7 and F8) through appropriate selection of pressure and composition of the dielectric gas contained in the chamber. To achieve this goal, a controlling device must be built, which, when added to the chamber's main structure, will allow for effective control of its pulsations.

#5. Releasing the phenomena to recover the heat dissipated by sparks (thus terminating the chamber's energy losses occurring during its operation). The goal of this stage is to alter the phenomena within the operational chamber in such a way that they will cause a conversion of energy contained in hot dielectric gas into the chamber's electric charge. To achieve this goal a complete understanding of the complex phenomena occurring in the chamber must be achieved, and then the alteration of this phenomena into a desired direction must be made so that the Oscillatory Chamber will make the best use of the Telekinetic Effect (see the description of this effect provided in chapter C).

#6. Neutralization of electromagnetic forces that act on the chamber's physical structure. The goal of this stage is to find such mutual relationships between the design parameters of the chamber (i.e. its shape and dimensions) and the parameters of its work that the structure of the chamber will be released from the action of forces produced during its operation. The way of achieving this goal is to change parameters of the chamber's design and operation, and subsequently to monitor the influence these parameters have on the forces acting on the chamber's structure. Then the optimal parameters must be chosen, which will neutralize completely the action of these forces.

#7. Building a spider configuration (at a later stage also a twin-chamber capsule). The goal of this stage is to combine effectively individual Oscillatory Chambers, so that they cooperate as a spider configuration or a twin-chamber capsule. Achieving this goal involves various alterations to the control of both chambers, and also to the phenomena occurring within them, so that the final configuration can work effectively and remain fully controllable.

#8. Unlimited increase of the chamber's energy reserves. The goal of this stage is to experimentally detect and eliminate all possible obstacles that could limit the amount of energy stored within spider configurations or twin-chamber capsules previously completed. The level which should be achieved at this stage is to store the amount of energy that allows for exceeding about 10 times the value of the starting flux. The achievement of this goal will be quite a difficult task, as research must involve various safety precautions and be completed with extreme care, because Oscillatory Chambers which are heavily loaded with energy also represent powerful bombs whose accidental explosion would cause enormous destruction (see subsection K2.1).

Analysing the above developmental master plan, one probably will notice that until the end of stage #3 it is purposely segmented into a series of small steps, in the assumption of the author sufficiently simple to be completable tasks for an individual researcher. Therefore this plan can gradually be completed either by individual hobbyists or by small developmental teams. Especially it suits the realization as a series of diploma projects for students in their final year of University or Technical Institute/College with an electrical or electronic interests profile. For example steps #1(a), #1(b), #1(c), #2(a), #3(a) are ready-made topics for such diploma projects, sufficiently simple and straight-forward to be completed in a laboratory at a University or a school with an average supply of research equipment. (It is a pity that the didactic specialization of the author is not electrical engineering because then he could try to complete this master plan on his own. Unfortunately, at the present stage of his career such

a drastic change in specialization is not possible.)

At the end of this subsection it is worth stressing that after the completion of stage #3, the prototypes of the chamber become commercially useful and can successfully compete in various applications with heavy and clumsy electromagnets. Therefore, beginning with the stage #4, the chamber becomes capable of earning money, thus it will pay itself for the further development. Also starting from stage #4, this device will quickly spread around the world and gradually take over numerous functions that presently are performed by various other devices (see subsection F8).

F7.3. An invitation to take part in the development of the Oscillatory Chamber

As this can be realized from the content of subsection F7.2, the first three stages of the chambers development can be completed even by a single researcher. In turn after completion the Oscillatory Chamber will start to bring in the first income, thus it will begin to finance further development by itself. Therefore with a bit of good luck and inventive talent, the person who currently decides to invest in this new device, perhaps in the not-too-distant future may hold the technological key to almost all the energy of our planet. This is an enormous stake to win, and the type of initial contribution to join the game is practically affordable by everyone. This is because almost everyone can get access to a few plates of plexiglass, a box of bronze needles or a copper wire, some capacitors and inductors, an old Wimshurst machine or a car ignition coil with an accumulator. What at this stage is needed the most is a will, a lot of common sense, an inventive talent, and a bit of good luck. So why not try.

Even when someone does not hit the jackpot, the contribution into this research may be an excellent investment into one's own future. This is because the completion of the Oscillatory Chamber must be initiated sooner or later, as it is too attractive device to be ignored forever. In turn the advanced stages of the chamber's development (i.e. starting from stage #3 upwards) must be completed with a team effort and the intellectual contribution from many minds. This in turn means that the last stages of the chamber's development would need to take the form of a quite large technological project. The project of course will require a number of research staff who must be well trained in solving the chamber's problems, and who should prove their capabilities in advance. It is well known that investigators who are completely new in a given field always require a significant period of studies (sometime even a few years) to become familiar with the subject. During this time they remain intellectually nonproductive. Thus in the case of beginning a project to build the Oscillatory Chamber, people who have already done some experiments with the chamber will be in high demand. Therefore, every person who at present is working on the chamber should keep in touch with the author, and should systematically exchange information on their most recent achievements. Such contact and exchange of information with the author has also some additional advantages, the most important of which are as follow:

1. The duplication of errors is avoided. Developmental research on the Oscillatory Chamber which is not coordinated, will more likely lead to the duplication of the same errors by those individual investigators who do not know about each other's achievements.

2. A number of various solutions and aspects of the Oscillatory Chamber can be investigated simultaneously. This in turn speeds up significantly the process of finding and implementing the correct technical solutions.

3. The contribution of fresh ideas is increased proportionally to the number of investigators simultaneously working on the Oscillatory Chamber. Subsequent investigators verify their ideas and contribute towards the common goal. As a result, the time-span in which this urgently needed invention is built (and used for the benefit of our civilization) is decreased.

It should be added here that such team work decreases also the secrecy about the advancement of the chamber's completion and thus gives everyone an equal opportunity to develop this device. This should prevent the history of the nuclear bomb from being repeated again. The military capabilities of the Oscillatory Chamber are so enormous (see subsections F8 and G13) that a totalitarian country or organization which secretly develops this device before anyone else could use it to conquer the world and to take complete control over our planet.

F7.4. The author's policy of the public ownership of the Oscillatory Chamber principles

The practical completion of the Oscillatory Chamber requires advancement of our knowledge in two different areas which can be called (1) principles and (2) technology. In order to eliminate possible confusion as to what the difference between these two areas is, they will be explained briefly here. Principles include the entire body of knowledge which explains how and why the chamber operates. Technology describes this specific knowledge that is required to actually build a working device (e.g. materials, manufacturing know-how, parameters of work, control devices, etc.). To illustrate the above with an example, subsections F1 to F6 of this chapter describe the chamber's principles, whereas subsection F7 is more concerned with the chamber's technology.

From the moment of invention of the Oscillatory Chamber, the author adopted the policy that the principles of this device should be jointly owned by all the people living on Earth. In accordance with this policy, the inventor: (1) opposes patenting or imposing other restrictions concerning the ownership of the principles, (2) discloses and publishes complete information about the chamber's principles, and (3) provides encouragement, advice, and expert assistance to every person, institution, or government who is interested in the development of this device. The reasoning behind this policy is as follows:

(a) The chamber is a totally new idea with no equivalent in any device that has been built so far (see subsection F8).

(b) The completion of the chamber will constitute the most important milestone in the development of our civilization. It will advance this civilization from a planetary level into an interstellar level.

(c) In the long term, access to the chamber will be important for the survival, well being, and further progress of our civilization.

(d) The use of the chamber is the main requirement for rapid progress in many areas of science and technology in future, as well as the motivating force behind revolutionary changes needed in our energy management and productivity.

(e) In future, the Oscillatory Chamber will become a main component of almost every other technological product (see subsection F8), including products that at present do not store any energy, such as household appliances, buildings, and even furniture. Thus the

co-ownership and participation in the development of this device guarantees everyone a personal contribution to the changing of practically every aspect of life of future generations.

Contrary to the chamber's principles which should be owned by everyone, its technology should be owned exclusively by a country, institution, or individual who invests in this device. It is logical that the huge economic benefits resulting from the mastering of this technology should be reaped by those who undertake its developmental research. Of course it is not difficult to foresee that these benefits will be enormous and will exceed everything that has so-far governed the economy of our planet. In their effect probably some super-powers will fall and simultaneously other will grow up in the hand of which the access to the technology of the Oscillatory Chamber will concentrate.

In order to protect the interests of the investors who will sponsor the technological research on the Oscillatory Chamber, the author has decided that beyond the 4th stage of the chamber's development, only the principles (but not the technological data) concerning this device will be published. Therefore all non-sponsoring institutions, who later have to catch up on this technology, will not only lose their markets because of starting too late, but they will also need to repeat the same costly research that the original developmental team has completed.

F8. Future applications of the Oscillatory Chamber

To-date there does not exist any other technical invention which has altered the state of our technical environment to the same extent as the completion of the Oscillatory Chamber will. The impact this device will have on the materialistic aspects of human life can be compared only to the effect of the introduction of computers in the intellectual sphere. It is a high chance that by the year 2084 (i.e. in one hundred years after the chamber's discovery) almost every active device used by people will consist of some form of the Oscillatory Chamber. Many structures which at present are passive, such as furniture, buildings, monuments, etc., will be transformed by the Oscillatory Chamber into active ones, i.e. moving, altering orientation and adjusting their location to the changing requirements of their users. Let us briefly review the main applications of the Oscillatory Chamber, trying to forecast what impact they will have on particular fields of human activity.

The area where the introduction of the Oscillatory Chamber will have the most significant impact, is our use of **energy**. This device will completely transform all present methods of energy production, storage, distribution, transformation, and consumption. After the Oscillatory Chamber is fully developed, the vast range of different devices which are presently used for these purposes will be replaced by a single type of twin-chamber capsule which, after appropriate change in control, will be capable of performing numerous different functions. In order to realize the total transformation that the landscape of our planet will undergo after the introduction of these devices, it is sufficient to realize that for example all current powerlines (both, high and low voltage) will disappear completely, and the energy will be distributed directly to the consuming appliances after being packed into "tins", i.e. small, light, handy, and re-chargeable twin-chamber capsules.

Totally new horizons in the **energy production** will be opened due to the potential of the Oscillatory Chambers for multidimensional transformation of energy. It can be predicted that systems of Oscillatory Chambers will replace all other present devices which serve the

production or transformation of energy. So the present combustion engines, generators, photo- and thermo-cells, transformers, motors, etc. - all these will be replaced by systems of Oscillatory Chambers (see Table F1). Because of the high efficiency of these new devices (i.e. the operation almost without losses of energy), they will provide our civilization with the required energy in a manner much less destructive to the natural environment and much more efficient than currently.

The Oscillatory Chamber will also make possible and economically viable the development and the introduction to common use numerous new, "**clean**" **methods** of energy production. Such devices as telekinetic generators of free energy (described in the separate treatise [6]) and generators of clean energy (making the use of solar radiation, wind, ocean waves, sea tides) can become extremely efficient and independent from the weather caprices if they employ Oscillatory Chambers as their energy gathering components. In effect the clean energy production most probably will be so effective that combustion engines and combustible fuels will be totally eliminated from use as damaging unnecessarily the natural environment.

Future numerous applications of the chamber can be predicted in the area of **energy accumulation**. These are connected with the ability of twin-chamber capsules to store huge amounts of energy. To get an idea of what kind of potentials are involved here, it is enough to realize that the energy needs for today's factories, towns, big ships or aeroplanes can be satisfied by a twin-chamber capsule of a pin-head size - if, of course, this device could only be built in such small dimensions. All present batteries, accumulators and electricity transmission lines (powerlines) will be replaced with light, much more efficient, and rechargeable Oscillatory Chambers. Built as twin-chamber capsules, they will not yield any magnetic field when used for energy storage.

Because of the enormous potential to accumulate energy, Oscillatory Chambers will entirely change our system of **energy distribution**. Instead of the centralized energy distribution, as is used presently, the Oscillatory Chamber will make possible an individualized distribution. In this futuristic type of distribution twin-chamber capsules will be assembled directly inside of energy consuming appliances, thus saving on inconvenience (e.g. juggling with cords, using extensions), preparation time (e.g. plugging in, switching off), materials (e.g. cords, plugs, home wiring, powerlines), costs, maintenance, workmanship, etc. As this already was mentioned before, the final effect will be that all our present means and types of energy supply will completely disappear, and only small, rechargeable Oscillatory Chambers will be used for this purpose.

The multidimensional energy transformation capabilities of Oscillatory Chambers will have a significant bearing on the methods of **energy transformation** utilized in the future. Almost all forms of energy transformation will then involve Oscillatory Chambers. This not only includes the replacement of present electrical transformers with two sets of independent twin-chamber capsules which exchange their stored energy directly from one to other, but also various other transformations, for example: magnetic field into heat (Oscillatory Chambers will be employed as ordinary heaters or air conditioners), magnetic field into light (Oscillatory Chambers will operate as fluorescent bulbs), magnetic field into motion (Oscillatory Chambers will operate as electric motors), and much more - see Table F1.

Due to the Oscillatory Chamber the transformation of energy in the future will also replace today's **transformation of motion**. Future mechanisms will be much simpler and lighter, because they will be released from all the devices which presently produce and

transform motion. The motion will be created in the location where the work is to be done and in the exact form that is required. For example if a future hobbyist were to build a copy of our present car, he/she would produce the motion right inside the wheels, therefore the whole engine, gears, and transmission would be eliminated.

The unique advantages of the Oscillatory Chamber will result in this device completely taking over the present functions of **electromagnets**. Research laboratories, capable of using magnetic fields of strengths unattainable today, will be able to wrest a number of secrets from nature, introducing a significant step forward in our science and technology. Industry, utilizing technologies that are based on the application of super-strong magnetic fields, will provide us with a number of products of as yet unattainable quality. For example, we could produce indestructible rubber and clothes, objects made completely of monocrystals, concrete stronger than steel, etc. Also a new type of magnetoreflexive material, suiting the magnetic requirements of the Oscillatory Chamber, will supersede those in use at present.

The Oscillatory Chamber will eliminate not only the electromagnets used as separate devices, but also all those which make up parts of other devices, e.g. from electric motors, electricity generators, etc. Advantages of the chamber, such as: high power-to-dimensions ratio, ability to introduce long gaps between the time of energy supply and the time of energy consumption, controllability; will result in the wide application of this device for building light vehicles, pumps and generators working far from an energy supply and civilization centres, ship and aeroplane engines, medical instruments, etc.

The twin-chamber capsule providing a constant magnetic field will replace some present-day **permanent magnets**. Therefore future models of our speakers, bearings, clutches, grapples, rails, etc., will all employ Oscillatory Chambers.

The Oscillatory Chamber will also introduce a completely new **fashion**, which at present has no appropriate technical back-up. It will be the fashion to suspend objects in space. It should be expected that future furniture, household devices, machines, and even buildings or elements of architecture will hang in space, supported by the invisible force lines of a magnetic field. For example such a piece of furniture as a couch or a sofa in future will be floating in the air. A computer built into it for control will analyse the spoken commands given by a person who sits on it, shifting this person into the required place, changing his/her orientation, height and slanting, and adjusting the couch shape to the type of resting position that this person wishes to experience at a given moment. One of the consequences of this fashion will be the complete disappearance of the wheel, as all present rolling movements will be replaced by soaring in space.

Of course, enormous potential is involved in the **military applications** of the chamber. This device can either enhance and multiply the capabilities of already existing weapons, as well as make new and yet unknown kinds of weapons. In order to illustrate the chamber's possible contribution to the already existing kinds of weapons it is sufficient to realize that the amount of energy accumulated in a twin-chamber capsule of a dice's size is sufficient to keep a bomber in the air for a number of years without the need for it to land and to refuel, to encircle our globe in a submarine a few hundred times without the need to emerge onto the surface, or to drive without stopping a military tank at a distance greater than the distance from Earth to Sun. In order to illustrate potentials of the Oscillatory Chamber to make a new types of weapons, it is sufficient to mention that a system of these devices producing whirling magnetic fields will be able to form barriers and mine fields which in seconds may explosively vaporize every object entering into their range made of a good electric conductor. Missiles

containing systems of chambers may cause instant evaporation of huge constructions made of steel, such as bridges, factories, ships, aeroplanes, rockets, satellites, etc. The rapid release of the energy stored within a chamber (e.g. through its detonation - for details see a separate monograph [5F]) will cause an explosion comparable in effect to the use of a thermonuclear super-bomb. The only difference will be that the chamber will not pollute the environment by any radioactivity. Because of the capability of Oscillatory Chambers to pack huge amounts of energy in small spaces, the potentials for forming the devastation equal to that given by a huge thermonuclear bomb will be provided by a miniature chamber able to fit inside a rifle bullet. Of course, Oscillatory Chambers are not only capable to destroy, but also allow us to protect ourselves from being destroyed. The simplest of such protections would depend on providing our security objects or military vehicles with chambers the fields of which will form repulsive or attractive interactions with ferromagnetic objects in their vicinity (see Figure F8). In this way our objects and vehicles will be able to repel (or - in the appropriate situations, also to attract, demobilize, and intercept) vehicles or missiles of the opposite side. Even the more unusual potentials of Oscillatory Chambers results from their ability to form a configuration of the magnetic field called the "magnetic lens" (see the description of this lens provided in subsection G9.4). Our soldiers, vehicles, aeroplanes, ships, and other objects which are wrapped with this lens become completely invisible to the opposite side.

The most promising prospects, however, are connected with using the Oscillatory Chamber for the purpose for which its principle was originally invented - i.e. for the magnetic **propulsion of flying vehicles**. The next chapters of this treatise are devoted to the description of such applications of the chamber.

At the conclusion of this review of future applications of the Oscillatory Chamber it is worth stressing that all these different applications and functions can be fulfilled by the same twin-chamber capsule which depending on circumstances is only provided with a slightly different controlling system/program. Therefore in the sense of universality of applications the Oscillatory Chambers will resemble present computers in which a simple change to the program is able to transform them for example from a typewriter into a musical instrument, automatic pilot, road map, casino of games, or a measuring instrument.

Independently from the applicational significance of the Oscillatory Chamber which is outlined above, the completion of this device will also have enormous **exploratory meaning** and learning consequences. This is because the Oscillatory Chamber is going to be the first "magnetic resonator" build on our planet. This resonator will be capable of producing its own magnetic oscillations (vibrations) as well as reacting to oscillations (vibrations) produced by other sources. Although the Earth's science is just at the beginning of learning about the capabilities and significance of magnetic oscillations, the author's theory called the Concept of Dipolar Gravity (described in chapter D) already realizes that they provide a key for enormously rich variety of phenomena still unknown for us. In order to list here some of these phenomena, they include the telekinesis and time travel described in chapters C and D, telepathy postulated by the Concept of Dipolar Gravity, control of people and animals' behaviour at a distance (e.g. instant paralysing someone's movements, instant hypnotizing with a device, erasing someone's memory, etc.), transformation of some elements into others, extraction of environmental energy described in monograph [6], and much more. Therefore, in the exploratory and learning sense, the Oscillatory Chamber will be the founder and a prototype for a whole series of incoming devices which are to produce, detect, process, and measure the magnetic oscillations. In this way in the future it will contribute to the formation

of the whole new scientific disciplines and directions of technology. For the next generations of scientists and engineers on Earth the exploratory and learning significance of the Oscillatory Chamber will probably be equally important as the significance of Henry's oscillatory circuit was for today's electronics, cybernetics, and communication.

F9. Monographs describing the Oscillatory Chamber

Since the Oscillatory Chamber was invented, the author has prepared, formally published, and disseminated a number of scientific monographs devoted to the presentation of this device. These were published in three different languages (English, German, and Polish) and available in a few countries (New Zealand, USA, Germany, Poland). The most important of these monographs are listed below.

[1F] "Theory of the Magnocraft". It contained the first comprehensive presentation of the Magnocraft, including the first description (one chapter) of the Oscillatory Chamber ever published. One chapter was also dedicated to the description of Magnetic Personal Propulsion. The treatise [1F] was published in the following editions:

- (a) First New Zealand edition, January 1984, ISBN 0-9597698-0-3;
- (b) First USA edition - co-published in USA by: Energy Unlimited, PO Box 35637 Sta. D, Albuquerque, NM 78176, June 1985.
- (c) First Polish edition (written in the Polish language) entitled, "Teoria Magnokraftu", March 1986, ISBN 0-9597698-5-4.
- (d) Second New Zealand edition - extended, Invercargill, August 1984, ISBN 0-9597698-1-1, 110 pages and 53 illustrations.

[2F] "The Oscillatory Chamber - a breakthrough in the principles of magnetic field production". It was intended to provide the first complete disclosure of the Oscillatory Chamber, prepared as a proposal to be discussed and evaluated by other scientists. One chapter was dedicated to the Magnocraft. The treatise [2F] was published in the following editions:

- (a) First New Zealand Edition, December 1984, ISBN 0-9597698-2-X.
- (b) First USA edition, published in the "Energy Unlimited" magazine, Issue 19/1985, pages 15 to 43. This special edition of the magazine (published by "Energy Unlimited", PO Box 35637, Station D, Albuquerque, NM 87176, USA) reprinted the whole treatise on the Oscillatory Chamber.
- (c) First West German edition (written in the German language) entitled, "Die 'Schwingkammer' Energie & Antrieb fur das Weltraumzeitalter", published by: Raum & Zeit Verlag, Dammtor 6, D-3007 Gehrden, West Germany; June 1985, ISBN 3-89005-006-9, 64 pages (including 7 illustrations).
- (d) Second New Zealand edition, augmented, Invercargill, October 1985, ISBN 0-9597698-4-6, 115 pages and 15 illustrations. This second edition included the first presentation of the Concept of Dipolar Gravity.

[2F/2] "Komora Oscylacyjna czyli magnes jaki wzniesie nas do gwiazd" (i.e. "The Oscillatory Chamber: a magnet that will carry us to stars"), Dunedin, New Zealand, 1994, ISBN 0-9597946-2-X, 178 pages (including 4 tables, 38 illustrations, and 1 enclosure).

The latest treatise [2F/2] (written in the Polish language) was intended to provide the most comprehensive and up-to-date description of the Oscillatory Chamber, supplemented

with the summary of to-date research on the completion of this device. It provided the blueprint for formulating this treatise.

[3F] "The Magnocraft: a saucer-shaped space vehicle propelled by a pulsating magnetic field". Treatise, Invercargill, New Zealand, September 1986, ISBN 0-9597698-3-8, 300 pages.

[4F] "Advanced Magnetic Propulsion Systems". Treatise, Dunedin, New Zealand, October 1990, ISBN 0-9597698-9-7, 460 pages (including 7 tables and 163 illustrations).

This treatise [4F] represents an updated and extended version of the treatise [1F]. It is composed of three parts: (1) the philosophical foundations, including the Concept of Dipolar Gravity, (2) Theory of the Magnocraft (including this chapter F devoted to the Oscillatory Chamber), and (3) the theoretical validation of theories and devices proposed in parts 1 & 2.

[5F] "The New Zealand explosion of 1178 A.D. which tilted the earth". Dunedin, New Zealand, 1994, ISBN 0-9597946-6-2, a private edition by the author, 156 pages (including 36 illustrations). It presents the author's findings about a crater formed when a stack of seven Magnocraft-like vehicles exploded near Tapanui, New Zealand.

[6F] "The magnetic extraction of energy from the environment". Dunedin, New Zealand, 1990, ISBN 0-9597946-1-1, 38 pages (including 14 illustrations), a private edition by the author. It describes energy producing devices that utilize the "Telekinetic Effect" released through acceleration or deceleration of magnetic fields.

Monographs [5F] and [6F] summarize briefly the use of Oscillatory Chamber but do not provide any extensive description of the operation or design of this device.

F10. Symbols, notation, and units used in this chapter

symbols - explanation	[units]
a - side dimension of a cube	[metre]
A - area	[square metre]
\check{C} - compression force	[Newton]
C - capacitance	[Farad]
E - name of an electrode	[-]
f - frequency of pulsations	[1/second]
F - magnetic flux	[Weber]
Fo- constant component of a magnetic flux	[Weber]
i - electric current	[Ampere]
l - spacing or length	[meter]
L - inductance	[Henry]
m - magnetic axis	[-]
M - magnetic force acting on a current	[Newton]
n - number of turns of a coil per unit of length	[-]
p - number of segments in an electrode	[-]
P - plate (electrode)	[-]
q - electric charge	[Coulomb]
R - resistance	[Ohm]
s - sparks' motivity factor	[-]
S - general name for a spark	[-]
t - time	[second]
T - period of pulsation	[second]
\bar{T} - tension force	[Newton]
U - breakdown difference of potential in the chamber	[Volt]
ΔF - amplitude of magnetic flux pulsations	[Weber]
ϵ - dielectric constant for a gas filling the chamber	[Farad/metre]
μ - magnetic permeability of a dielectric	[Henry/metre]
Ω - resistivity of a dielectric gas within the chamber determined at the moment of electric breakdown	[Ohm·metre]

Suffixes assigned to electrodes and other symbols:

- B - Refers to a back electrode
- F - Refers to a front electrode
- L - Refers to a left electrode
- R - Refers to a right electrode
- N - Refers to a north magnetic pole
- S - Refers to a south magnetic pole
- I - Refers to an inner Oscillatory Chamber
- O - Refers to an outer Oscillatory Chamber
- C - Refers to a circulating flux of a twin-chamber capsule

R - Refers to a resultant flux of a twin-chamber capsule

Table F1. The utilization of Oscillatory Chamber. Listed are examples of present devices for conversion of energy which in the not-too-distant future will be replaced by twin-chamber capsules due to the multidimensional energy-transformation capabilities of the Oscillatory Chamber.

The device utilizing the Oscillatory Chamber	Kind of energy Supplied	Principles of operation Obtained
1. Electro-magnet	Electric current	Magnetic field Electric energy supplied to the chamber will be transformed into a magnetic field.
2. Heater	Electric current	Heat Hot gas from the chamber will be circulated through a radiator.
3. Electric motor	Electric current	Mechanical motion Waves of controlled magnetic fields produced by a set of chambers will cause a mechanical motion of conductive elements.
4. Transformer	Electric current	Electric current of different parameters Two chambers of different working parameters exchange energy through their magnetic fields (utilizing a phase shift in their pulsations).
5. Combustion engine	Heat	Mechanical motion Heating of the gas in the chamber provides energy which is then consumed in the process of producing a mechanical motion.
6. Electricity generator	Heat	Electricity Gas filling the chamber circulates through a heat exchanger. Energy supplied in the form

of heat is converted into an electrical charge and then withdrawn as an electric current.

7. Generator Mechanical Electricity Moving one chamber towards another changes the motion interactions of their magnetic fields, providing them with energy which can then be withdrawn.

Fig. F1. The evolution of the Oscillatory Chamber. Three parts of this diagram show the gradual transformation of a Henry's oscillatory circuit with a spark gap into an Oscillatory Chamber.

(a) The conventional form of an oscillatory circuit with a spark gap, as it was discovered by J. Henry in 1845. Its three vital elements (i.e. capacitance "C1", inductance "L" and spark gap "E") are provided by three separate devices, i.e.: a capacitor, a coil, and a pair of electrodes.

(b) The modified version of the oscillatory circuit with a spark gap. All three vital elements are concentrated in one device, i.e. a couple of conductive electrodes "P_F" and "P_B" joined to the inner surfaces of the two opposite walls of a cubical chamber made of an electric insulator. Both electrodes "P_F" and "P_B" in turn are subdivided into several separate segments "1, 2, ..., p". In the real chambers these segments will be reduced to thin conductive needles insulated from each other. The side dimension of the cube is marked by "a".

(c) The Oscillatory Chamber formed by combining together two modified oscillatory circuits "C1" and "C2" identical to that presented in part (b) of this diagram. The consecutive appearance of sparks labelled as "S_{R-L}", "S_{F-B}", "S_{L-R}", "S_{B-F}" oscillating along the surface of the left-side walls creates a kind of electric arc circulating around the inner perimeter of this chamber and producing a strong magnetic field.

Fig. F2. **The assumed appearance of the Oscillatory Chamber** - see also Figure L6. It will look like a plain glass cube or a regular crystal. Streaks of bright shimmering sparks of golden colour will run horizontally around the inner surfaces of it's side walls. These sparks will look as if frozen in their positions, although from time to time they will rapidly move their plots like a knot of snakes writhing around their prey. Therefore the operational chamber will give an impression of a living creature preoccupied with some mysterious activity. The broken lines indicate the column of produced magnetic field distributed along the "m" axis. When viewed from the direction perpendicular to the magnetic field force lines (i.e. exactly as it is illustrated in the above diagram) this column will trap the light and thus it should be seen by the naked eye as a black bar extending in both directions from the chamber - see the description of such bars presented in subsection G3.4. Also this field should cause the inside of the chamber to be non-transparent. Therefore the chamber should look as if it is filled with black smoke. If viewed along the magnetic field force lines, the passage through the chamber should be transparent, except for the cases presented in Figure F5.

Fig. F3. The **mutual neutralization of the electro-magnetic forces** acting in the Oscillatory Chamber. The mechanism of this neutralization utilizes Coulomb's electrostatic forces and the deflecting electromagnetic forces simultaneously tensing and compressing the chamber in two opposite directions, thus cancelling each other's action.

(a) The four basic phases of operation of the Oscillatory Chamber. Symbols: R, L, F, B - the right, left, front and back electrodes of the chamber that together form two cooperating oscillatory circuits; S_{R-L} , S_{F-B} , S_{L-R} , S_{B-F} - the four streams of electric sparks that appear in succession during a single cycle of oscillations, thus forming one complete rotation of the square arc (the active sparks are marked with a continuous line, whereas the inertial sparks with a broken line).

(b) The changes in the potential of the electrodes during a full cycle of the chamber's operation. Symbols: T - period of pulsation; t - time; +q, -q - positive and negative electric charges accumulated on electrodes. Note that the Coulomb's mutual attraction of opposite charges accumulated on the facing walls will produce forces which will tense the chamber into the inward direction.

(c) The changes in the electro-magnetic deflecting forces (M) acting on particular electric sparks. These forces try to stretch the chamber into the outward direction.

(d) The changes in the tensing forces (T) and the compressing forces (C) that mutually neutralize each other. The tensing forces (T) are produced by the electro-magnetic containment interactions occurring between the sparks and the magnetic field that fills the chamber. The compressing forces (C) are caused by the reciprocal Coulombs attraction of the opposite electric charges accumulated on the facing plates.

Note that both groups of these forces have a symmetrical course but opposite value. This is why they cancel each other's action.

Fig. F4. The "twin-chamber capsule". This is the basic arrangement of two Oscillatory Chambers, formed to increase their controllability. The twin-chamber capsule is formed from two oppositely oriented chambers placed one inside the other. Because of the need for free floating of the inner (I) chamber suspended inside of the outer (O) one, the side edges "a" of both Oscillatory Chambers must meet the equation: $a_o = a_i \cdot \sqrt{3}$ (see equation F9). The resultant magnetic flux (R) yield to the environment from these arrangements is obtained as a difference between outputs from chambers having opposite orientation of poles. The principles of forming this resultant flux are illustrated in Figure F6. The twin-chamber capsule allows full control over all the attributes of the produced magnetic field. The subjects of control are the following properties of the resultant flux (R): (1) strength of the field (fluently controlled from zero to maximum), (2) Period (T) or frequency (f) of pulsations, (3) ratio of the amplitude of the field's pulsations to its constant component ($\Delta F/F_o$ - see Figure F8), (4) character of the field (i.e. constant, pulsating, alternating), (5) variation in time (i.e. linear, sinusoidal, beat-type curves), (6) polarity (i.e. from whichever side of the arrangement the N and S poles prevail). Symbols: O - outer chamber, I - inner chamber, C - circulating flux trapped inside the capsule, R - resultant flux yield from the capsule to the environment.

Fig. F5. Differences in visual appearance of twin-chamber capsules. Illustrated are capsules that operate in two opposite modes called: (a) the INNER flux prevalence, and (b) the OUTER flux prevalence. Because a strong magnetic field produced in both capsules is translucent only when observed along the field force lines, the curved force lines of circulating flux (C) are nontransparent to the outside observer and thus must be seen as black bars (compare the description from subsection G3.4 with Figure F4).

(a) The capsule with the **inner** flux prevalence. The resultant flux (R) is produced here by the inner chamber (I), whereas the entire output of the outer chamber (O) is turned into the circulating flux (C). Therefore in this capsule the space between the inner and outer chamber is impenetrable to light and appears as a totally blackened area.

(b) The capsule with the **outer** flux prevalence. The resultant flux (R) is produced here by the outer chamber (O). The inner chamber (I) supplies only the circulating flux (C) that entirely curves itself back into the outer chamber. Therefore in this capsule the cross area of the inner chamber is totally blackened.

Fig. F6. Principle of combining together the outputs from both chambers of the twin-chamber capsule into the resultant flux "F_R". The case of producing the resultant flux whose variation in time reflects a beat-type curve is considered. The outer chamber produces the greater flux "F_N" whose variation in time (determined at its north, "N" pole) is represented by the curve "F_O". The inner chamber has the opposite polar orientation - see Figures F4 and F5 (b). Therefore in the direction where the north, "N" pole of the outer chamber "O" prevails, the inner one "I" extends its south, "S" pole. The variation in time of the output "F_S" from this inner chamber "I" is represented by the curve "F_I". If two fluxes "F_O" and "F_I" of the opposite polarity are combined together, the resultant flux "F_R" represents the difference in their values: $F_R = F_O - F_I$. This difference of fluxes is yield outside the twin-chamber capsule forming resultant flux "F_R". The entire output "F_I" of the inner chamber remains trapped inside of the capsule as the circulating flux "C" that circulates internally between the inner and outer chambers. Note that in further deductions the shape of the resultant beat-type curve "F_R" is roughly represented by pulsing curves containing the constant component "F_O" and the pulsating component "ΔF" - see Figures F8 and G34.

The "spider configurations" (see Figure F7) produce their resultant flux in an almost identical manner to the one described above.

Fig. F7. An arrangement of five Oscillatory Chambers, called the **"spider configuration"**. This configuration is mainly used as a propulsor for the four-propulsor spacecraft - see Figure H1. It is formed from five Oscillatory Chambers having the same cross area. The four cubical side chambers (marked U, V, W and X) surround the oppositely oriented main chamber (marked M) which is four times longer. The total volume of all four side chambers must be equal to the volume of the main one. This arrangement is the simplified model of the Magnocraft's propulsion system. The resultant magnetic flux (R) yield to the environment from the spider configuration is obtained as a difference between outputs from the main chamber and the oppositely oriented side chambers. The principles of forming this resultant flux are similar to those illustrated in Figure F6. The spider configuration, similar to the twin-chamber capsule, also allows full control over all the attributes of the produced magnetic field. But in addition, the spider configuration can spin the produced field around its magnetic axis "m" thus producing its own magnetic whirl. Its main drawback in comparison to the twin-chamber capsule is the lack of ability to complete "extinguish" the magnetic field yield to the environment (even if the entire output of this configuration is bound into the circulating flux (C), still this flux will circulate via the environment).

Fig. F8. The curve of the "interactions in equilibrium" between the magnetic field produced by a twin-chamber capsule or a spider configuration and all the ferromagnetic objects found in the range of this field. As it is known, the constant magnetic fields attract ferromagnetic objects. Therefore all fields in which the constant (F_0) component dominates over their pulsating (ΔF) component must attract ferromagnetic objects. The parameters of fields whose constant component dominates lie under the curve from this diagram. It is also known that pulsating magnetic fields repel all conductive (ferromagnetic) objects found in their range. So the fields which the pulsating component (ΔF) dominates over the constant one (F_0) will cause the repulsion of all ferromagnetic objects. The fields with the dominating pulsating component (ΔF) lie above the curve from this Figure. For the parameters of fields lying exactly at the curve, the attraction and repulsion components mutually neutralize each other. Thus such fields neither attract nor repel any ferromagnetic objects in their vicinity. These fields behave more like an "antigravity field" than a magnetic one.

The frame contains the interpretation of all the involved parameters of the pulsating magnetic fields.

Fig. F9. Photographs of the experimental devices of a Polish hobbyist, Ryszard Zudzin of Bydgoszcz. The prototype of his chamber still requires further perfecting to become a powerful magnetic field producing device, and it may take many years before the first chambers will be deployed. But his undisputable achievement is to demonstrate that the principles of the Oscillatory Chamber are valid and completable in a technical manner, and to pave the way for further more advanced research. The secret of success with building the above chamber lies in the introduction of needle-shaped electrodes that replaced the square plates shown in Figure F1 "b" (see Figure F10), and in the appropriate shaping of electric impulses that produce the sparks. Mr Zudzin acquired the idea of such needle-shaped electrodes from ancient descriptions of gold nails driven through the wooden walls of the Ark of the Covenant.

(a) Zudzin's model photographed in darkness. It reveals the fascinating appearance of streams of rotating electric sparks. This photograph was taken in May 1987.

(b) Mr Zudzin and his experimental station composed of: one of his prototypes of the chamber, an impulse generator (of his own construction) that supplies electric power, deflecting electromagnet, and the measuring equipment. Photographed in August 1989.

Fig. F10. The illustration that justifies the use of needle-shaped electrodes in the construction of Oscillatory Chambers. The diagram shows an overhead view at two versions of the Oscillatory Chambers during their operation. In both chambers streams of sparks are in the process of jumping along the indicated paths from electrodes marked as "R" (right) to electrodes marked as "L" (left). Because of the strong magnetic field prevailing along the vertical axis "m", the jumping sparks are pushed towards the wall with electrodes marked as "F" (front). This pushing causes that in the chambers utilizing the plate-shaped electrodes (see the chamber "a") instead of desired path (s') sparks take the line of least resistance (s") passing through the front plates "F". But these "short-cuts" are impossible in the chambers with needle-shaped electrodes (see the chamber "b") where the sharp tips of needles repel the sparks making impossible their entering the electrodes "F" and passing through them.

Chapter G.THE (DISCOIDAL) MAGNOCRAFT

The "Magnocraft" is the name given to a completely new type of space vehicle (invented by the author), which is propelled by a pulsating magnetic field. The main goal to be achieved through the invention of this vehicle is to obtain such a design for an interstellar spaceship that would make it possible for it to be completed by a small country, or even by a large industrial corporation. How close we are to achieving this goal is demonstrated in the analysis of the attributes of the Magnocraft listed below:

1. Not a single moving part is necessary, either for the flight or the manoeuvring of this spacecraft. (Theoretically speaking, the whole Magnocraft can be produced like a plastic balloon, i.e. from only one part. In comparison, the new Boeing 747 - 400 "Jumbo Jet" constructed in 1988 contains about four million individual parts.) Some versions of the Magnocraft (usually miniature, computer-operated probes) will in fact be built devoid of even a single moving part, and at the same time will perform all their required functions excellently. In the case of large, man-operated versions, moving parts, such as doors, will be included only for the convenience of the crew. How important a technological break-through this attribute of the Magnocraft is can be realized when we think of the production of all these millions of cooperating parts contained in space vehicles to date, and consider the consequences of the failure to move any of these parts somewhere in space.

2. The energy resources within the Magnocraft are self-rechargeable. When this spaceship accelerates it consumes the energy contained in its magnetic field, but when it decelerates the energy is returned back to the field. The principles of such self-recharging are the same as those involved in the return of electricity to the aerial overhead powerline by an electric train decelerating its speed by turning its motors into generators. Therefore, if the Magnocraft returns from a round trip in free space (where the flight does not involve any friction) its energy resources will be the same as they were at the moment of the start of the voyage. In effect, magnetic propulsion will allow this vehicle to travel unlimited distances, because - contrary to our rockets - its material and energy resources will never be exhausted. The self-rechargeability of the Magnocraft means that all countries which don't have their own energy resources or whose energy resources are close to exhaustion should be vitally interested in obtaining access to this vehicle.

3. The specifications for this spacecraft are at such an advanced level that it can not be compared with any other device that has been built to-date. For example, the Magnocraft is able to produce:

(a) A rotating "plasma saw" which is obtained from the surrounding medium by ionizing and swirling it with the vehicle's powerful "magnetic whirl". This plasma saw makes possible flights through solid matter (e.g. rocks, buildings, bunkers). An effect of such flights through solid matter is the formation of glassy tunnels.

(b) A local "vacuum bubble" surrounding the surface of the vehicle. This bubble is formed by the centrifugal forces that act on each particle of a swirled environmental medium. It isolates the vehicle's shell from the action of a hot environmental medium, making possible noiseless flights within the melted rocks and blazing gases, and also flights in the atmosphere at speeds exceeding the heat barrier. The vacuum bubble allows this spaceship to achieve a speed of approximately 70,000 km per hour in the atmosphere, plus flights close

to the speed of light in free space.

(c) An "inductive shield" formed from the vehicle's spinning magnetic field. The inductive power of this shield is sufficient to change every piece of metal found in the range of the field into an explosive material and blast it to pieces.

(d) A kind of "magnetic framework" created from the system of reciprocally balanced magnetic forces produced by the vehicle's propulsors. This invisible framework reinforces the physical structure of the vehicle. It possesses the ability to withstand any high environmental pressure - not only that which prevails on the bottom of oceanic trenches, but also that which exists at the centre of the Earth and probably even in star nuclei.

(e) A kind of "magnetic lens" that makes this vehicle invisible to radar and to the naked eye. This lens is formed through the saturation of space with magnetic energy to such an extent that it is equivalent to a local increase of mass density (according to relativistic equivalence of energy and mass). In turn the higher density of mass changes the optical properties of the space surrounding the Magnocraft, shaping it into a type of lens.

(f) Completely noiseless flights.

Such specifications will allow the Magnocraft to carry people to the stars, but also may turn this spacecraft into the most powerful weapon ever to be at our disposal. Therefore, it is probably only a matter of time before a country or a corporation willing to invest in the development of this extraordinary vehicle will be found.

There are two further attributes of the Magnocraft which introduce an obvious difference between the theory of this spacecraft and other already existing speculations concerning the future of interstellar travel. They are:

4. In a theoretical way, solutions to all the main problems that hold back the completion of this spacecraft have been found and worked out. Therefore its technical realization can be initiated without delay. This means that in the event of finding an authoritative sponsor and receiving appropriate support for research, the first flying prototype of this vehicle could be seen in our skies even before the end of the next decade.

5. All the principles and phenomena applied in the operation of the Magnocraft are based on our current level of knowledge, and no part of the theory of this spacecraft - including the device called an "Oscillatory Chamber" which the vehicle uses as its "engine" - requires the discovery of any new tenet of physics or new phenomenon.

All the above attributes taken together make the Magnocraft one of the most attractive endeavours of our century.

G1. The magnetic propulsor

In subsection B2 "propulsor" was defined as a device that produces an absolute motion of a vehicle in its environment. Examples of propulsors used in conventional vehicles included a balloon, an aeroplane propeller and a rocket outlet. A type of propulsor must also be used in the Magnocraft to produce its motion. Of course, this advanced vehicle can not be propelled by any of our conventional devices, and it requires the development of an entirely new type of propulsor which is called here a magnetic propulsor. This subsection details what a magnetic propulsor is and how it works.

Operation of the magnetic propulsor is based on a well-known empirical observation that every two magnets of similar magnetic size must mutually repel themselves if they are appropriately orientated towards each other. Thus, when one of these magnets is Earth and

the other is the magnetic propulsor itself, a suitable repulsive force must be produced if their magnetic sizes are comparable. The magnetic size of every magnet is defined by its so-called "effective length" (i.e. a length of space in which its magnetic field prevails). Therefore, in order to repel itself from the Earth's magnetic field, the magnetic propulsor must have its effective length comparable to the diameter of our planet. The effective length of a magnetic propulsor depends in turn on the value of flux that it generates. (To illustrate this dependence, magnetic flux can be compared to the gas pumped into a rubber balloon, i.e. the more gas that is pumped, the greater the volume of space the balloon stretches into.) If this flux is greater than the so-called "starting flux", the magnetic size of the propulsor becomes comparable to the size of the Earth.

Establishing the above enables us to define a magnetic propulsor. This definition states:

"A **magnetic propulsor** is any independent source of controlled magnetic field which is able to generate a flux in excess of the starting flux."

In this definition the starting flux is the flux needed to lift a propulsor as a result of its repulsive interaction with the Earth's magnetic field (a more detailed explanation of the starting flux is contained in subsection G5.1). When the propulsor's output exceeds the value of the starting flux, it is able to repel itself from the Earth's magnetic field. In this way it produces a lifting force sufficient to carry its own mass and the body of a vehicle attached to it. Because of this lifting capability, magnetic propulsors can be used to propel space vehicles.

In order to achieve the repulsive orientation of a magnetic propulsor in relation to the environmental magnetic field, the following two conditions must be met:

#1. Identical magnetic poles are to be pointed towards each other (i.e. N of the propulsor towards the N of the environmental magnetic field, whereas S to S).

#2. The magnetic axis of the propulsor is to be tangential to the local course of the force lines of the environmental magnetic field.

Note that on the Earth's north magnetic pole this repulsive orientation can be obtained when the north pole of the propulsor is pointed downwards. When above the magnetic equator, the magnetic axis of the propulsor should be horizontal and its magnetic polar orientation the same as Earth's (see Figure B2).

There are two major properties that every magnetic propulsor must display. These are:

(a) Its magnetic output exceeds the value required for producing sufficiently powerful thrust and lifting forces (i.e. this output is greater than the starting flux).

(b) The parameters and the direction of the produced field are controllable to the extent that complete manoeuvrability of the propelled vehicle is obtained.

Apart from the above, it is also desirable for a magnetic propulsor to possess a number of other useful properties, such as:

(c) The ability to accumulate and store the magnetic energy that will be consumed during flight (i.e. the operation as a fuel-tank that stores a magnetic field instead of a combustion fuel).

(d) The production of sufficient heat and electricity to satisfy the vehicle's internal consumption during a flight.

(e) The performing of a number of additional functions to increase the safety and efficiency of the flight, such as the formation of an inductive shield, working as a searchlight, etc.

All the properties listed above appear in the configurations of the Oscillatory Chambers called the twin-chamber capsule (see subsection F6.1). Therefore such configurations, after

being assembled within appropriate spherical casings, are utilized as magnetic propulsors for the Magnocraft.

G1.1. The principle of tilting the magnetic axis in a Magnocraft's propulsor

For the convenience of the crew, the manoeuvring of large man-operated Magnocraft can be achieved by tilting the magnetic axes of the propulsors in relation to the body of these vehicles. Such tilting requires the twin-chamber capsules contained within the propulsors to turn towards the casings of these propulsors. The principle of such turning can be explained by the example of a hypothetical propulsor controlled by two sets of mechanical rollers.

The general design of this hypothetical propulsor is presented in **Figure G1**. The upper (A-A) part of this Figure shows the propulsor from an overhead view, whereas the lower (B-B) part shows a vertical cross-section. The propulsor's external casing (1) have the shape of a sphere which contains inside: eight rollers (2), a carrying structure (3) that holds Oscillatory Chambers and passes onto them the motion of the rollers, and a twin-chamber capsule (4) & (5). The twin-chamber capsule is composed of the outer Oscillatory Chamber, marked as (5), and an inner chamber marked as (4). The capsule is confined by the carrying structure (3) which looks like a fragment of a ball with the two opposite ends cut off. The shape of the structure (3) copies the inner surface of the spherical casing (1), but at the same time it is able to rotate in relation to this casing. In Figure G1 this structure is indicated by shading with parallel lines. Apart from the twin-chamber capsule (4) & (5), the structure (3) also houses the devices for tilting the magnetic axis "m" of the propulsor. These devices can be imagined as two sets of rollers (2) driven by a control unit of the propulsor. Each set contains four rollers rotating in the same vertical plane. Both sets of rollers are placed along two vertical planes "x" and "y" that are perpendicular to each other. The axles of the rollers rotate in the carrying structure (3), while their race rolls on the inner surface of the casing (1). The motion of the rollers which follows the control signal causes displacement (slanting) of the carrying structure (3), and so also the displacement (slanting) of the twin-chamber capsule held in this structure. This in turn changes the direction of the field's magnetic axis "m" towards the propulsor's casing (1). Figure G1 also illustrates the outer diameter "D_s" of the propulsor's casing (1) which for the Magnocraft is an important design parameter - see Figure G23. Note that the side dimension "a_o" of the cubical outer chamber (5) contained in this casing is much smaller than D_s, i.e. only about:

$$a_o = (1/\sqrt{3}) \cdot D_s = 0.577 \cdot D_s \quad (G1)$$

The above description of a hypothetical propulsor is used to explain the principles involved in the tilting of the magnetic axis of the Magnocraft's field. The real design, however, is slightly different, although utilizing the same principles. In this design, rollers (2) are replaced by two sets of four miniature Oscillatory Chambers joined to the propulsor's casing (1), whereas the carrying structure (3) is replaced by invisible strings of magnetic field. The field from these miniature chambers interacts with the field produced by the twin-chamber capsule held by them, allowing for the **free-floating** suspension of the capsule inside the propulsor. Therefore in a real propulsor we should be able to actually see the cubical twin-chamber capsule (5) as it hovers suspended inside the transparent casing (1). Because the magnetic field which attaches this capsule to the eight miniature chambers is transparent, an observer would have the impression that the cubical capsule does not touch anything, and also that it does not seem to be held by anything.

G1.2. The propulsion unit

One magnetic propulsor alone is not able to provide adequate flight and manoeuvrability for the Magnocraft, just as a single wheel is not sufficient to construct a motor car. Therefore in the spaceship described here, a number of such propulsors strictly cooperating with one another must be utilized. The optimal configuration of propulsors which is able to fulfil all the requirements of flight and manoeuvrability is called here the "magnetic propulsion unit". Such a propulsion unit used in the Magnocraft is shown in **Figure G2** (to simplify the explanations that follow, it is illustrated above the Earth's north magnetic pole). The main attribute of this unit is that it employs a minimal number of magnetic propulsors, providing at the same time the maximum range of operational possibilities. Therefore this unit, after only a slight modification, is also utilized in Personal Propulsion (refer to chapter I) and in the Four-Propulsor Spacecraft (refer to chapter H). The configuration of this unit is based on the shape of a bell. This is because in this propulsion unit the distribution of lifting and stabilizing forces resemble a bell-shape with a single holding point located at the centre, and a ring of stabilizing weights suspended below this point at even distances. (It is well-known that bells represent the physical form that is considered able to provide optimal stability in space.)

Let us now analyze the main components and operation of the magnetic propulsion unit. It consists of two different kinds of propulsors, i.e. a single main propulsor (marked "M" in Figure G2) located in the centre, and a number of side propulsors (marked "U, V, W, X" in Figure G2) distributed evenly around a lowered ring. According to the condition explained in subsection G4.2 the total number "n" of side propulsors must always be a multiple of four. The main propulsor is usually oriented so as to be repelled by the Earth's magnetic field. (The introductory part to subsection G1 explained that on the north magnetic pole of Earth, such a repulsive orientation of propulsors can be obtained when their north "N" pole is pointed downwards.) The side propulsors are usually oriented so that they are attracted by the field of the Earth.

By increasing the flux produced by the main propulsor (M) oriented in such a repulsive manner, an increase in the repulsion force "R" is achieved. At the moment when the repulsion force overcomes the gravitational pull, the propulsor (M) begins to ascend, lifting up the entire propulsion unit. If the main propulsor would operate alone, then its flight would be disturbed by the magnetic torque which would tend to turn around the propulsor's magnetic orientation so that attraction would replace repulsion. Thus, to compensate for the effects of the environmental magnetic torque trying to turn the main propulsor around, additional stabilizing side propulsors "U, V, W, X" are necessary. Their magnetic orientation opposes that of the main propulsor (M), i.e. when the main propulsor is to be repelled, side propulsors are to be attracted by the environmental magnetic field. A possible configuration of such side propulsors is illustrated in Figure G2. These side propulsors give flight stability to the whole propulsion unit. By appropriate adjustment of the produced fluxes, the side propulsors can enforce the balanced orientation of a craft in whatever attitude and position the crew requires.

The propulsion unit described above can operate in an "upright position" (see **Figure G3**) as well as in an "inverted position". The previous description relates to the upright position. In the inverted position the function of both kinds of propulsors is reversed, i.e. the main propulsor serves as a single stabilizer and the side propulsors as lifting devices. During horizontal flights in such an inverted position above the Earth's surface, the gravitational pull

(G) acts as an additional stabilizer. Therefore, this position combines better stability with less power involved in the magnetic field produced by the vehicle. For this reason, it can be used when the area of flight should be less disturbed magnetically (but for the crew this position is probably less comfortable).

If the magnetic propulsion unit described above is built into a protective shell, which also contains the crew cabin and the craft's equipment, the final construction of the Magnocraft is obtained. The general view of this construction is shown in **Figure G4**. Describing the elements and characteristics of the Magnocraft's shell is the aim of subsection G2.

G1.3. Using propulsors as searchlights

We know from physics that some substances, when exposed to the action of conditions similar to those prevailing within the Oscillatory Chamber (i.e. bombardment by high energy ions, action of a strong pulsating magnetic field) will emit light. Therefore, if we build inside the Oscillatory Chamber a device which on command will either move forward into the range of sparks a rod of such a substance or saturate the chamber with appropriate vapours, the propulsor becomes a means of producing light. This capability of a magnetic propulsor combines the role of a bulb with the role of a torch. It causes the emission of a concentrated beam of very strong light in the direction where the outlet from the propulsor is pointed. As this can be especially useful for landing, for low altitude flights, or as a searchlight during night, all the propulsors in each Magnocraft will have this modification.

The Magnocraft can light up just one of its propulsors and use it as a searchlight, or simultaneously any number of lights up to or equal to the number of all its propulsors. The direction of the beam of light emitted from a particular propulsor can not be changed without altering the angle of that propulsor or the position of the whole spaceship. Therefore, when more than one propulsor is used for such a purpose, outside observers should see a group of almost parallel beams of light descending downwards from the vehicle.

G2. The shell of the Magnocraft

The shell of the Magnocraft is a kind of hermetic wall which permanently separates two spaces where different environmental conditions prevail and which is made of material that possesses the required properties. For example, the shell will be the entire external casing of the Magnocraft because it separates the inner parts of the vehicle - containing the crew cabin and important devices - from the outside environment in which the craft flies (e.g. vacuum, hot gases). The shell will also be the wall inside the vehicle that separates a propulsor (filled with dangerous magnetic field) from the crew cabin, where the field should not be present. But the shell will not be the partition walls subdividing the crew cabin into a number of rooms, as they do not separate different environments.

Some characteristics of the shell of the Magnocraft, just as those of the metal panels of motor vehicles, will be the subject of changes and evolution occurring during the period of this spacecraft's production. They will be dependent on the technology available at the time of producing the particular craft, on fashion, on the function for which it is built, on the individual wishes of its crew, etc. But there will be a number of features which, independently of changes introduced, must remain the same. An example of such a fixed feature is the

external shape of the vehicle, which is strictly defined by the equations originating from the principles of its operation - see Figure G23. The descriptions which follow will concentrate mainly on the presentation of these fixed features.

G2.1. Terminology describing various parts of the Magnocraft's shell

Vehicles such as bicycles, motor cars or aeroplanes possess their own terminology allowing for a strict definition of whichever part is considered at a particular moment. Thus, when using names such as "pedals", "boot", or "wing", the attention of the interested person is directed to the right part. In order to make it possible to do the same with the deductions concerning the Magnocraft, the necessary terminology is introduced in this subsection. The terminology proposed here is subsequently used in the entire treatise. While subsequent terms are defined, an opportunity arises to also explain all the details of the Magnocraft's shape.

The parts of the Magnocraft's shell are named and described here using an example of the middle-sized vehicle, type K6, shown in **Figure G5**. The K6 type possesses all the features which can also appear in the shells of any other type of this spacecraft.

The shape of the Magnocraft's shell resembles the outline of a flat saucer turned upside down (compare Figure G5 with Figures G4 and B1). In the centre of this saucer, the single "main propulsor" (M) is suspended. The flange of the saucer contains numerous "side propulsors" (U), (W). The total number "n" of side propulsors in a particular type of vehicle is described by the equation (B1). In the Magnocraft type K6 this number is equal to $n=20$. The main propulsor, together with all the side propulsors, constitutes the "propulsion unit" of the Magnocraft which is described in subsection G1.2. Between the main propulsor and the flange of the craft a "crew cabin" (CC) is located. This cabin takes the shape of a parallel-piped ring surrounding the "central cylinder" (13) inside of which the main propulsor is suspended. Using again the saucer comparison, the crew cabin takes the place of the side walls of this saucer. The central cylinder (13) and the main propulsor (M) contained in it occupy the centre of the crew cabin (CC), forming a kind of vertical "column" that extends from the ceiling (5) to the bench (12) of the floor (11). Therefore this column constitutes a characteristic feature of the Magnocraft's deck, being visible from almost every compartment. Because this cylinder is made of a transparent material, the crew and visitors are able to observe the operation of the Oscillatory Chambers from the vehicle's main propulsor.

The underside of the Magnocraft's shell begins from the flat, ring-like "base" (11). This base, in all deductions concerning the vehicle, is taken as the starting point (benchmark) for assigning the dimensions and for referring to the position (see Figure G23). The central point "O" of the Magnocraft lies on the intersection of the central axis "Z" of the vehicle with the plane of the base. This point is in fact suspended in the air as the central part of the vehicle's underneath section curves upright, forming the "underside concave" (12), (14). This concave always consists of two parts: the "bowl" (14) and the "alignment cone" (12). In the vehicles types K3 to K6 both these parts (i.e. "bowl" and "alignment cone") transform themselves tangential into each other, whereas in the rest of the Magnocraft they are joined together at almost a right angle (see Figure G24).

On the upper side of the Magnocraft the "topside convex" (2), (4) appears, which in shape is exactly symmetrical to the underside concave (12), (14) described above. This topside convex also consists of two parts, the central "dome" (4) of which has the shape of

a hemispherical bowl with the radius "R", whereas the side "alignment cone" (2) is a fragment of the conical surface serving as an outer shell for the crew cabin (CC). In the vehicles K3 to K6 the apical angle of the alignment cone is so selected that this cone intersects the base plane exactly under the axes of the side propulsors. Because of the symmetry of the topside convex to the underside concave, a number of Magnocraft can be stacked one on top of another in a way similar to saucers in a kitchen cupboard, thus forming a flying complex called a "stacked cigar" - see Figure G8. The distance between the topside convex and the underside concave is determined by the diameter " D_M " of the main propulsor (M).

The outer part of the craft's flat base (11) transforms itself into the base (10) of the "flange" (L). The flange (L) houses the side propulsors (U), ... (W). This flange has an overall appearance similar to that of the rim of a lens. The thickness of the flange is determined by the diameters " D_s " of the side propulsors which are housed inside it. Also its width is determined by the appropriate equation (G8). The top half of the flange has a magnetic "pole separator" (9) in the shape of a horizontal ring. The function of this separator is to divide the N and S magnetic poles in each of the side propulsors so that the side magnetic circuits must loop through the environment, not through the inside of the craft. The flange also houses a number of vertical partitions (not illustrated in Figure G5 but shown in Figures G4 and B1) which divide it into several magnetically separated chambers. Each chamber contains only one side propulsor. These partitions not only prevent the connection of the magnetic circuits within the craft's shell, but also prevent the circulation of plasma around the annual space holding the side propulsors.

It should be emphasized here that in the types of the Magnocraft from K7 to K10 (see Table G1) the height D_s of the side flange exceeds 2 meters, thus it begins to be suitable for housing crew members and living compartments. Therefore in these large type Magnocraft the side propulsors will be also placed in vertical magnetoreflexive cylinders in a manner similar to that utilized for the main propulsors in vehicles of all types. Simultaneously in these large Magnocraft the whole interior of the side flange, sheltered by the hermetic shell made of a magnetoreflexive material, becomes also used for housing the living compartment. Due to this arrangement, the interior of the large types of the Magnocraft will resemble interiors of present churches. They will have a bench located in their centre, above which a huge dome will be suspended. Around of this central domed "nave" a shorter circular columned will be arranged the individual columns of which will house subsequent side propulsors. Behind this side columned further living compartments will occupy the vehicle's side flange.

Towards the centre of the outlets from the side propulsors the upper side of the Magnocraft's flange is transformed into a "complementary flange" (6). The thickness of this flange is " G_s " (compare Figures G23 and G8). Therefore it expands onto all the unused space between the Magnocraft which are coupled into "flying systems" (see Figures G16 and G22). This allows for an additional living space when vehicles are joined into these arrangements. Further towards the centre, the complementary flange (6) joins the topside convex (2) described earlier. The border (7) between the flange and the complementary flange also forms the outer edge of the crew cabin (CC).

G2.2. The Magnocraft's compartments

In the shell just described, two kinds of compartments can be distinguished: the crew's living compartment (CC) and the propulsion compartments (C) and (L). The crew's **living**

compartment extends around 360° within the cone-shaped body of the craft; it surrounds the dome-shaped free space which exists under the main propulsor (M) and in the central cylinder (3) in which (M) is suspended. This space is left free so as to avoid interference with the magnetic field of the main propulsor, while the direction of this field changes for the purpose of manoeuvring. In the living compartment, the crew cabin, log computer, flight engineering equipment, life support system, etc. are stored. In the types of Magnocraft larger than K4, this compartment is further subdivided into a number of smaller cabins performing specialized functions. There are also two **propulsion compartments** in the Magnocraft: the central compartment (C) which contains the main propulsor (M), and the lateral compartment (L) which houses the side propulsors (U), ..., (W). Both of these compartments are divided into two parts (N) & (S) which contain the field from only one (North or South) magnetic pole of the propulsors. The central compartment (C), is divided into two sections (C_N) and (C_S) by the crew cabin of which the top part is joined to the spherical casing of the main propulsor. This top part (13) separates both of the magnetic poles of the propulsor so that the force lines of the magnetic field have to loop through the medium surrounding the craft. For the lateral compartment (L), the magnetic poles of the side propulsors are separated by a ring (9). This compartment also contains two sections (L_N) and (L_S) in which only a field from one pole prevails.

G2.3. The Magnocraft's facilities

Two other important features of the Magnocraft are its telescopic legs and its periscopes. The legs (15) lie along the conical section of the interior wall (12) of the crew cabin, extending from the ceiling (5). In flight, when the legs are fully retracted, they do not protrude below the base (11) but are extended at the moment of landing. The angled position of the legs gives them numerous advantages which are of an important consideration when landing on uneven ground. The number of legs may differ according to the type of craft. But they must always occupy positions between the side propulsors, thereby avoiding interference with the magnetic field yield from them. Smaller Magnocraft, whose number of side propulsors "n" is also a multiple of three (e.g. K4 type with $n=12$ side propulsors) have three telescopic legs, whilst all others have four - see Table G1.

Magnocraft are also equipped with four side periscopes (1) extending from the ceiling of the crew cabin, and two base periscopes (not shown in Figure G5). These are capable of extending beyond the range of the "ionic whirl" (see Figure G32) generated by the Magnocraft when it is operating in the magnetic whirl mode, and thus assist the crew in making precise manoeuvres. When the vehicle is in this mode of operation, the periscopes provide the only outside visual contact. To shield these periscopes from the destructive action of a plasma saw, their surface is protected by miniature magnetic screens.

Other facilities carried by Magnocraft may include ladders, boarding lifts, landing sledges, etc.

G2.4. Materials for the Magnocraft's shell

Two drastically different types of material should be used to create the shell of the Magnocraft. The first, which hermetically covers the living compartment and also forms the

separatory ring (9) with its vertical partitions, must possess magnetoreflexive (magnetoresistive) properties. So the dimensionless parameter of its diamagnetic susceptibility must be $\chi=-1$. On the other hand, the second material, which covers aerodynamically the outside surfaces of the propulsion compartments, must provide maximum magnetic conductivity. Its diamagnetic susceptibility therefore must be $\chi=0$. This is vital, as any significant resistance to the magnetic flux could result in destructive energy conversion. Independently of these main magnetic properties, both materials must also be:

1. Electrical non-conductors.

2. Transparent/mirror-like (with a regulated ratio of transparency to light reflection). This means that materials should be able to either act like transparent glass or like a mirror (i.e. in extreme they should either let all light pass through them, or reflect all the light). Moreover, materials should also allow for a smooth control into any state between these two extremes (i.e. into any state between complete transparency - like glass, and complete light reflection - like a mirror).

3. Of robust mechanical construction.

4. Resistant to conversion of magnetic energy into any other form of energy (e.g. heat).

It should not be very difficult to produce a magneto-conductive material which fulfils the above requirements. We already know some substances (e.g. various kinds of glass) which are probably suitable. The real problem seems to lie in obtaining an appropriate magnetoreflexive material. Although in nature a substance is known which displays a high magnetoreflexiveness, i.e. graphite; unfortunately it is also a good electric conductor. A non-conductive version of graphite, called "vitreous carbon", which is also highly magnetoreflexive, provides better prospects for this application, however it still is non-transparent. Thus the Magnocraft covered by it would not provide any visibility to its crew. Therefore, it seems that the production of the Magnocraft's shell will require a material specially engineered for this purpose. The guidelines for engineering such a material are provided by the so-called "electrodynamical model of magnetoreflexiveness".

G2.4.1. The electrodynamic model of magnetoreflexiveness

By "**magnetoreflexiveness**" we understand a property of materials, which allows them to reflect magnetic fields in a way similar to the way mirrors reflect light. It is necessary for some parts of the Magnocraft's shell (especially those encasing the crew cabin) to be perfectly magnetoreflexive, i.e. they must reflect the entire 100% of the magnetic flux that is striking upon them.

In the research to date on magnetoreflexiveness, only the natural abilities of some chemical structures were utilized. Theoretically, however, there is another way of achieving the same effect. This way employs the Contradictory Rule governing electro-magnetism. According to this rule, every change of a magnetic field within a conductive material induces an electric current which produces its own magnetic field that is contradictory to the field inducing it. It is the Contradictory Rule which makes electric superconductors also perfect magnetic screens. But this rule can not be utilized directly by producing an electrically conductive shell for the Magnocraft. Large plates of such a shell would allow to induce within them extremely powerful electric currents that would produce an enormous amount of heat. In turn, this heat would be able to evaporate the vehicle.

There is, however, another way of achieving the same effect. The heat problem can be

solved if the size of the conductive circuits is decreased to an atomic scale. To achieve this, microscopic droplets, about 5 μm in diameter, of electrically polarized conductive material should be spread uniformly within the volume of an electric insulator. Each such droplet would contain only a few (i.e. up to about a hundred maximum) atoms. The spreading of these droplets would be similar to the distribution of graphite spheroids within modified cast-iron. In such small polarized conductive droplets, insulated electrically from each other, electric currents would take the form of a synchronization of movement of electrons within atomic orbits. Therefore, these currents would not be able to yield any heat, while still obeying the Contradictory Rule. In this way the currents would be able to produce the internal magnetic fields that would neutralize the action of an external field that induces them, while the vehicle's shell would remain cool. The above theoretical principle, on which this dynamic manner of forming magnetorefectiveness is based, is called the "electrodynamic model of magnetorefectiveness".

Of course, the technological implementation of the above model is not an easy task. This is because the obtaining of such material would encounter problems at two different levels, i.e. its design and its production. The main problems relating to the material's design are: selecting the chemical elements most appropriate for the conductive droplets and for the insulative material that will host them, and finding the optimal size of droplets and their optimal density in insulative material. The main problems with the production of such magnetorefective material are caused by the necessity for the forced polarization of all atoms in the droplets (i.e. orienting all atoms within each droplet in the same direction), and on keeping the size and spatial distribution of droplets at the required level.

It should be stressed that the need for forced polarization of atoms inside each droplet imposes the use of a powerful electric field during the formation of such magnetorefective material. In turn such polarized material must display some rather unique physical properties, for example when cut with a saw or file it must produce streams of powerful sparks (like the flint from a cigarette lighter).

G3. Shapes of the coupled Magnocraft

One of the most important attributes of the Magnocraft's propulsors is that they allow for easy and complete control over the produced output and over the orientation of their magnetic poles. Therefore, independently of their propelling functions, these propulsors can also be used as coupling devices, allowing for an attachment of one vehicle to another without disturbing the flight possibilities of either of them. The forces that join together the coupled Magnocraft are provided by the magnetic interaction of the vehicles' propulsors brought close to one another. Such an easy manner of joining several Magnocraft into a flying arrangement, combined with the numerous advantages that it provides, ensure that the coupling of these vehicles is a very common practice. Therefore observers of these spacecraft may on one occasion witness them as a single vehicle of an inverted saucer shape, whereas on another occasion they may see them as spheres, cigars, platforms, crosses, or hundreds of other possible shapes that can be arranged from several Magnocraft coupled together.

The main advantage of coupling Magnocraft together is the ability to pilot the whole resultant arrangement by a single crew on duty, while other crews can rest, investigate, consult each other, or socialize. Additional advantages include: setting up an inductive shield of greater width that makes travel much safer; an increase in propulsive power which

subsequently enables the attainment of speeds higher and more uniform in heavier mediums than those of solo flights; an increase in the total number of compartments and the range of crew specializations. During long-distance interstellar voyages, the coupling increases security and comfort of flight, allows for the socializing of crews from different vehicles, and also makes it possible to transport damaged Magnocraft.

G3.1. The six classes of the Magnocraft arrangements

There are three factors which determine the shape and properties of the flying arrangements obtained as a result of coupling several Magnocraft together:

(a) The type of propulsors that face or interact with each other in each pair of joined vehicles. We can distinguish here as many as three different combinations: (1) main to main, (2) main to side, and (3) side to side.

(b) The character of the magnetic interaction occurring between each pair of facing propulsors, i.e. if it is (1) attraction, or (2) repulsion.

(c) The type of contact occurring between the shells of both joined craft. This contact can be one of the following: (1) fixed (e.g. plane to plane or cone to cone), (2) labile (e.g. two spheres touching each other in a point), and (3) detached (i.e. there is no physical contact between these shells).

The way the above three factors are combined together categorizes a particular flying arrangement into a specific class. There can be distinguished as many as six basic classes of different arrangements obtained through various manners of coupling the Magnocraft. Examples of these are illustrated in **Figure G6**. These classes are as follows:

#1. Flying complexes - see Figures G7 to G10. These are obtained when in the joined craft: (a) main propulsors always face other main propulsors and side propulsors always face other side propulsors; (b) all propulsors (i.e. main and side) create only attractive interactions; and (c) the coupling provides only fixed contacts.

#2. Semi-attached configurations - see Figures G11 and G12. In these arrangements: (a) the facing of the propulsors is the same as in the flying complexes; (b) the attractive interactions are formed only by the main propulsors, whereas the side propulsors of both vehicles repel one another; and (c) the contact between the vehicles is only labile (i.e. occurring only at the point where two convex hemispheres touch each other). In spite of such labile contact, the configuration is permanent and steady because the combining of the attractive and repulsive interactions between vehicles joined together provides the required stability.

#3. Detached configurations - see Figure G13. In these: (a) propulsors are faced in the same manner as in the physical complexes and semi-attached configurations; (b) the character of the interactions is the reverse of semi-attached configurations, i.e. the main propulsors of both vehicles repel each other, whereas the side ones attract; and (c) there is no physical contact between the coupled vehicles so they keep apart at some distance from each other. But the magnetic interactions are so strong and steady that they maintain a stable and permanent configuration. Note that in these configurations the facing outlets of the side propulsors of both spacecraft must be joined by the columns of a highly concentrated magnetic field which catches the light and therefore appears as square "black bars" - see subsection G3.4.

#4. Carrier platforms - see Figures G14 and G15. Obtained when: (a) the main

propulsor of one craft faces the side propulsor of the other craft; (b) all interactions are attractive; and (c) the contact is fixed. This arrangement is the most profitable when a number of small Magnocraft are to be carried under the base of a large mothership (see Figure G14). But it may also be used for coupling two vehicles of the same type (see Figure G15).

#5. Flying systems - see Figure G16. For these: (a) the side propulsor of one Magnocraft faces the side propulsor of the other one, while their main propulsors do not face each other; (b) all interactions are attractive; and (c) the contact is fixed. In flying systems, not only single vehicles but also entire stacked cigars are coupled together. In this way whole flying cities are formed. The flying systems are the highest rank of arrangements, usually formed for the duration of an interstellar voyage.

#6. Flying clusters - see Figure G17. These are simply various other arrangements of Magnocraft that are subsequently clustered together with magnetic forces. In flying clusters: (a) no propulsors of any arrangement face the propulsors of another flying arrangement (i.e. in all arrangements clustered together the magnetic axes of propulsors are parallel to one another); (b) two subsequent arrangements which belong to a given cluster (put simply) attract each other with their main propulsors and repel each other with their side propulsors; and (c) there is no physical contact between subsequent arrangements forming a given cluster. An example of a typical two-dimensional cluster could be a "flying cross" shown in Figure G6.

In each of the above classes we can further distinguish particular arrangements which differ from each other in shape, number of coupled craft, their mutual orientation, etc. The Magnocraft may actually form hundreds of such arrangements; each one unique, and each one very different from the others. The limited size of this treatise does not allow for the presentation of all of them. But to give readers an idea as to what variety of shapes can be formed just by coupling together a number of saucer-shaped Magnocraft, some of the most frequently appearing configurations are described below.

G3.1.1. Flying complexes

The flying complexes constitute a class of coupled Magnocraft formed for the duration of planetary and interplanetary voyages. In this class the following regular arrangements can be distinguished: (1) the spherical complex, (2) the stacked-cigar complex, (3) the double-ended cigar complex, and (4) the fir-tree complex. These regular flying complexes may join further between themselves, forming irregular arrangements of an almost unlimited variety of lengths and shapes. The enormous range of possibilities resulting from such further coupling may be left to the reader's imagination. Let us now review the main characteristics of the regular flying complexes.

1. The spherical complex. This is obtained when two Magnocraft of the same type are joined by their bases (i.e. base-to-base - see **Figure G7**). The name of this complex originates from its shape that roughly resembles a sphere (especially in the magnetic whirl mode of operation). Exactly in the middle of the height of this sphere a double flange which fastens the resultant arrangement horizontally can be distinguished. The upper part of Figure G7 shows the external (side) appearance of this complex, whereas the lower part of the same Figure shows its cut-away view. This cut-away view illustrates an upright vehicle (1) and an inverted vehicle (2) forming such a complex, and it also indicates a gelatinous hydraulic substance (A) called "angel's hair" which fills the free space between both vehicles. This substance

neutralizes the attracting pressure that originates from the interaction between the main propulsors (M) of both coupled Magnocraft. Its function is similar to that of the white of an egg which prevents the thin shell from being crushed by a uniform pressure, even that which could be exerted by the strongest athlete. The angel's hair, at the moment when the flying complexes decouple, drops from the Magnocraft and falls onto the Earth's surface, covering trees in a manner reminiscent of the Christmas decoration of the same name. Note that the decoupling of spherical complexes formed from subsequent types of Magnocraft must release a cumulatively growing volume of angel's hair. The volume of this substance for each type of Magnocraft can be calculated on the basis of data provided in Table G1. For a spherical complex formed from the smallest Magnocraft type K3 it exceeds 1 [m³]. In special circumstances spherical complexes may also form laminar deposits of magnetically scorched organic matter called the "onion charcoal" (C). This charcoal attaches itself to the (N) outlet from the main propulsor (M).

2. The stacked cigar-shape complex. This is created by stacking the convex top of one craft onto the concave part of the base of another, and so on. The result is similar to a pile of saucers, one on top of another, stored in a kitchen cupboard - see **Figure G8**. The facing outlets of the side propulsors in this configuration must be joined by columns of a highly concentrated magnetic field which looks like black bars (the description of these bars is provided in subsection G3.4). For this reason, when the shells of vehicles from such a cigar are transparent, and when this configuration flies in a throbbing mode of operation, to an outside observer looking at it from a side view it would resemble a kind of shiny ladder.

3. The double-ended cigar complex. This is formed when more vehicles are coupled to both ends of a spherical complex, or when two stacked cigars couple together into a spherical-like configuration. The double-ended cigar complex, similarly to a spherical complex, also has a space in the middle which is filled with angel's hair (see **Figure G9**). In other details it resembles a stacked cigar complex.

4. The fir-tree complex. All three flying complexes described above (the spherical, stacked-cigar, and double-ended cigar complexes) are **homogenous**, i.e. they are formed from Magnocraft belonging to the same type. There is also, however, the possibility of coupling in the same manner a number of Magnocraft belonging to various types. The group of arrangements resulting from such coupling is called the fir-tree complex. The name for these arrangements originates from the visual impression that they make on observers, i.e. eye-witnesses see them as a shape that closely resembles the outline of a fir-tree (see **Figure G10**).

In general, the fir-tree complexes can be coupled as single-ended or double-ended. The single-ended ones are obtained when a number of Magnocraft belonging to various types join together by stacking vertically smaller types of craft on top of larger ones. The mutual positioning of vehicles is very similar to the one in stacked cigar-shaped flying complexes - compare Figure G10 and Figure G8. The double-ended fir-tree complexes are obtained when two such single-ended complexes are joined together base-to-base. The resultant arrangements are equivalent to double-ended cigar complexes.

There are eight main types of Magnocraft, each of them possessing different dimensions (see Figure G24). Therefore depending on which of these types are coupled together and how many vehicles participate in a particular arrangement, the resultant shape of a fir-tree complex can be different. In this way, a large number of various shapes and sizes of these arrangements can be formed.

G3.1.2. Semi-attached configurations

The semi-attached configurations are formed in the docking stage of the Magnocraft's coupling into flying complexes (see subsection G3.2). To obtain any such arrangement, further coupling must be suspended in the middle of the docking stage, and the intermediate configuration so formed must remain unchanged for the duration of subsequent flights. In these configurations, the vehicles involved gain all the properties of a flying complex, however their contact is only along those surfaces which are unable to give any physical stability to the arrangement (e.g. at the centre of two convex hemispheres - see **Figure G11**). The method of coupling together such configurations uses the set of forces of magnetic interactions between the propulsors of the craft that are joined, and which are kept in a state of permanent equilibrium. It is these magnetic forces, not physical contact, that keep the arrangement stable.

The semi-attached configurations possess the properties which enable an extensive usage of these arrangements in various circumstances. The most important of these properties are:

(a) The ability to join into one arrangement a set of vehicles (or a set of Magnocraft's arrangements) whose shape and/or orientation make it impossible for them to be coupled into an ordinary flying complex. An example of this can be the joining together of two Magnocraft which are touching each other with their convex tops (see Figure G11), or the joining together of two spherical flying complexes (see **Figure G12**).

(b) The convenient distribution of forces within such a configuration, which decreases the danger of the structure of both vehicles being crushed. This makes it possible to couple together differently the same Magnocraft which took part in an ordinary spherical-shaped flying complex (see Figures G7 and G17). However, in the semi-attached configuration it is unnecessary to use the hydraulic substance (angel's hair) for neutralizing the magnetic interactions between the propulsors. Therefore the spherical complexes which drop their hydraulic substance during decoupling may become semi-attached configurations in the event of further coupling back together.

(c) A quicker and less complicated coupling and decoupling of semi-attached configurations when compared with the formation of flying complexes. Therefore it allows for the arranging of temporary configurations which are intended to be quickly decoupled into single vehicles.

Note that each of the above properties apply also to the detached configurations.

G3.1.3. Detached configurations

The detached configurations, similarly as semi-attached ones, are also formed during the docking stage of the Magnocraft's coupling into flying complexes. Only the coupling routine leading to the formation of these configurations is different, i.e. it is the "routine through a detached configuration" (see subsection G3.2). The vehicles coupled into these configurations also behave like a flying complex, although they do not touch each other at all - see **Figure G13**. Because all the properties of the detached configurations are similar to those of semi-attached ones, their presentation is not repeated here.

G3.1.4. Carrier platforms

Carrier platforms are formed when a number of smaller Magnocraft adhere to the base of a larger mother ship, held by some of its side propulsors. The resultant arrangement reminds us of baby bats clinging under their mother's belly (see **Figure G14**). The coupling of these vehicles can be so tight that some eye witnesses may assume the small spacecraft to be protuberances swelling out from the base of the large vehicle (such witnesses may also wrongly believe that these protuberances perform major propelling functions, e.g. acting as "antigravity generators").

Depending on the differences between the "K" factor in both vehicles involved, i.e. between the " K_M " factor in a mother ship and the " K_c " in a vehicle (or vehicles) carried by it, the carrying capabilities of the mother ship can vary. When this difference is equal to $K_M - K_c = 1$ (e.g. a mother ship is type K4, whereas all attached vehicles are type K3), only two smaller vehicles can be carried by a larger mother ship. But when these vehicles differ by $K_M - K_c = 2$ (e.g. a mother ship is type K5, whereas attached vehicles are type K3 - see Figure G14), then as many as eight smaller vehicles can be carried by a larger mother ship. With the further increase of the " $K_M - K_c$ " difference, the number of vehicles which can be carried rapidly increases.

Carrier platforms can also be formed from vehicles of the same type. If two Magnocraft of the same size join together into such a carrier configuration, the resultant arrangement looks like a warped spherical complex (compare **Figure G15** with Figure G7). During night flights, the ionized air at the outlets from the side propulsors will shape the image of this configuration into the form of a glowing zigzag.

G3.1.5. Flying systems

For the duration of long (e.g. interstellar) trips the Magnocraft are able to form arrangements of a higher rank than of all of those described previously. These arrangements are called flying systems (see **Figure G16**). A flying system may consist of a single cell only - like the system shown in Figure G16 "a", or a number of cells interloping with one another - see Figure G16 "b" and "c". Each individual cell of such a system is coupled from four stacked cigar-shaped complexes joined together rim-to-rim by their side propulsors. One of the many possible appearances of a single cell is presented in Figure G16 "a". The principles of its formation are explained in Figures G21 and G22.

Flying systems can be formed in an almost unlimited variety of sizes and shapes. Some of the possibilities are illustrated in Figure G16 "b" and "c". Note that further appendixes composed of any configurations described previously can also be joined to the main body of such systems. Thus the final structures of systems supplemented with such appendixes may reflect any form that the imagination can produce.

Flying systems are homogenous arrangements, i.e. only Magnocraft belonging to the same type can be included into their main body. Therefore, in order to join together Magnocraft that belong to various types another arrangement must be used, which here is called a flying cluster.

G3.1.6. Flying clusters

The most simple example of a flying cluster is shown in **Figure G17** (it illustrates only two identical spherical complexes clustered together, although in reality any number of any type and arrangement of Magnocraft can be bonded in this way). A flying cluster is formed through the touchless linking together of a group of independent Magnocraft. Because in the same effective way it incorporates single vehicles, spherical or cigar complexes, carrier platforms, or even flying systems, therefore its individual components are called here "units" (i.e. a "unit" in a flying cluster can be any possible arrangement of Magnocraft or a single vehicle of any type). After being linked together, subsequent units do not physically touch one another. Thus the entire cluster is bonded only with magnetic forces (i.e. in a manner quite similar to that utilized by detached configurations, only that in flying clusters the subsequent units are joined sideways instead of being piled axially).

Flying clusters resemble a chain in which each two segments are joined together with a special link-segment. The function of such links, which in flying clusters bind individual units together, perform "unstable units" (see the unit on the right in Figure G17). These are obtained from ordinary flying arrangements (or from single Magnocraft) by reversing the polarity of their stabilizing propulsors. In this way, the unstable units have both groups of their propulsors oriented repulsively towards the environmental magnetic field. (In usual situations only one of these groups, e.g. a main propulsor, is oriented repulsively, whereas the other group, e.g. side propulsors, is oriented so as to attract the environmental magnetic field and thus to stabilize the vehicles.) Such an orientation of the propulsors causes them to provide lifting forces, but they are unable to provide stabilization forces. Therefore the unstable units are able to fly with repulsive orientation of all their propulsors only when they are attached to some stable units (see the left unit in Figure G17). Such an attachment causes the stable units to ensure the stability of the unstable units. Because of the linking function that unstable units perform, every second unit of a cluster must have such reversed polarity of its propulsors to become an unstable unit.

The magnetic circuits are utilized in flying clusters for two different purposes. Apart from their usual lifting and stabilizing functions (subsection G7.1), they additionally serve the purpose of coupling. Using this purpose as a criterion, as many as four separate categories of magnetic circuits can be distinguished - see Figure G17. These are: separating, holding, tuning, and compensating circuits. (Note that in order to not obstruct the clarity of the drawing, Figure G17 shows only single examples of each category of the circuits listed above. But in real clusters each of these circuits can appear a number of times.) The deductions below explain the purpose for each of these categories.

- The separating circuits in a cluster are those that repel subsequent units from one another, thus making impossible the touching and accidental crushing of vehicles (see circuits indicated with a broken line in Figure G17). To this category belong magnetic circuits formed by almost all the side propulsors of the units participating in a given cluster. Because the orientation of the magnetic poles in all of these side propulsors is identical, they mutually repel one another, causing the separation of subsequent units.

- The holding circuits are those that attract subsequent units to one another, thus allowing for their bonding (holding) together. These are formed from the outputs of the main propulsors in stable units, circulated (looped) through the main and side propulsors in unstable units (see circuits (4), (5) and (6) in Figure G17).

- The tuning circuits are those which allow for the final adjustments of mutual interactions between each pair of clustered units. These are formed by those pairs of side propulsors from each arrangement which are located next to the facing (2) side propulsors

(see circuit number (3) in Figures G17 and K2).

- The compensating circuits are those that neutralize the reaction torque created by the spin of the other magnetic circuits in a given unit. In Figure G17 they are marked as (Ts). Although subsection G6.4 provides a detailed description of the function of these compensating circuits, at this stage it should be explained that they act in the same way as the tail propeller in a helicopter (i.e. they do not allow the vehicles to revolve in an opposite direction from the direction in which their magnetic whirls rotate).

It is worth explaining here that when a cluster descends close to the ground, each category of its magnetic circuits scorches in the soil its own characteristic mark. A combination of these marks form the landing site of a very distinctive shape illustrated in Figure G17 "b". The clarity of this site especially increases when the cluster operates in the magnetic whirl mode. Then its whirling magnetic circuits act like powerful spinning combs, whose countless force lines sweep every inch of the soil thoroughly. Each of these circuits brushes the soil in rings, laying down every single blade of grass along perfectly circular paths. Because each different category of magnetic circuits also has a different length, depending on the height at which a given cluster hovers, only selected circuits can reach the ground and impress their own pattern on it. For this reason, various landings of such clusters in reality introduce further modifications to the basic pattern illustrated in Figure G17 "b".

There are significant forces of repulsion between all the individual arrangements (or individual vehicles) forming a given cluster. Therefore they tend to stretch along straight lines. For this reason, flying clusters can be divided into linear ones and two-dimensional ones. In linear clusters, each unstable unit holds only one or two stable units which are attached to it from opposite sides. Thus, such clusters spread their individual units along a single straight line, forming a kind of "flying chain". A single link (simple example) of such a chain is shown in Figure G17. In two-dimensional clusters, unstable units may have more than two other arrangements attached symmetrically to their sides. Thus, the two-dimensional clusters create a kind of mesh or net spreading along mutually crossing lines. A typical example of a two-dimensional cluster is a "flying cross" shown in Figure G6.

Apart from the advantages of all previous arrangements (e.g. being flown by only one pilot), the flying clusters display further important advantages. Some of these are: (1) clusters allow for a simple linking together of any number of individual arrangements or single vehicles, (2) there is no restriction concerning the type of vehicles, their number, or the kind of arrangements that can be clustered together, (3) in order to be clustered together individual arrangements do not need to change their existing configuration (e.g. split into individual vehicles), and (4) individual arrangements can disconnect from the cluster at any time without the need to change their configuration.

G3.2. The principles of coupling and decoupling

Coupling of the Magnocraft is an activity of joining these vehicles in any flying arrangement described previously. This activity is usually carried out during the vehicles' flight. The reversal of coupling, i.e. splitting flying arrangements into individual vehicles, is called **decoupling** in this treatise. The principles of coupling and decoupling will be explained in the example of forming a spherical flying complex. Of course exactly the same principle is also applied for coupling Magnocraft into any other arrangement. In turn, knowing this procedure of coupling, it is obvious that to decouple any arrangement into single units, the procedure

described below needs only to be reversed.

The entire coupling procedure is completed by only one **active** vehicle (in **Figure G18** it is the lower one) which undergoes all transformations. The other unit (in **Figure G18** the upper one) remains **passive** all the time, and its only function is to allow the active Magnocraft to approach it and to complete the necessary transformations. The polarity of propulsors in the active and passive units must be opposite. For example, if the propulsors of an active unit have the polarity characteristic for the inverted position (see **Figure G3**), then the passive unit must have the polarity characteristic for the upright position. Note that both units (i.e. passive and active) can be either single vehicles or entire flying arrangements.

The coupling of two Magnocraft is conducted in three phases, called the (#1) orientation phase, (#2) the docking phase, and (#3) the linking phase (see **Figure G18**). Each of these phases is discussed below.

#1. The "**orientation** phase" initiates the coupling of the active unit to a passive one. In this phase the active vehicle positions itself exactly opposite the surface to which it is later going to cling to (e.g. in **Figure G18** directly beneath the passive unit). Then the active vehicle adjusts its angular position so that the outlets of its propulsors begin to face the corresponding outlets from the passive unit. The opposite polarity of the propulsors applied in the upright position and in the inverted position have the effect that in this phase both spacecraft have the same magnetic poles confronting one another. Therefore all the propulsors of both units repel one another (see **Figure G3**). For example, in the upright (passive) unit the North pole of the main propulsor and the South poles of the side propulsors are directed downwards, whereas in the inverted (active) Magnocraft the North pole of the main propulsor and the South poles of the side propulsors are directed upwards. In effect both Magnocraft act against each other only with repelling forces (R). This prevents the vehicles from accidentally colliding with each other. After finishing the orientation phase the active Magnocraft may advance to further stages of the coupling procedure.

#2. The second phase of coupling, called the "**docking** phase" (see part "b" of **Figure G18**) contains three steps which must be completed in a very fast sequence by the active vehicle. These are: (2A) the reorientation of the magnetic poles in the active vehicle, (2B) the balancing of the forces of interactions between both vehicles, and (2C) the closing-up of the distance between both vehicles.

(2A) In the first step, the active unit reorientates the magnetic poles of its side propulsors from their repulsive (R) into their attractive (A) orientation towards the same propulsors of the passive unit. As a result, two opposite kinds of forces begin to coexist between both Magnocraft, i.e. a repulsion force (R) appears between their main propulsors, and forces of attraction (A) are produced between their side propulsors. Depending on which of these two types of forces is greater, both craft begin to move towards each other or diverge.

(2B) Immediately after the reorientation of the magnetic poles is finished, the active unit must also complete the second step of the docking phase which is the balancing step. In this step the outputs from the Magnocraft's main and side propulsors are so controlled that the forces of attraction (A) and repulsion (R) between both units reach an equilibrium. This equilibrium causes both vehicles to stop further movement towards each other (or diverge) and form a kind of "solid configuration" which we call the "detached configuration". The detached configuration displays all the properties of the physical complexes, i.e. stability, consistency, permanence, etc. Only the mutual attachment of units is achieved not by mechanical means but by a magnetic field. In this state, both craft could travel a long distance together without any need for a more "physical" coupling. If the formation of such a detached

configuration is the aim of the coupling routine, then further actions are discontinued at this stage and the resulting arrangement flies away, controlled by only one pilot.

(2C) If both vehicles intend to couple into a physical flying complex, after the balancing step the third step of the docking phase begins to commence. In this third step the forces of reciprocal attraction (A) and repulsion (R) between the vehicles are controlled so that both Magnocraft very slowly draw nearer to each other until they achieve physical contact (e.g. base-to-base) .

#3. After physical contact the vehicles begin the third phase of coupling, called the "**linking** phase" (see part "c" in Figure G18). In this phase the polarity of the main propulsor in the active vehicle is reoriented so its repulsion with the main propulsor of the passive unit is replaced by reciprocal attraction (A). Both craft now physically hook onto each other, forming one solid complex.

The characteristic attribute of the coupling routine described above is that the vehicles subjected to it must pass through the following three stages: (1) independent units, (2) detached configuration, and (3) flying complex. Therefore we can call this routine the "routine through a **detached** configuration". There is also another coupling routine, shown in **Figure G19**, which can be called the "routine through a **semi-attached** configuration". This routine, during the second (docking) phase of coupling, achieves all the force interactions and the reciprocal orientation of propulsors that are characteristic for the semi-attached configurations. It should be noted that the only difference between both routines is in the type of propulsors which should be reoriented during the docking stage. For the routine through a detached configuration the side propulsors are reoriented, whereas in the routine through a semi-attached configuration it is the main propulsor whose magnetic poles are reoriented.

G3.3. The hydraulic substance filling the space between the craft ("angel's hair")

The hydraulic substance used to fill the space between the units in the spherical and double-ended flying complexes needs some special properties. It must have a fibrous structure, similar to egg white, together with the same kind of gelatinous consistency. It cannot be a conductor of electric current, and at the same time must be an ideal magnetic field susceptor. It must not convert the magnetic field energy into any other type of energy (e.g. heat).

It is hypothesized that these requirements are met by the class of materials known as the borosiloxane polymers, created by borosiloxane molecular strings. They can be made by a chemical reaction of the boron hydrides with the siloxanes. An example of such a reaction is the association of the boron hydride B_2H_6 with the methyl siloxane $(CH_3)_2SiO$:



Theoretically, such a reaction would produce a huge amount of energy, much more than that currently obtained from rocket fuels (e.g. the association of hydrogen with oxygen). Thus, a reaction similar to this could possibly be used in the future for energy production, while the polymer received (like the waste exhaust gases emitted from motor vehicles) as a byproduct from this reaction could be recycled for filling the space between the Magnocraft. Unfortunately, because this reaction has a high activation energy, it is very difficult to carry out with our present level of technology. To accomplish it much more technical know-how is necessary.

It should be noted that the organic-like compound of boron with silicon, obtained in the effect of the reaction described above, is a gelatinous substance which has an absolutely neutral effect on the environment and people. Its serially connected borosiloxane strings can have a fibrous consistency. As a result of the water (which is present in the air) attacking the boron, these strings crack, creating volatile chemical compounds of the boraxine $(\text{BHO})_3$ type. Therefore, the hydraulic substance which is dropped from decoupling complexes onto the Earth does not pollute the natural environment, and also evaporates after a while.

Another name for this hydraulic substance is the term "angel's hair", as when it is dropped from a vehicle and lands on a tree, it covers it with strands of long, wet, glassy fibres, creating a visual impression similar to that of the well-known Christmas tree decoration of the same name.

G3.4. The black bars of the magnetic field

There are some arrangements of the Magnocraft, e.g. the semi-attached or detached configurations (see Figures G11 to G13) and the cigar-shaped complexes (Figures G8 & G9), in which the side propulsors belonging to different vehicles face and attract one another, at the same time being kept at a distance. Therefore the highly concentrated pulsating magnetic field yielded by these propulsors passes through the environment, forming types of dense columns with clearly distinguishable boundaries. These columns, when observed from a direction that is perpendicular to the field's force lines, must absorb and trap the light, thus appearing to eye-witnesses as black, square bars. Because they appear intensely dark, they can be taken as solid forms extending from the structure of the vehicles. The cross section of these columns reflects the square shape of the Oscillatory Chambers which produce the field forming them. In various arrangements of the Magnocraft, the number of these black bars is always equal to the number of operational side propulsors contained in the coupled vehicles. This could facilitate the type identification of the coupled vehicles, but unfortunately every such bar can not always be seen, as some of them can be hidden behind the vehicles' shells or behind other black bars. Notice that in semi-attached configurations the black bars pass between the main and side propulsors of the facing vehicles (see Figure G11).

A phenomenon identical to that which causes the black bars to appear is also in action during the observation of twin-chamber capsules - see Figure F5. The circulating flux of such capsules, when observed from a direction perpendicular to the field force lines, is perceived as an area of complete blackness. Moreover, when a Magnocraft's propulsor operating in the outer flux prevalence is observed from the inside of this vehicle, for the same reason it also looks as though it is filled with black smoke. (Further details concerning the phenomena involved in the blackish appearance of the Magnocraft's field observed from a direction perpendicular to its force lines are presented in subsection G9.4.)

G4. The conditions defining the shape of the Magnocraft's shell

Every type of propulsion imposes a unique set of requirements on the vehicles which utilize it. These requirements cause that a given type of vehicles must always display certain fixed attributes, independently of who builds them, and when and where they are built. An example of such fixed attributes can be the wheels of a car, which must always be underneath

it (e.g. even the most advanced cosmic intelligence is unlikely to build a car whose wheels are placed on the upper side). Other examples can include the wings of an aeroplane (it is impossible to build an aeroplane without some form of wings) and the hull of a boat (which must have an aerodynamic shape). The propulsion used in the Magnocraft also imposes a set of such unchangeable requirements. They dictate that the shell of this vehicle is strictly defined by a set of mathematical equations. The subsection that follows reviews the most basic conditions which the shell of the Magnocraft must fulfil, and presents the impact of these conditions on the final shape of this vehicle.

In subsection B2.2 the primary requirement for building a controllable propulsion system was described. This requirement states that the principle of operation of the propulsion must allow the working medium to circulate through the environment. For the Magnocraft this means that its magnetic field must form closed circuits whose paths must cross the environment. To fulfil this condition, the shell of this vehicle must be shaped in such a way that:

1. Both outlets from every propulsor must open out onto the environment.
2. Both poles of the same propulsor must be separated from each other so that the magnetic field is forced to circulate around the outside of the vehicle.
3. Every propulsor must be located in a separate chamber which only opens out onto the environment so that the magnetic field is prevented from forming circuits within the craft.

Above describes only one of numerous conditions that the shell of the Magnocraft must fulfil. This condition makes us realize that the vehicle is also subject to a distinct chain of causes and effects (causes are unique requirements imposed by the principles of operation of the Magnocraft, whereas effects are the ways in which the construction of the Magnocraft must be formulated so that it fulfils all these requirements). This cause-effect chain very strictly defines the shape and the mutual ratio of dimensions of the vehicle. These definitions take the form of a set of equations which the shape of the Magnocraft must fulfil.

The consequence of the chain of causes and effects described above is that not many details are left to the choice of the designer of the Magnocraft. Almost every element of its shell, every dimension and shape is strictly defined by numerous conditions. Let us now, one by one, analyze each such cause and mathematically describe its effects.

G4.1. The condition of equilibrium between the thrust and stabilization forces

The Magnocraft's propulsion is designed for equally effective flights in both possible positions, i.e. upright and inverted - see Figure G3. There are also some situations, for example coupling and decoupling into flying arrangements (see subsection G3.2), where the function of particular propulsors must be reversed. These reasons make it necessary for the propulsion unit of the Magnocraft to be designed in such a way that **"the total output produced by all the side propulsors is equal to the magnetic output provided by the main propulsor"**. Only in such a case can a selected kind of propulsor (i.e. the main or the side) in one application be used for propelling and in the other application be used for stabilization. Because the force of magnetic interaction is proportional to the output from the propulsor, the requirement presented here is called the "condition of the equilibrium between the thrust and stabilization forces".

The propulsors of the Magnocraft are built as cubical twin-chamber capsules and are located within the spherical casing (see Figure G1). The external diameters of these casings,

i.e. D_M and D_s , are the parameters that directly impact the shape and dimensions of the vehicle's shell - see subsection G2. But the diameters D_M and D_s of the propulsors' casings must depend on the output provided by the chambers located within them. This dependence results from the requirement that in the state of magnetic equilibrium, the density of energies in the main and side propulsors should be equal. To achieve such equality, the volume of the spherical main propulsor must be equal to the volumes of all "n" side propulsors, i.e.

$$(\pi \cdot D_M^3 / 6) = n \cdot (\pi \cdot D_s^3 / 6) \quad (G2)$$

When the above is transformed and reduced, the final form of the equation describing the condition of the equilibrium between the thrust and stabilization forces is derived. This equation takes the form:

$$D_M = \sqrt[3]{n} \cdot D_s \quad (G3)$$

where "n" is the number of side propulsors in the Magnocraft.

By applying the equation (G3) to the shell of the Magnocraft, the mutual ratio between the thickness of the flange (D_s) and the thickness of the body of the vehicle (D_M) can be determined for each type of craft if we know only the number "n" of its side propulsors.

G4.2. The condition that the number of side propulsors must be a multiple of four

Subsection F6.1 explains that magnetic energy must escape from one Oscillatory Chamber to another if the fields of these chambers pulsate with a certain phase shift. On the other hand - as explained in subsection G7.2, the formation of a "magnetic whirl" which allows manoeuvring and latitudinal flights of the Magnocraft, is impossible without introducing a phase shift between pulsations of fields in subsequent side propulsors of this vehicle. Therefore, to eliminate the escape of magnetic energy from one side propulsor to other, but at the same time to enable the formation of a magnetic whirl, the condition must be imposed that the phase shift " Φ " in pulsations of a vehicle's propulsors always fulfils the equation: $\Phi = (i/2) \cdot \pi$, where $i=0, 1, 2, 3$, or 4 (i.e. this phase shift is always either equal to zero or to a multiple of $\pi/2$). To fulfil this condition without compromising the symmetry of magnetic interactions, the Magnocraft must be designed so that the number "n" of its side propulsors is always equal to a multiple of four and is expressed by the equation (B1).

G4.3. The basic condition for the force stability of the structure of a craft which uses magnetic propulsors

The Magnocraft's propulsors not only produce the forces which propel this vehicle, but also form the internal forces of magnetic interactions amongst themselves. If unbalanced, both these types of forces would be transferred into the physical structure of the craft where they could cause tensions, fatigue of material and subsequent destruction. To eliminate any negative impact of these forces on the vehicle's shell, their value and directions must be so selected that they neutralize one another. The condition under which all forces appearing within the Magnocraft neutralize one another is called here the "basic condition for the force stability of the structure of a craft with magnetic propulsion", or briefly, the "**condition of stability**".

All forces appearing within the Magnocraft are presented in **Figure G20**. They can be

classified into two groups: (1) the interactions between the propulsors and the environmental magnetic field, and (2) the interactions between successive propulsors themselves. The group of forces which interact with the environment includes: the force of magnetic repulsion (R) of the main propulsor from the environmental field, and the forces of attraction (A) between all "n" side propulsors and the environmental field. Note that during a Magnocraft's free hovering in the absence of gravitational interactions, the above forces must meet the condition:

$$R = n \cdot A = \text{Ref} \quad (\text{where "Ref" is a reference constant}) \quad (\text{G4})$$

The interactions between the propulsors themselves consist of two groups of different forces. These are: the attraction (Q) between the main propulsor and each side propulsor, and the repulsion (E) between each side propulsor and the other side propulsors. Note that each attraction force (Q) can be resolved into the radial component (Q_d) and axial component (Q_h). Moreover, all repulsion forces (E) acting on the same side propulsor can be combined together giving the radial pull (E_d).

If we analyze the above forces appearing in the Magnocraft's structure, we notice that in every direction two forces act in opposition to each other. The kinds of action exerted by these forces on the vehicle's shell are as follows:

1. Axial tension. It is created by the opposite forces (R) and (A). The value of these forces depends only on the output from the propulsors, i.e. on the "Ref" from equation (G4).

2. Axial compression. It is formed by the axial components (Q_h) of facing forces (Q) produced in each interaction between the main propulsor and a side one. The value of this compression depends on the ratio of the craft's dimensions "d/h" and on the "Ref" from equation (G4).

3. Radial tension. This is introduced by the radial pulls (E_d). The value of this tension depends on the "Ref" from equation (G4) and on the number "n" of side propulsors.

4. Radial compression. This is produced by the radial components (Q_d) of the attraction forces (Q). Its value depends on the ratio of the craft's dimensions "d/h" and on the "Ref" from equation (G4).

Therefore, through an appropriate manipulation of the factors that define the values of these forces, i.e. ratio of the craft's dimensions "d/h" and the number of side propulsors "n", their mutual equilibrium can be achieved. As an effect of this equilibrium, the opposite forces reach equal values, i.e. $Q_d = E_d$ and $Q_h = A$ so their actions reciprocally neutralize one another. The state of such an equilibrium is obtained when the Magnocraft's design fulfils the following condition:

$$\frac{d}{h} = \frac{n}{4} + 1 \quad (\text{G5})$$

A wooden barrel is a good example of an object which maintains the equilibrium of its forces in a manner almost identical to that utilized in the Magnocraft's shell. A barrel consists of a number of hooped staves that try to expand outwards and thus repel one another like the Magnocraft's side propulsors (these expansion forces in a barrel are equivalent to " E_d " forces formed by the Magnocraft's side propulsors). But simultaneously metal hoops compress these staves inwards, similarly as forces " Q_d " do to the structure of the Magnocraft. The equilibrium reached through the mutual balance of these expansion and compression forces constitutes the barrel's own "condition of stability". The fulfilment of this condition provides the

barrels with their excellent robust qualities.

The equation (G5) expresses the mathematical formulation of the "condition of stability" for the Magnocraft. The magnetic forces produced by the vehicle that fulfils this condition form a kind of invisible skeleton, or framework, which surrounds the Magnocraft's physical structure. This invisible skeleton is called here the "**magnetic framework**". The magnetic framework does not itself exert any forces on the vehicle. Moreover, it also protects the vehicle's shell from the action of other external forces directed at it.

In the equation (G5) the ratio of dimensions "d/h" defines an extremely important construction factor, called "Krotność" and marked by the letter "K". (The word "Krotność" in the Polish language means the "ratio of main dimensions" - usually diameter to height.) After the introduction of the "K" factor, the condition of stability can be expressed as:

$$K = \frac{d}{h} = \frac{n}{4} + 1 \quad (G6)$$

If we build the Magnocraft in such a way that the "K" factor takes only integer values from the range of $K = 3$ to $K = 10$, then the number "n" of side propulsors, as well as the ratio "d/h" of the craft's dimensions, is strictly defined and constant for every different "K". For this reason, all vehicles having the same "K" are classified as the same type, whose name is derived from the values that this factor acquires (this name is expressed as K3, K4, ..., K10).

G4.4. The condition for expressing the K factor by the ratio of outer dimensions

The propulsors of the Magnocraft are hidden inside its shell and are usually invisible to an outside observer. Therefore it would be rather difficult to determine the value of "Krotność", as also the type of craft under observation, only by the number of its side propulsors or their positioning in relation to the main propulsor (i.e. by the "d/h" ratio). On the other hand, the type must be quickly recognizable by the crews of other vehicles and also by the technical personnel on the ground, as it defines their relationship towards the observed craft. Therefore it is necessary to introduce the additional condition that "K" is not only expressed by the ratio of inner dimensions "d/h", but also by the ratio of outer dimensions "D/H" (see Figure G25). When this condition is met, the crews of other vehicles as well as the personnel on the ground can easily determine the type of an approaching vehicle solely by determining the ratio ($K=D/H$) of its outer dimensions.

After the introduction of this condition, every Magnocraft must fulfil not only the equation (G6) but also the following equation:

$$K = \frac{D}{H} \quad (G7)$$

This equation (G7) makes the determination of the type of observed Magnocraft very simple - it is sufficient only to find out how many times the vehicle's apparent height "H" (base to top) is contained within the vehicle's apparent outer diameter "D". Of course this is a purely routine calculation, so it can be completed automatically by the appropriate computer system linked to an identification radar.

The factor "K" is able to fulfil simultaneously the equation (G6) and the equation (G7) only if the width "L" of the Magnocraft's flange (see Figure G20) is described by the equation:

$$K$$

$$L = \frac{D_M}{4} \quad (G8)$$

This equation (G8) together with the equation (G7) are the mathematical consequences of the necessity to express the type factor "K" by the ratio of outer dimensions of the Magnocraft.

G4.5. The condition for optimum coupling into flying systems

In subsection G3.1.5 the most advanced configuration of the coupled Magnocraft is presented. It is called a flying system - see Figure G16. The single cell of this configuration is formed from four stacked cigars, the flanges of which mesh with one another. (How such meshing is achieved for every two consecutive cigars is presented in Figure G22.) In order to pack into the flying system the greatest number of vehicles occupying the smallest space, the additional condition of "optimum coupling" must be involved. In accordance with this condition, all vehicles belonging to a particular cell must touch with their rims the central axis "Z" of this cell. The geometrical configuration defined by this condition is presented in **Figure G21** (which illustrates such a cell from an overhead view - compare also Figure G22 with Figure G16). After joining the vehicles in this way, the distance between the central axes of every two spaceships located on the opposite sides of the "Z" axis is equal to "D", whereas the distance between the axes of every two vehicles coupled together by their side propulsors is equal to "d". Using the Pythagoras theorem " $D^2 = d^2 + d^2$ ", the above can be expressed as:

$$D = d \cdot \sqrt{2} \quad (G9)$$

Both diameters "D" and "d" must also fulfil the equation (see Figure G20):

$$D = d + 2 \cdot L \quad (G10)$$

in which the "L" can be replaced by (G8) combined with (G7); therefore after necessary reductions the final expression for the condition discussed here takes the form:

$$D_M = H \cdot (2 - \sqrt{2}) \quad (G11)$$

The equation (G11) reveals that the ratio " H/D_M " (i.e. the height "H" of the vehicle to the diameter " D_M " of its main propulsor) is constant for every type of Magnocraft and equal to about: $H/D_M = 1.7$.

G4.6. The condition under which the flanges coincide

The optimum coupling of Magnocraft into flying systems also requires that the meshing of the flanges of all craft must coincide exact with one another. The principle of such coinciding of flanges is shown in **Figure G22**. As this Figure reveals, the entire space left between two stacked vehicles is taken by the mutually coinciding flanges and complementary flanges of the meshing crafts. Because the thicknesses of the flanges are equal to " D_s ", whereas the distance between the bases of two consecutive stacked vehicles is equal to " D_M ", the thicknesses " G_s " of the Magnocraft's complementary flanges must be expressed by the equation:

$$G_s = D_M - D_s \quad (G12)$$

The fulfilment of the equations (G11) and (G12) forms the Magnocraft's shell in such a way that after these vehicles are coupled into a flying system, there is almost no space left which would not be occupied by a craft.

G4.7. Types of Magnocraft

By the phrase "type of Magnocraft" is understood a group of identical vehicles which share exactly the same values of: their "K" factor, design parameters (e.g. "n", dimensions), external shape, and various standardized features subjected to international (or interplanetary) agreement. Therefore any group of Magnocraft belonging to the same type is able to couple together into homogenous arrangements, independently of who produced these vehicles and when, what their purpose is, etc. All Magnocraft of the same type will also look identical from the outside and will have the same number of side propulsors. But they can be subdivided into different internal rooms, may use different materials for their shells, be produced by different countries or companies, be made in different years, and so on.

It is worth mentioning here that a number of series of the Magnocraft will probably be built in the future for various purposes. We can imagine a minimum of two such series, i.e. (1) the basic series of crew-carrying vehicles, and (2) an additional series of the computer controlled Magnocraft. In these computer-controlled vehicles, types K3 to K5 could perform the functions of personal implements (e.g. weapons, couriers) whereas types K6 to K10 could perform the function of automatic probes. In each of these two series, the dimensions of particular types of vehicles must be different, but the general appearance, the number of side propulsors, and the mutual ratio of dimensions must remain the same for a given type. For the series of the crew-carrying Magnocraft, the best use of space seems to occur when outer diameters "D" of the subsequent types of vehicles fulfil the equation:

$$D = C_c \cdot 2^K \quad [\text{metres}] \quad (\text{G13})$$

(i.e. "D" expressed in metres is equal to "C_c" multiplied by "2" to the power of "K"). The constant "C_c" from this equation represents the cosmic universal unit of length, in this treatise called the "cosmic cubit". Its value is C_c=0.5486 [metres].

The outer diameters D' of the computer controlled Magnocraft should probably be 2⁸=256 times smaller, thus expressed by another equation of the form: D' = 2.143·2^K [millimetres]. Such defining of their values would cause that the outer diameter D'_{K10} of the K10 type of a computer controlled Magnocraft would be equal to a half of the outer diameter D_{K3} of the K3 type of a crew-carrying Magnocraft, i.e.: D_{K3} = 2·D'_{K10}. The above demonstrates that in fact, for the complete categorizing of the Magnocraft, there is a need to identify not only the type to which it belongs, but also the series from which this type is taken (i.e. crew or computer controlled). However, because this treatise is not concerned with the specific possibilities of the applications of the Magnocraft, in the remainder of the text any reference to a computer controlled series of the Magnocraft will not be elaborated. Therefore any further reference to a type of Magnocraft will relate solely to the crew-carrying series of this vehicle.

The equation (G13) highlights the fact that the outer diameters of successive Magnocraft are organized in a binary fashion. By way of their organizing, the diameter "D" for each following type of Magnocraft is obtained by doubling the same diameter from the previous type. Because there is a linear relationship between the outer diameters "D" and some other dimensions and parameters of the Magnocraft, a number of various dimensions of these vehicles are also aligned in such a binary fashion. For example the diameters "d" of the circles of scorched vegetation left by landed Magnocraft (see Figure G38) are also organized in such a way that each subsequent circle is twice as big as the circle produced by the previous type of this vehicle.

The conditions defined in earlier subsections led to the deduction of a number of

equations which completely describe the geometrical shape of the shell in each type of Magnocraft. These equations are listed in **Figure G23**. If we use the equation (G13) for defining diameter "D" of the subsequent vehicles, we may determine the main dimensions for the crew-carrying series of Magnocraft. These dimensions are presented in **Table G1**.

Transforming the dimensions from Table G1 into diagrams, the outlines of all eight basic types of the Magnocraft are obtained. The final form of these outlines is presented in **Figure G24**. This Figure reveals that each type of Magnocraft possesses a unique and very distinct shape, which in the future will help us to visually identify them quickly and easily.

G4.8. Identifying the types of Magnocraft

A number of practical consequences result when the shell of the Magnocraft follows the conditions specified above. First and the most important of them, is the possibility of quick and easy identification of the type and size of the vehicles that are observed, and resulting from this, instant knowledge of almost all the construction parameters of these craft. An effective method of such quick identification of the Magnocraft's type is illustrated in **Figure G25**. All that is needed is to place a piece of thread, a blade of grass, a ruler, or any other linear object towards the flying Magnocraft or on a photograph of it, and then measure its apparent "H" and "D" dimensions. Next, the value of "Krotność" can immediately be established from the equation (G7) by a simple division of "D" by "H". If by this means the value of "K=D/H" is determined, almost all of the vehicle's parameters can later be found either by reading them from Table G1 or by calculating them from equations (G3) to (G13).

Determining the value of the K factor for a single craft is simple; we just use equation (G7). Also when two Magnocraft are coupled together (see subsection G3.1.1) into a spherical flying complex, "K" may be calculated from the following simple equation:

$$K_{\text{spherical}} = \frac{D}{H} \quad (G14)$$

However, the "K" determination starts to be more complicated when one of the cigar-shaped flying complexes is analyzed. In this instance the final form of the equation used depends on the value of the following ratio:

$$c = \frac{H}{H - D_M} \quad (G15)$$

This ratio can be determined from the equation (G11) expressing the condition of optimum coupling into flying systems. After it is determined from this condition it takes the following value:

$$c = 1/(\sqrt{2} - 1) \quad (G16)$$

After using this value for "c" for deducing the equation describing the "K" factor in cigar-shaped flying complexes, these equations take the following form:

- for the stacked cigar-shaped complex:

$$K = \frac{m - 1}{c} \cdot \frac{D}{\sum H} = \frac{D}{(m - 1) \cdot (2 - 1)} \quad (G17)$$

- for the double-ended cigar shaped complex:

$$\frac{m - 1}{c} \cdot \frac{D}{\sum H}$$

$$K = \frac{(m - 1)}{c} \cdot \frac{1}{\Sigma H} = \frac{(m - (m - 2) \cdot (2 - 1))}{\Sigma H} \quad (G18)$$

The "m" represents the number of Magnocraft coupled together into a given flying complex, whereas "ΣH" is the height and "D" is the outer diameter of the resultant arrangement.

Note that when the number of units takes the value $m = 1$, the equation (G17) reduces itself into the form of equation (G7). Similarly equation (G18), when applying the value of $m = 2$, transforms itself into equation (G14).

The final formulas for identifying the type of Magnocraft that form one of the flying configurations considered above are listed in **Table G2**.

G4.9. The magnetic framework

Another consequence of the "stability condition" is the resistance of the Magnocraft's structure to the action of even the highest of external pressures. Any external effects directed onto the craft are taken up by the magnetic whirl. This whirl is supported by the "magnetic framework" described in subsection G4.3. Therefore the environmental pressure is not transferred into the body of the craft, but is neutralized within the magnetic field's interactions. This makes it possible for the vehicle to withstand high pressures that otherwise would be destructive to its physical structure. Therefore the Magnocraft have the ability to penetrate the bottom of oceanic trenches where any other structure would be crushed by water pressure. Also the Magnocraft should not be in danger from any nearby explosion because the shockwaves would be stopped by the magnetic framework.

The other property of the Magnocraft, called the "magnetic whirl", prevents any extremely hot medium from touching the craft's surface. Simultaneously, the strong magnetic field ("magnetic lens") bends the thermal radiation, making it impossible to illuminate the surface of the craft. Therefore, Magnocraft are able to fly through any environment consisting of melted materials. This ability, together with the magnetic framework, should allow this vehicle to penetrate the Earth's nucleus, and also perhaps the centres of stars.

G5. The magnetic field of the Magnocraft

The operation of the Magnocraft involves a number of issues concerning the magnetic field of this vehicle. Some of them are very important and sensitive. For example, the issue of the effective length of the Magnocraft's propulsors is overlooked by the majority of those raising critical comments that refer to the uniform character of the Earth's magnetic field. Thus, if people who put forward such comments would become familiar with the author's deductions before they formulated their objections, most of the criticism directed towards the Magnocraft to date would be avoided. For this reason, the issues mentioned need to be addressed here to give readers a complete understanding of the scientific foundations behind this vehicle. Such an understanding would also enable readers to defend this spaceship from unjustified attacks by various sceptics who do not bother to learn the details of the Magnocraft's theory, but who are nevertheless quite eager to attack it. Unfortunately, the major issues concerning the magnetic field of this vehicle are rather difficult to understand, and also their comprehension seems to require some background in science or technology. Therefore some readers may find this subsection quite difficult. To minimize the gaps when someone

omits the material on the Magnocraft's magnetic field, the author has arranged this chapter so that skipping through the subsection that follows should not disadvantage their comprehension of the entire material. But for those readers who are able to work through this subsection, the author highly recommends that they do so.

G5.1. The starting flux

Planet Earth, apart from numerous other properties, also acts as a huge magnet. If any man-made source of a magnetic field (e.g. a propulsor) is placed in the range of its field, then magnetic interactions between the Earth and this source must occur. A visual illustration for these interactions in action is the operation of a magnetic compass. It is commonly known from physics that any two magnets can be so oriented that they repel each other. This can also be achieved with the Earth and any man-made source of magnetic field. Unfortunately in this latter case, the low density of the Earth's magnetic field and its high uniformity cause that the forces of repulsion so created are negligible. But if the man-made device is capable of increasing its magnetic output (and thus also its effective magnetic length), the force of its repulsion from Earth must also increase. Assuming that this source has unlimited capabilities to increase its output, such a moment must inevitably occur when the force of its repulsion from Earth will exceed the gravity pull. Therefore, at this significant moment a very critical output from this device is achieved which initiates its ascent into space. This critical output is called here the "starting flux".

The starting flux represents an extremely important constant for the devices that propel the Magnocraft. Its definition is as follows:

"The name, **starting flux** (F_s), is given to such a ratio of the magnetic flux (F) to the mass (m), that any device oriented repulsively towards the field of the Earth which achieves this ratio must autogenously begin to ascend."

Every man-made source of a magnetic field whose output exceeds the starting flux is able to break a gravity pull by its own force of magnetic repulsion from the Earth's field, and to ascend. Therefore the starting flux represents the magnetic equivalent of the "escape velocity" as applied in conventional space travel. Its value relates to geographical location and is lowest for the magnetic poles and highest for the magnetic equator. For the north magnetic pole of Earth it is equal to $F_s=2.59$ [Wb/kg]. But for the area of Poland it rises to the value of about $F_s=3.45$ [Wb/kg].

The starting flux is a physical constant of extreme importance for the magnetic propulsion of flying vehicles. It defines which sources of a magnetic field are only ordinary magnets and which of them can be used as magnetic propulsors. The primary condition for employing any source of a magnetic field as the magnetic propulsor is that its field-to-mass ratio must exceed the value of the starting flux.

From an historic point of view the starting flux constitutes an important breakthrough separating two eras. Until the completion of the device (Oscillatory Chamber) whose output will exceed the starting flux, the era of propulsion systems operating on the principle of circulation of matter - see Table B1 - prevails on Earth (these systems keep our civilization tided to our planet). Upon completion of such a device, the era of the magnetic propulsion of flying vehicles will arrive on Earth. With the arrival of this era our civilization will evolve from a planetary into a galactic level.

Up until now our devices for producing a controlled magnetic field (called

electromagnets) possess a number of drawbacks which makes it impossible to attain the outputs equal to, or greater than, the value of the starting flux. These drawbacks are listed in subsection F1. The Oscillatory Chamber described in chapter F of this treatise is the first device whose principles of operation allow us to achieve outputs higher than the value of the starting flux.

G5.2. The naming of the magnetic poles

In contemporary physics there is a rule for the naming of the magnetic poles which states that:

"The 'North (N) magnetic pole' is understood to be the pole of the magnetic needle tip pointing northward".

As a result of this notation, the North geographic pole is actually adjacent to the South magnetic pole and vice versa. Perhaps the above complication does not matter in the physical interpretation of electricity and magnetism, but it introduces confusion in the analysis of the Magnocraft's polarity in relation to its geographic location.

Therefore to standardize our understanding of the geographic and magnetic poles and to rationalize the description of the Magnocraft's polarity in relation to the geographical location of this spacecraft, in this treatise and in all other works by the author the magnetic poles are named as follows:

"The 'North (N) magnetic pole' is understood to be the pole of the Earth's field which exists adjacent to the Earth's North geographic pole, whereas the 'South (S) magnetic pole' exists near the Earth's South geographic pole".

It should be stressed that the above definition is the reverse of the naming of the magnetic poles as used in physics.

G5.3. The effective length of the Oscillatory Chamber and the net magnetic force

There is a popular claim repeated frequently by various "experts" in magnetism that because of the highly uniform nature of the Earth's magnetic field, a magnetic propulsor is not supposed to be able to produce a sufficiently high net magnetic force to lift a spacecraft. As is explained in this subsection, such a claim is groundless. But because it is stated by "experts", who should know what they are talking about, its repetition introduces a significant confusion in people whose educational backgrounds do not concentrate on the area of magnetism. For this reason, the subsection that follows explains the common mistake of "experts" stating this claim, and why the net magnetic force produced by the Oscillatory Chamber is in fact sufficiently high to lift a vehicle.

The operational size of every bar magnet is described by two parameters, called a "physical length" and an "effective length". The **physical length** is the length of the physical body of a magnet; the **effective length** is the length of space in which the field of this magnet prevails. The physical length is very easy to measure, but the measurement of the effective length of a magnet is very difficult and impossible without very precise and complicated equipment. For this reason elementary books on magnetism simplify the equations for the forces of interaction formed by magnets. They express these forces as depending on physical length, whereas in fact they depend only on the effective lengths of the magnets involved. Such

simplification does not matter at secondary school level, but it is inexcusable in a consideration of the Magnocraft's behaviour in space. This is the reason why the problem of the effective length of a magnet is highlighted here.

Contrary to physical length which is difficult to change, the effective length of a magnet changes easily. It can be increased in the following three ways, by:

(a) An increase of the physical length of a given magnet.

(b) An increase of the ratio between the density of the field produced by this magnet and the density of an environmental magnetic field.

(c) Spinning of the force lines of the magnet with a very high angular velocity (see the relativistic phenomenon described at the end of subsection H2).

The Oscillatory Chamber represents a magnet of a relatively short physical length, but the ratio of its field density over the density of the Earth's magnetic field may be increased unlimitedly. Therefore the effective length of the Oscillatory Chamber can reach any desired value. The value of the Earth's field density determined for the latitude of the southern boundary of the United States is 5.4×10^{-5} [weber/m²] (see the book [1G5.3] "General Physics" by O.H. Blackwood and others, 4th edition, John Wiley & Sons Inc., New York 1973, ISBN 0-471-07923-5, page 424). Thus the ratio of the Magnocraft's flux density to the Earth's flux density exceeds the range of 10^8 (i.e. 10 to the power of 8) when the vehicle produces only the starting flux. But because this spacecraft needs a further power reserve for the purpose of accelerating and manoeuvring, the above ratio should be additionally increased by a range of 10^4 or even more. This allows us to estimate that the effective lengths of the Magnocraft's Oscillatory Chambers will exceed over a million times their physical dimensions. So in fact a chamber with a physical length of around one meter will extend its effective length to a value of above a thousand kilometres, thus being comparable to the diameter of the Earth. This means that in spite of a small physical size, magnetically the chamber would behave in the same way as would a magnet of such enormous length.

When the magnetic propulsor is so oriented that it is repelled by the Earth's magnetic field, and if the effective length of its Oscillatory Chambers covers the appropriate gradient of the environmental field, a significant repulsive net force must be produced. We know that planetary, solar and galactic magnetic fields are uniform by human standards, i.e. their values do not vary appreciably over the physical dimensions of any man-made object. Therefore, it is not expected that a significant net translation force is exerted on an ordinary magnet of a low output (whose density is comparable to that of the environmental magnetic field), because its effective length could not greatly exceed its physical dimension. But for the outputs from the Oscillatory Chamber exceeding the value of the starting flux, the effective length of this device is comparable to the size of the Earth. Thus it easily overcomes the uniform character of the field of the Earth, Sun or Galaxy. Therefore such a chamber must produce a significant net repulsive force capable of lifting not only this device, but also a heavy spacecraft attached to it. This is why the Oscillatory Chamber **can be used** as a magnetic propulsor, and why individuals claiming otherwise are mistaken.

G5.4. The determination of the value for the "starting flux"

Let us assume that we have a hypothetical bar magnet whose properties correspond exactly to those of the Oscillatory Chamber. This means that the output (F) of this magnet can be increased to an infinitively large value, and also its length is comparable to the effective

length of the Oscillatory Chamber (i.e. about a thousand kilometres). Let us also assume that we place this hypothetical bar magnet in a vertical orientation on the north (N) magnetic pole of the Earth. Thus its north pole (N) is close to the ground and is pointed downwards, whereas its south pole (S) extends to the height where the Earth's magnetic field is almost completely non-existent. Because of the enormous length of this hypothetical magnet, the repulsive force (R) created by the north pole of the Earth acts on its north magnetic pole, whereas no force acts on its south pole as it is extended too far in cosmic space. Therefore the net magnetic force acting on this magnet is equal to the repulsion (R) of its north pole with the north magnetic pole of Earth (the attraction between the north magnetic pole of Earth and the south pole of the magnet is negligible).

Simultaneously with the magnetic force (R), the hypothetical magnet will also be acted upon by the gravitational pull (G) which is determined by gravitational acceleration (g). If we assume that the mass of this source of field is equal to (m), we can determine the value of this gravitational attraction:

$$G = m \cdot g \quad (G19)$$

On the other hand we know the magnetic flux (F) which is produced by our hypothetical magnet and we know also the strength (H) of the Earth's magnetic field. This allows us to determine the force (R) of reciprocal repulsion occurring between our source of field and the Earth's magnetic field. The value of this force is described by the definition of the field's strength, fundamental in magnetism. This definition states that "the field strength (H) at a point is the force (R) exerted on a unit north pole (F) at that point" (see [1G5.4] Loeb L.G. "Fundamentals of electricity and magnetism", Dover Publications Inc., New York 1947, pp. 29 and 49). This can be expressed by the following equation:

$$R = H \cdot F \text{ [dyn]} \quad (G20)$$

For the hypothetical magnet to ascend, the condition must be met that its repelling force (R) must overcome the gravitational pull (G):

$$R > G \quad (G21)$$

If in the relation (G21) we replace the variables by the equation (G19) and (G20) we find that our hypothetical magnet begins to ascend when the ratio of its magnetic flux (F) to its mass (m) exceeds the value:

$$\frac{F}{m} > \frac{g}{H} \text{ [Mx/gram]} \quad (G22)$$

The relation (G22) has been derived for the CGS Unit system only. After its conversion into SI Units it takes the form:

$$\frac{F}{m} > \frac{4 \cdot \pi \cdot g}{H} \text{ [Wb/kg]} \quad (G23)$$

The ratio of F/m in the relation (G23) is called here the "starting flux" and we label it with the letters F_s :

$$F_s = F/m \quad (G24)$$

After introducing the definition of the starting flux, the final form of the relation (G23) is the following:

$$F_s > \frac{4 \cdot \pi \cdot g}{H} \text{ [Wb/kg]} \quad (G25)$$

This relation describes the value of the starting flux which must be produced by the Oscillatory

Chamber in order to begin the ascent.

To determine the value of the starting flux at the north magnetic pole of the Earth, we must substitute the variables in the relation (G25) with their appropriate values. Taking the strength of the Earth's magnetic field at the north magnetic pole $H = 0.6 \text{ [Oe]} = 47.75 \text{ [A/m]}$ and the gravitational acceleration $g = 9.81 \text{ [m/s}^2\text{]}$, we will receive $F_s > 2.59 \text{ [Wb/kg]}$. This means that the Oscillatory Chamber starts to ascend from the north magnetic pole of the Earth when each kilogram of its mass yields a magnetic flux larger than 2.59 Weber. Because the Earth's field is strongest at the pole, the starting flux will increase proportionally to the distance from the Earth's magnetic pole. For example, at Poland's latitudes it is over 3.45 [Wb/kg] . Certainly the field sources utilized for propulsion must be much more efficient than this, because they carry not only themselves but also the whole structure of the craft. As well, they must possess the reserve of power to enable them to accelerate the vehicle in the weakened fields of free space.

The above deduction of the equation for the starting flux, and also the determination of its value, were presented for the first time in the article [1A] "Teoria rozwoju napędów" (i.e. "The theory of propulsion development"), published in the Polish Journal Astronautyka, no. 5/1976, pp. 16-21.

G5.5. The energy of the Magnocraft's field

We also need to consider the problem of the amount of energy consumed by the magnetic field of the Magnocraft. The first impression is that this energy should be high. But analysis has shown that the Magnocraft consumes only a small fraction of the energy required by a supersonic aeroplane of the same size (mass). This is explained by the principle which states that attracting or repelling forces produced by a magnetic field do not consume energy. For example, a permanent magnet can interact with the Earth's field for millions of years without losing its power. Also the electric current in the closed circuit of a superconductive electromagnet can circulate for many years and produce the same value of the magnetic field which interacts with the field of the environment. Therefore, producing the thrust and stabilization forces in the Magnocraft does not require the expenditure of any energy, and this fact is independent of the speed of the craft. The Magnocraft flying in this manner is similar to a balloon soaring rather than to the thrust of a rocket. The energy consumption of the Magnocraft is caused only by: production of the magnetic whirl which has to fight against friction (this friction is absent in free space); inducing currents in objects in the environment; electromagnetic radiation; acceleration of the craft; and the so-called "initial energy" necessary to create (but not maintain) the magnetic field of high intensity. We should also remember at this point that the energy of the Magnocraft's field is self-rechargeable, i.e. its consumption during an acceleration of the vehicle is replaced by its recovery during deceleration.

The **initial energy** in the Magnocraft is analogous to the electrical energy consumed by a car's starter motor during the starting of the engine, or to the energy used for pumping gas into a balloon casing. It is spent only once - during the starting of the Magnocraft's propulsors. Therefore it is obtained from an outside source of energy which is accessible at the starting sites of the Oscillatory Chambers. The value of this energy is equal to the sum of energy contained in the fields generated by each vehicle's propulsor.

It is possible to calculate the energy involved in this "initial energy". Such a calculation is presented below. We know that if the density of the magnetic flux (f) is increased from zero

to f , the energy density stored in the magnetic field (e) will be expressed as (see [1G5.5] Slemon G.R. Straughen: "Electric Machines", Addison-Wesley Publishing Company, USA, 1980, page 18):

$$e = \int_0^f \frac{f}{\mu_0} - df = \frac{f^2}{2 \cdot \mu_0} \quad [\text{J/m}^3] \quad (\text{G26})$$

Substituting the value of the starting flux $F_s=2.59$ [Wb/kg] (obtained from equation (G25)) divided by this part of the K3 Magnocraft's base area $s=0.00785$ [m²] which belongs to one kilogram of its mass (see Table G1) for f , and the magnetic permeability of free space $\mu_0=4 \cdot \pi \cdot 10^{-7}$ [T·m/A] for μ_0 , we obtain the result that the initial energy density required for a Magnocraft to ascend from the North magnetic pole of the Earth is approximately $e=12$ [MWh/m³] for each kilogram of the craft's mass. This value must be increased, depending on the strength of the local environmental field (in comparison to the strength at the North magnetic pole of Earth) where the craft operates, and also depending on the maximal acceleration for which the craft is designed. By reference to the values of mass of particular types of Magnocraft which are listed in Table G1, and considering the distribution of the magnetic field around the craft, the total initial energy can be found. For example, the estimative calculation of this energy for the K3 type of Magnocraft gives an approximate result of 1.5 [Tera-Watt-hours]. To give an idea of how great this is, we can say that it is equivalent to two months' consumption of all types of energy by all of New Zealand.

The storing of such enormous amounts of energy within the Oscillatory Chambers of a Magnocraft transforms this vehicle into a flying bomb of tremendous power. Let us now determine the destructive potential of this bomb in the event of the Magnocraft accidentally exploding. We know that one ton of TNT releases $4.18 \cdot 10^9$ [Joules] (or 1.61 [MWh]) of energy - see the book [2G5.5] "McGraw-Hill Dictionary of Scientific and Technical Terms", Third Edition, 1984, ISBN 0-07-045269-5, page 1656 (term: "ton"). This means that the explosion of the smallest, K3 type Magnocraft whose Oscillatory Chambers are loaded with 1.5 [TWh] of magnetic energy, would be equivalent to a blast of almost one-megaton thermonuclear bomb, or to the simultaneous exploding of almost 80 atomic bombs similar to the one dropped on Hiroshima. Also, the major effects of such a detonation of the Magnocraft would be the same as the effects of a powerful hydrogen bomb explosion. Only the area destroyed would not be polluted by any radioactive isotopes, so that this area could be populated again almost immediately.

G5.6. The energy of the Magnocraft's field is self-rechargeable

The electric motors operating on the principle of interaction between magnetic fields have introduced a new quality unknown before in steam or combustion engines. They are able to recover during their decelerating the energy consumed for accelerating. Therefore an electric train or tram, when decreasing its speed, may turn its own motors into generators and return the electricity to the overhead powerline.

The above phenomenon also applies to the Magnocraft. This vehicle, when accelerating, transforms the energy of its magnetic field into a kinetic energy of its motion. But when decelerating the process is reversed, and its magnetic field becomes recharged. Therefore, if a long interstellar voyage which does not involve any friction is completed, the Magnocraft's field should contain the same amount of energy it had at the moment of starting

(initial energy). Thus we may say that the energy resources within the Magnocraft are self-rechargeable.

G5.7. Why the Earth's magnetic field should not be called "weak"

In our view of the Earth's magnetic field a stereotype opinion prevails that it is too "weak" to be able to support a space vehicle. Let us analyze the validity of this view.

As far as the magnetic field is concerned, the terms "weak" and "strong" describe the amount of energy contained in this field. The indicator for this amount is the work needed to remagnetize a given source of the field, i.e. to exchange its north magnetic pole into south and vice-versa. So by a weak magnet is understood a magnet which, when acted upon by the field of the other magnet, easily changes the orientation of its poles, almost without absorbing any energy during this process. However, if we try to imagine or calculate the amount of energy necessary for remagnetizing the Earth - that means to change its north magnetic pole into its south magnetic pole and vice-versa - we very quickly come to the conclusion that the Earth's field is extremely strong. It is not possible by any means to remagnetize this field by the field of even the heaviest spacecraft that can be built. However, the field of the Earth, because of the dimensions of our planet, stretches into a vast distance in space. This in turn decreases its density. People who do not understand the direct relationship between the amount of the field's energy and its strength wrongly use this low density as justification for calling the Earth's field "weak".

G5.8. The Earth's magnetic field is able to carry out technically useful work

The spreading of the Earth's magnetic field over a large area causes a decrease of its density to the level where it is unable to form any technically significant force interactions. This is the reason why in our technical projects we ignore the influence of the field of the Earth. This tendency is now advanced to the extent that we automatically assume that this field is unable to complete any technically useful work at all. The following example indicates how wrong this assumption is.

Mr H.G. Slingsby (Half Moon Bay, Stewart Island, New Zealand) built a magnetic motor which, instead of having a stator, uses the Earth's magnetic field. This motor works on a principle which is a combination of a DC motor and the magnetic needle of a compass. Mr Slingsby connected twelve horizontal electromagnets, positioned like the points of a star around a vertical axle, with the commutator attached to this axle. The commutator provided the current only to the electromagnets which were oriented in an east-west direction, and disconnected the electromagnets which were oriented north-south. The switching on of the current caused the electromagnets to act like the needles of a powerful compass which tried to turn in a north-south direction. This forced the rotation of the whole set of magnets that were joined to the commutator. As a result, when some of these electromagnets were disconnected from the current after reaching a north-south orientation, the current was then supplied to the next electromagnets pointed east-west, and so on.

Mr Slingsby's motor proves that mechanical motion can be obtained from the Earth's magnetic field, and that this motion can display the same power that some people believe could only be produced by a technically induced field of high density (i.e. similar to that which

appears in modern electric motors). Thus, his motor empirically demonstrates that space vehicles whose flight utilizes the field of the Earth, Sun or Galaxy can definitely be built.

G6. The manoeuvring of the Magnocraft

The behaviour of the Magnocraft in space is determined by the vectorial sum of all external forces and torques acting upon its body. These forces and torques in turn are formed as the effect of interactions occurring between the field produced by the vehicle itself and an environmental magnetic field. There are as many as four different kinds of interactions with the environmental magnetic field which the Magnocraft may create. These are:

1. A lifting force (i.e. the magnetic buoyancy).
2. A meridional thrust (i.e. acting in a north-south or south-north direction).
3. A latitudinal thrust that pushes the vehicle in an west-east or east-west direction (i.e. it is formed by the magnetic equivalent of the Magnus Effect known in hydromechanics).
4. A rotary torque.

To cause the flight of the Magnocraft in a desired direction, a coordination of the effects of all the four interactions above is required, so that the resultant force pushes the vehicle according to the crew's intentions.

The manner of flying utilized by the Magnocraft poses a number of requirements which this vehicle must fulfil. The most important of these is that the magnetic axes of the propulsors should be close to their parallel orientation towards an environmental field. Practically, this means that during flights **the Magnocraft tends to be oriented with its base almost perpendicular towards the local course of the force lines of the environmental magnetic field** (i.e. we may never see this vehicle flying {stable} with its base parallel to these force lines). The above requirement makes the principles of the Magnocraft easily distinguishable from all the different principles possible to be applied for flight, because in order to prove that the observed craft does not use magnetic propulsion it is sufficient to document that it flies stable with its base parallel to the Earth's field force lines.

G6.1. Ascent, hovering, and descent

In every stage of the Magnocraft's flight one kind of propulsor remains oriented so as to be repelled by an environmental field. For vehicles flying in the upright position it is the main propulsor, whereas for vehicles flying in the inverted position the side propulsors are thus oriented - see Figure G3. The force "R" formed by the propulsors so oriented is called the lifting force, or - because of its similarity to hydraulic buoyancy - the force of magnetic buoyancy. This force allows the craft to overcome the gravity pull "G".

In order to produce magnetic buoyancy, it is sufficient that the Magnocraft's lifting propulsors fulfil conditions #1 and #2 specified in the introductory part of subsection G1. Notice that these conditions also make it possible to form the lifting force above the Earth's equator - the principles for achieving this are illustrated in Figure B2.

Independently of the lifting force "R", the Magnocraft also produces counteracting interactions called stabilization forces "A". These are formed by orienting the propulsors so that they are attracted by the environmental magnetic field. The main function of the stabilization forces is to ensure the steadiness of the vehicle in space. They can be used

additionally to cause the spacecraft to descend.

Control over the relation between the value of lifting force "R" and the value of stabilization forces "A" makes possible the ascent, suspension (hovering) and descent of the vehicle. In general, if the lifting force "R" dominates over all the forces directed downwards, i.e. over the stabilization forces "A" and the gravity pull "G", the Magnocraft ascends. If an equilibrium appears between these two groups of forces, the vehicle hovers motionless at the same height. But when the forces "A" directed downwards are dominating, the spacecraft descends. Because the relation mentioned above depends on the outputs provided by both kinds of propulsors, control over the discussed behaviour of the Magnocraft is limited to an appropriate selection of the values of the resultant fluxes yielded from the craft's twin-chamber capsules.

G6.2. Meridional flights

Flights of the Magnocraft in meridional directions, i.e. from north to south and south to north, are achieved by slanting the magnetic axes of the craft's propulsors from their parallel orientation towards the local course of the Earth's magnetic field. As the effect of such slanting, the meridional components of the force interactions between the craft's field and the environmental field are created. The value of these components and the direction of their thrust depends on the outputs from the slanted propulsors and on their inclination angle "I" (see Figure B1). By appropriate differentiation between the outputs and "I" angles from the main and the side propulsors, a suitable meridional thrust force is formed which pushes the vehicle into the direction desired.

G6.3. Latitudinal flights

In hydromechanics we know of the so-called "Magnus Effect" which employs a rotary cylinder to produce a thrust force acting perpendicularly to the drift lines of a flowing medium. Because of the similarities revealed between the flow of a liquid and a magnetic field (see subsection D4.1) the author has formed the hypothesis that a version of this effect must also appear in magnetism. The validity of this hypothesis is supported by the theoretical deduction whose description follows, and which can also be verified experimentally. This effect can be utilized by the Magnocraft to create a latitudinal thrust force, i.e. a force propelling the vehicle from east to west or from west to east. To obtain this force it is sufficient for the vehicle to spin its magnetic field around its own body. Such a spinning field is called a magnetic whirl and the principles of its formation are described in subsection G7.

During initial discussions on the magnetic equivalent of the "Magnus Effect" the author's colleagues named it the "Pajak Effect". This name was later established in numerous publications; it is also used in this treatise.

G6.3.1. An experiment showing the existence of the latitudinal thrust force

The formation of the latitudinal thrust force can be proved experimentally through the

building of a "magnetic transmission". Such a transmission can be formed from two circular magnets axled like two cooperating gear wheels. They should not touch each other so that their mutual interactions must be passed through their magnetic fields. The axes of rotation of these magnets should be parallel to each other so that their fields could interact in the same way as the magnetic whirl of the Magnocraft interacts with the field of the Earth. Even though these magnets physically do not touch each other, by spinning the first of them a detectable torque is formed which acts on the other magnet forcing it to rotate also. So the fields of these magnets act like a kind of magnetic gears. Exactly the same phenomenon occurs between the Earth and the Magnocraft. Thus if the mass of a Magnocraft would be comparable with the mass of Earth, this vehicle when flying above the equator would turn the Earth, just as our experimental magnets do to each other. But because the Magnocraft has an insignificantly smaller mass than that of the Earth, instead of turning the Earth this vehicle flies around it.

Because of the limited powers of the fields produced by ordinary magnets, a successful completion of the experiment explained here requires a high degree of precision in the balancing of both magnets and in the sensitivity of their bearings.

There is also a possibility of completing a simplified experiment which also proves the existence of the "Pajak effect" described here, but which does not require any special device to be built. In this experiment a single magnet and a magnetic compass are used instead of two magnets from the previous experiment. If we place a single magnet in the vicinity of such a compass, and then rotate it with our hands, its field forms the "magnetic transmission" described above. In this way the hand rotation of the magnet is transmitted onto the needle of the compass which also starts to rotate. In turn the fact of magnetic transmission of the torque which rotates the needle of the compass is the experimental proof for the action of the effect described here.

G6.3.2. The deduction that explains the principles of the latitudinal thrust force formation

The author has also developed a formal deduction which supports his hypothesis that in magnetism, a version of the Magnus Effect must appear. This deduction is based on the illustration from **Figure G26**. Its presentation is as follows.

The density of the magnetic field which is created by the Earth, Sun or other planets and stars depends on its radial distance from the source of the field. If a point "H" is above the Earth's surface at a height greater than point "L" (for convenience, H and L are assumed to be above the equator), then the density of the Earth's field is greater at L than at H, i.e. $F_L > F_H$. If these points are at the same radial distance from the centre of the Magnocraft, then the whirling magnetic field must induce local electrical fields U_L and U_H , where $U_L = U_H$. The values of U_L and U_H are determined by Maxwell's equation. The Contradictory Rule which applies to electro-magnetism states that these electrical fields must create their own local magnetic fields which then react against the rotation of the vehicle's field. The whirling field of the Magnocraft interacts with these locally induced fields and tries to cause them to rotate. However, they are prevented from rotating because of their interaction with the Earth's field. The forces preventing the local fields from rotating are proportional to the local density of the Earth's magnetic field. The reaction force T_L at L is thus greater than the reaction force T_H at H, i.e. $T_L > T_H$. These elemental forces represent the magnetic resistance which the

environmental field gives against the magnetic whirl. As the elemental reaction forces differentiate with height, an elemental thrust force acting on the Magnocraft is produced. Its magnitude is given as $dP = T_L - T_H$. This force acts along an equipotential surface of the environmental field, perpendicularly to the whirl's axis. The resultant thrust force "P" can be calculated by summarizing the elemental thrust forces "dP" along each force line of the Magnocraft's field "f" over the number of these force lines "n":

$$P = \int \int_{f n} dP \quad (G27)$$

It can be observed that similarities to the "Pajak Effect" also exist in every other kind of heterogeneous field, e.g. a pressure field. There is only one condition necessary for this effect to occur: a whirl must be formed from the medium which is creating the field, and the axis of the whirl's rotation must lie on the equipotential surface. For this reason, the magnetic thrust force "P" in the atmospheric pressure field (or in the ocean) is increased by an aerodynamic (or hydraulic) version of the "Pajak Effect" due to the Magnocraft producing a whirling of the environmental medium.

The "Pajak Effect" described above is similar to the mechanism which is the basis of a number of other phenomena that are already well understood. One example of such phenomena is the Lorentz force. If an electrically charged particle in an environmental magnetic field moves, it produces its own vortex magnetic field. This vortex magnetic field, by interacting with the environmental field, causes an action similar to the "Pajak Effect", and as a result the path of an electrically charged particle is bent in a direction perpendicular to the force lines of the environmental magnetic field. Another example of this is Fleming's right-hand rule (or its opposite version, the left-hand rule - often called the motor effect). When an electric current flows through a straight wire, a vortex magnetic field which surrounds this wire is produced (see subsection D4.1). This vortex field, by interaction with an environmental magnetic field, produces a force which tries to move the wire in a direction perpendicular to the force lines of the environmental field. These examples prove that simple forms of the "Pajak Effect" are already known, therefore using this effect for the creation of the thrust force in the Magnocraft is just applying them in a different and more general way.

G6.3.3. How to determine the direction of the thrust force created by the magnetic whirl (the "rolling sphere rule")

The magnetic whirl spinning around the Magnocraft is able to form a thrust force which can act in the same direction as that followed by the Sun. In such a case it can be called a "solar" thrust. This "solar" thrust propels the vehicle from east to west. The Magnocraft can also produce a "counter-solar" thrust which propels the vehicle from west to east. There is a simple method, called the "rolling sphere rule", which allows for a very easy determination of the direction in which the particular rotation of a magnetic whirl pushes the Magnocraft.

In the **"rolling sphere rule"** the spinning magnetic field of the Magnocraft is replaced by an imaginary sphere which also spins around the same axis and in the same direction as does the field of the vehicle. The diameter of this sphere is so assumed that its imaginary surface touches the ground. Because the sphere spins, after its surface makes contact with the ground it must roll forward. The direction in which it rolls is also the direction in which the thrust force created by the Magnocraft's magnetic whirl pushes this vehicle - see **Figure G27**.

The "rolling sphere rule" also allows us to determine the direction in which a particular type of whirl flattens plants on the landing sites of the Magnocraft (see subsection G10). This is very useful in deducing the direction of the vehicle's flight from the marks left by it at a landing site. The method used in such a case is identical to the one applied for determining a flight direction, with the one difference that the imaginary sphere is not rolled along the ground but swirls the plants as the effect of its rotation in one place. When applying this method we notice that the "solar" whirl in the Southern hemisphere causes clockwise swirl patterns in any plants that may have been flattened on the landing site by the whirl-induced winds. The same "solar" whirl in the Northern hemisphere forms counter-clockwise swirl patterns. A "counter-solar" whirl reverses the direction of swirl patterns already described.

G6.4. The rotation of the Magnocraft

The magnetic whirl, because of the action of the "Pajak Effect", causes a reaction torque " T_R " to act on the Magnocraft during flight. This torque tries to rotate the vehicle in a direction opposite from the direction of rotation of the magnetic whirl - see **Figure G28**, similarly as the rotation of the main propeller in a helicopter tries to rotate the helicopter in an opposite direction. To prevent this, the vehicle must produce its own stabilization torque " T_s " which keeps its position stable during flight (see Figure G17). In helicopters such a stabilization torque is achieved through placing a small propeller at the end of their tails. This stabilization torque is created by varying the output flux "A" and inclination angle "I" of the side propulsors located on the east and west sides of the vehicle. The values of these two parameters ("A" and "I") are chosen so that the vertical components "V" of the stabilization forces "A" created by the side propulsors are equal. This ensures the stability of the vertical orientation of the vehicle. At the same time, the horizontal components "H" of the forces created by these propulsors differ from one another. The difference between these components, multiplied by the radius "R" of the vehicle, produces the necessary stabilization (rotary) torque:

$$T_s = R \cdot (H_E - H_W) \quad (G28)$$

The value of torque " T_s " is controlled by the logcomputer of the Magnocraft. To keep it at a required level, the propulsors located on the eastern or/and western sides of the Magnocraft should usually have a much greater output than the output of the other side propulsors of this vehicle. During landings such a greater output will be indicated by additional markings left on the ground (see marks "Ts" in Figure G17).

The rotary torque makes it possible not only to fly the Magnocraft in a stable orientation, but also for the crew to control the rotation of the vehicle. Such rotation is utilized to orientate the pilot's seat in the direction of flight, to facilitate the crew's observation of the vehicle's surroundings, and to orientate the propulsors' outlets during a coupling manoeuvre. In free space, such controlled rotation could create an artificial gravity inside the crew cabin.

It should also be mentioned here that principles similar to those described above are involved in swaying the Magnocraft around a horizontal axis. For this, the output from the side propulsors located at one end of a given vehicle may sometimes need to be extinguished partially or completely. Therefore on some occasions, especially during landings on the slope of a hill when the Magnocraft tries to orient its base parallel to the ground, the propulsors located on one side of the vehicle can be completely extinguished. As a result, only half-rings are scorched on such landing sites (see subsection G10 and Figure K12).

G7. The magnetic whirl

In the Magnocraft, the name "magnetic whirl" is assigned to the effects of fast rotation of the field's force lines around the central axis "Z" of the vehicle.

The main function of the magnetic whirl is to produce a thrust force acting in a latitudinal (i.e. an east-west or west-east) direction. But it also performs some additional functions, such as the protection of the vehicle from any missile or meteorite attack (i.e. the formation of an "inductive shield"), the creation of a whirling "plasma saw" that evaporates solid barriers, the illumination of surroundings, the emission of optic (light) signals, etc.

The magnetic whirl is responsible for the creation of a unique "ionic picture" of the Magnocraft and also for putting this vehicle into a specific state of operation, called a "magnetic whirl mode". In addition to the magnetic whirl mode, the Magnocraft's propulsion may also operate in a "throbbing mode" - while its field is non-whirling, but shrinking and expanding in a manner like the action of a heart; and in a "magnetic lens mode" - while a constant (i.e. non-pulsating and non-whirling) field is produced.

The creation of the magnetic whirl in the Magnocraft utilizes almost the same principles as those applied during the creation of a similar whirl in asynchronous electric motors. It involves a rather complicated mechanism initiated by the appropriate sequencing of the pulsating outputs from the side propulsors. The magnetic circuits of the Magnocraft convert these pulsations of outputs into the rotation of the field's force lines around the vehicle's central axis. This subsection explains the mechanism of the magnetic whirl formation.

G7.1. The magnetic circuits in the Magnocraft

The term "magnetic circuit" is introduced in this treatise to describe different paths that strands of magnetic force lines produced by various Magnocraft's propulsors may take. The term "magnetic circuits" originates from the analogy of the magnetic force lines to the paths of electric currents in conductive wires. In the same way as electric currents produced by a given cell circulate along closed paths (i.e. after leaving from one pole of this cell they always return back to the other pole) the magnetic force lines are also endless, i.e. after leaving one outlet from a propulsor they always return to the opposite outlet of the same propulsor in order to join themselves in the middle of it. The magnetic field force lines that leave a given propulsor tend to group themselves in compact strands, each of which follows a different closed path. The path may pass through the environment and/or another propulsor. Each separate strand that loops (passes) through such a different path is distinguished as a separate magnetic circuit.

The mutually opposite orientation of the magnetic poles in the main magnetic propulsor (M) in relation to all the side propulsors (U, V, W, X) channels the field of the Magnocraft into three separate groups of magnetic circuits - see **Figure G29**. These are called the main (M) central (C) and side (S) circuits.

- The **main magnetic circuits** (M) are formed from that part of the main propulsor's output which is intercepted and bonded by the side propulsors. Therefore the force lines belonging to this group of circuits loop (circulate) through the main and side propulsors. Note that in each Magnocraft there are as many main circuits as the vehicle has operational side propulsors.

- The single **central magnetic circuit** (C) is formed from the non-bonded part of the main propulsor's output and therefore apart from the environment, it loops (circulates) only through the twin-chamber capsule of this main propulsor.

- The **side magnetic circuits** (S) are formed from the non-bonded parts of the side propulsors' output and they loop (apart from the environment) only through the twin-chamber capsules of these side propulsors.

The paths of the magnetic circuits described above apply only to a single vehicle. When a number of Magnocraft are coupled into various configurations, these paths must be appropriately modified in order to include the propulsors of other vehicles. As was explained in subsection G3.1.6 and illustrated in Figure G17, depending on the shape of a final arrangement, the functions and paths of the same circuits can become drastically different.

The course of the magnetic circuits shown in Figure G29 appears only if the field produced by a given single vehicle is stationary, i.e. does not form a magnetic whirl. When the field begins to whirl, the described course becomes dynamically deformed and the circuits transform themselves into the shapes illustrated in **Figure G30**. The largest deformation occurs in the central circuit. This is because the environmental magnetic field is stationary and is opposed to the whirling of the force lines of the vehicle's field. The central circuit, which contains the smallest part of the main propulsor's power and whose force lines penetrate the largest volume of space, receives most of this opposing environmental field. Therefore the rotation of its lines is stopped at a certain distance from both ends of the craft, and further out from the vehicle these lines remain stationary. But within this distance the force lines are whirling. The whirling force lines of the central circuit are connected to the stationary part of this same circuit at the two end points of the rotating field's axis. These are called the "slip" points.

It should also be noted that the manoeuvring of the Magnocraft requires changes in the relation between the outputs from the main and side propulsors. Such changes will affect the proportions of magnetic energy engaged within the particular circuits. In general, when the Magnocraft descends (i.e. it creates no lifting force) the central circuit tends to disappear, whereas the side circuits become reinforced - see Figure G30. During ascending the situation is reversed, i.e. the central circuit become very strong, whereas the side ones almost disappear.

G7.2. Creation of a magnetic whirl

The magnetic whirl is formed from the waves of a magnetic field which circulate around the Magnocraft. These magnetic waves are produced in a way very similar to waves on the surface of the sea, i.e. through the appropriate sequencing of rises and falls of the outputs from the vehicle's side propulsors. To achieve such rises and falls of these outputs, the pulsations of the magnetic field produced by subsequent side propulsors are appropriately shifted in phase. Below is explained the mechanism involved in such phase shifting and sequencing of outputs from the Magnocraft's side propulsors to produce a magnetic whirl.

The principle of magnetic whirl production is illustrated in **Figure G31**. As this Figure shows, the Magnocraft's side propulsors are arranged in repeated sets of four units, each labelled with the letters U, V, W and X. The main propulsor is labelled M - see (b) and (c) in Figure G31 showing two overhead views of the Magnocraft. Each section of the vehicle's flange which contains one set of four subsequent side propulsors (marked U, V, W and X) is

called a "sector". There is (K-1) sectors in each vehicle. The K3 type of Magnocraft, which possesses eight side propulsors, has two such sectors. Each successive type of craft has one sector more than the preceding type. For example, the K4 type has three sectors and the K6 type has five sectors (see Figure G29).

In each sector the same letter labels a propulsor that is to pulsate with a given phase shift. All propulsors of the Magnocraft that are labelled with the same letter must also pulsate with exactly the same phase shift (i.e. in harmony with one another). For this reason all side propulsors marked with the same letter are called a "group". Thus in the Magnocraft there is a "U group", a "V group", a "W group" and an "X group" of side propulsors. The number of propulsors in each group is equal to (K-1), i.e. to the number of sectors in the vehicle.

Propulsors of the same group pulsate in synchronization towards each other - see (a) in Figure G31. But between the output of the propulsors that belong to different groups there is a cumulative phase shift of one quarter of a period ($\frac{1}{4}T$), or 90° for a cyclic function. Note that to fulfil the condition explained in subsection G4.2, the phase shift must have exactly this value and can not be even slightly larger or smaller. As a result of this phase shift, each group of side propulsors has a magnetic flux (F) of a different value at a particular moment of time (t). The variation (change) of this value in time is reflected by the course of appropriate sinusoids illustrated in part (a) of Figure G31.

As an example, let us analyze the distribution of the magnetic flux around the Magnocraft at a moment of time $t = \frac{1}{4}T$. This distribution is illustrated in part (b) of Figure G31 which shows the Magnocraft from an overhead view (letters M, and U, V, W, X label the main and side propulsors of this vehicle). At this specific time the value of the magnetic flux in the "U" propulsor of any sector is decreasing, "V" is at its maximum value, "W" is increasing, and "X" is at its minimum value. The field from the "U" propulsor in the next sector is likewise decreasing, and so on. The effect of these outputs so sequenced is to produce two magnetic waves around the Magnocraft. These waves are moving all the time. Their movement can be realized by observing the change of the waves' position after a further quarter of a period of field pulsation (i.e. from $t = \frac{1}{4}T$ to $t = \frac{1}{2}T$) which is illustrated in part (c) of Figure G31. At a moment of time $t = \frac{1}{2}T$ the "W" propulsors are now at their maximum value, and the other propulsors are similarly progressed. To measure the movement of the waves, the factor (A) which represents the angular position of the maximum of a first wave is introduced. It illustrates that with the elapse of time, the angular position (A) of the waves is also progressed in accordance with the field pulsation. After the time $t=2T$ the waves completely circulate around the K3 vehicle. In such a way, the high frequency rotation of these waves produces the required magnetic whirl. The period T_w of the waves' rotation is described by the following equation:

$$T_w = (K-1) \cdot T = 0.25 \cdot n \cdot T \quad (G29)$$

This period is a function of the total number (n) of side propulsors and the period (T) of pulsation of the magnetic field generated by these propulsors (the value of T is expressed by equation F7).

The amplitude of the waves circulating around the Magnocraft (so also the power of the whirl) is controlled by adjusting the amplitude of the field's pulsations within the side propulsors. But the amplitudinal waves formed from the outputs of the side propulsors affect the force lines of the main magnetic circuit shown in Figure G29. The part of the field produced by the main propulsor, which previously was connected to the side propulsors which decrease their output, must jump and connect to the next side propulsors whose outputs are increasing. In this manner, the circulation of the amplitude waves activates the changes in the

paths of the magnetic circuits by pushing them to join the next propulsors, and in this way causing the force lines of these circuits to rotate also. Thus the sequent pulsations of the outputs from the side propulsors produce a magnetic whirl which manifests itself as the whirling of the Magnocraft's force lines around the vehicle's central axis.

Notice that the whirl is produced for any synchronized time-varying output of the side propulsors and not just for the sinusoidal variation, shown for convenience in Figure G31. As was explained in subsection F6.1, the Magnocraft's propulsors in reality produce a field with a variation which follows a kind of "beat-type" curve, roughly represented by F_R in Figure F6.

G7.3. The ionic picture of a whirl

The magnetic circuits of the Magnocraft during their whirling create a unique picture called the "ionic picture of a whirl". It is shown in **Figure G32**. Because air ionized by the magnetic whirl emits coloured lights, the picture is visible when the Magnocraft flies. The subsection that follows explains the mechanism of its formation and also its main characteristics.

Figure G32 gives the outlines of the Magnocraft (see broken lines) and the characteristic elements of its magneto-ionic whirl. These elements include the magnetic circuits (also presented in Figures G29 and G30) and the traces created from the air ionized by these circuits. Continuous lines in Figure G32 indicate the central magnetic circuit (C), the main magnetic circuits (M), and the side magnetic circuits (S). When these circuits are whirling they form a pattern which is visible due to the ionization, shown in Figure G32 as blackened areas. In this ionic picture of a whirl, several characteristic features can be distinguished. The most significant of these are: the central swirling pillar (2), the main swirling block (3), and the flange (4) of side swirling. These features' intensity of colour in the picture depends on the local density of the ionized layer. For example, the curving of the lower part of the main swirling block forms two bulges (5) below the side swirling flange (4). A notable feature of this picture is the "upper slip point" (1) of the central pillar. At this point, the whirling section of force lines of the central circuit (C) meet the stationary section of these lines. Above the slip point the whirling movement of the lines of the central circuit stops. Therefore the air ceases to glow and the circuit becomes invisible. The central circuit also has a "lower slip point" (6), but usually it is concealed behind the main and side swirlings.

The ionic picture of a whirl described here may change, depending on the Magnocraft's flight phase, and the vehicle's type. The whirl shape illustrated here relates only to a motionless (e.g. landed) craft of a small type (e.g. K3 or K4). But during flight the movement of air changes the shape of the whirl, depending on the orientation of the vehicle in relation to the direction of its flight. Also, other types of Magnocraft (and other configurations) create a slightly different shape of the whirl. Generally, as the "Krotność" factor (see subsection G4.7) increases its value, thus flattening the vehicle's body, also the main swirling block flattens and gradually disappears behind the flange of side swirling.

G8. Three modes of the Magnocraft's operation

The Magnocraft's magnetic field can be in one of three different states: (1) whirling, (2) throbbing, and (3) constant. Thus depending on the state this field takes, the Magnocraft can

operate in one of three possible modes. The subsection that follows describes each of these modes and explains their properties and capabilities.

The state of the Magnocraft's field while a magnetic whirl is being produced is called in this treatise the "magnetic whirl mode of operation". The characteristic attribute of this mode is that the side propulsors of the vehicle produce a pulsating magnetic field with a strictly controlled mutual phase shift. A different mode, when the side propulsors of the Magnocraft still produce a pulsating magnetic field but eliminate their mutual phase shift, is called here a "throbbing mode". In the throbbing mode of operation the magnetic whirl is not produced at all. But the field shrinks and expands in a manner similar to the beating of the heart. The pulsating output from the propulsors of the Magnocraft can also be changed into a constant (i.e. non-pulsating) one. In such a case the vehicle's propulsion operates in a "magnetic lens mode". Notice that the Magnocraft's crew may smoothly transform any one of these modes into any other mode. Also, because the parameters of the produced field in this vehicle can be smoothly controlled, there are very flexible possibilities for passing from one mode to any other, when any intensity for each of these modes can be achieved.

The most frequently used mode of operation is the **magnetic whirl mode**. This is because the spinning magnetic field provides the Magnocraft with the latitudinal component of the thrust force, i.e. the component which acts in an east-west or west-east direction. It is necessary to combine this latitudinal component with the meridional component (formed by slanting the propulsors - see subsection G6.2) in order to achieve flights in any other direction except that of precisely meridional ones. (Meridional flights are those which exactly follow the magnetic north-south or south-north direction.) Of course the intensity of the produced magnetic whirl varies depending on the direction of flight and is the strongest for precisely latitudinal flights and decreases gradually when the direction of flight becomes closer to being meridional. For precisely meridional flights the magnetic whirl must be extinguished completely.

The **throbbing mode** of operation has a rather limited use. This is because the throbbing mode allows only for vertical and strictly meridional flights. But it provides the crew with perfect visibility of the vehicle's surroundings. Therefore it is mainly used for observational purposes or for leisure. Also, as it causes the least damage to the environment, it is particularly useful for landing and for take off. Because of the less harmful effects of this mode, for the purpose of landing a special, safer version of it is introduced. This version is called here the "**four-circuits**" mode of operation. In the four-circuits mode, independently of the type of Magnocraft, only four of its side propulsors are left operational, whereas the output from the rest of them is extinguished (see Figure G29). Practically this means that the vehicle forms only four main magnetic circuits, which affect the environment to a much smaller extent than would be the case when the circuits of all the "n" side propulsors are active (see subsection G10). Of course, the four-circuits mode limits significantly the operational abilities of the Magnocraft therefore it is used almost exclusively for the purposes of landing and take off.

The **magnetic lens mode** of operation, similarly to the throbbing mode, also has limited use as it only allows for strictly meridional and vertical flights. Moreover, it makes it impossible for the crew to observe the environment visually and requires all observations to be conducted with instruments. But because this mode makes the Magnocraft invisible, it can be used in all those cases when the crew does not wish to be noticed (e.g. in all spying and military missions, for the observation of the uninterrupted behaviour of people, or during visits to planets with hostile civilizations).

G8.1. Visual recognition of the mode

During each mode of the Magnocraft's operation, the attributes of this vehicle (including visual ones) are very different. A summary of these attributes is presented in the next subsections. Only those attributes are examined here which impact on the visual appearance of the Magnocraft. One of the main reasons for which it is vital that people know how to recognize the Magnocraft's mode of operation is safety. In the magnetic whirl mode of operation the Magnocraft is extremely dangerous as it can cause instant death (through the magnetic burning of tissues) of people who approach it, and the melting or inductive explosion of metallic vehicles that come too close. But in the throbbing and magnetic lens mode of operation the Magnocraft is reasonably safe (apart from the direct exposure to the outlets from its propulsors) and can be approached and even touched without fear. Therefore it is important that individuals, as well as special services (police, pilots) are able to easily distinguish between the dangerous and the safe operation of this vehicle (especially in the light of the formal proof presented in chapter K).

The mode of the Magnocraft's operation can be determined during a visual observation of this vehicle or during an examination of its photographs. In the **magnetic whirl mode** of operation, the vehicle is hidden inside a cloud of ionized air formed by the magnetic whirl. This cloud, when observed by the naked eye or photographed with a long time exposure, displays a number of features characteristic of the ionic picture of a whirl (which are illustrated and explained in Figure G32). If this cloud is photographed with a very short time exposure, the picture reveals only the strands of air ionized within the magnetic circuits - see Figure G30. (Notice that such spinning strands of the main magnetic circuit look like streams of water dispersed from a rotating sprinkler. But the direction of the whirl rotation of the Magnocraft's field is opposite from that of the water jets from sprinklers of a similar shape. This is because the motion of the Magnocraft's field is forced at the vehicle's edge, whereas the sprinkler is propelled at its axis.)

In the **throbbing mode** of operation the surface of the Magnocraft can be clearly visible. But during poor light conditions, at the outlets from the propulsors and also along the magnetic circuits some glowing areas may be noticed. These glowing areas may take the shape shown in **Figure G33**, when observed by the naked eye or when photographed with a long time exposure from a motionless spacecraft. It is worth stressing here that because the opposite magnetic poles of the Magnocraft's propulsors cause the ionized air to glow in different colours, patterns shown in Figure G33 allow us to determine the polarity of the vehicle's propulsors. In general, **a red-yellow glow is emitted by the air ionized at the outlets where the north magnetic pole (N) prevails, whereas a blue-green colour is emitted by the air ionized at the propulsors' outlets where the south magnetic pole (S) prevails.** When the Magnocraft moves fast or when it is taken with a short time of exposure, individual pulsations of its magnetic field produce a variety of patterns that reflect a multiple image of the vehicle's circuits. The principles of formation of these multiple images of the Magnocraft's circuits are explained in **Figure G34**. The shapes of the patterns revealed in such cases depend on many factors, such as the orientation of the craft (i.e. the section of its magnetic circuits directed towards the observer), the direction of its movement, the light and weather conditions, etc.

There may occur some problems with recognition of the magnetic **lens mode** of the Magnocraft's operation, as the vehicle is then completely invisible to the naked eye and undetectable by a radar beam, but slightly registrable (as a kind of unfocused shape) on a

sensitive photographic film. Such photographs only reveal the light produced by the spacecraft itself (i.e. not the light reflected from it) as only this light is able to pass outwards through the magnetic lens. Of course the crew may intentionally eliminate any emission of light from the spacecraft.

G8.2. The SUB system for indicating the Magnocraft's mode of operation

Because of reasons of safety, the actual mode in which the propulsors of the Magnocraft work must be known not only by the crew of a given vehicle, but also by people on the ground and by crews of any other vehicles which are in the vicinity. This is very important for avoiding accidents, for space traffic control, and for coupling/decoupling activities. Therefore, to indicate the actual state of propulsion, a special system of lamps must be installed in the Magnocraft. This system represents an advanced version of the positional (navigation) lights used in modern aeroplanes. It is called here the "SUB system" from the first letters of its Polish name, "system Sygna- l
izacji Układami Barwnymi" (i.e. system of signalling through colour patterns). This subsection explains its components, operation, and main functions.

The components of the SUB system are shown in **Figure G35**. It consists of four, or a multiple of four, large signalling lamps (lights) installed around the vehicle's perimeter, usually on the outer tip of its flange, plus a further four small lamps installed on the pilot's control panel in the crew cabin. The large lamps from the vehicle's flange are positioned with equal spacing between themselves. They are marked with the letters U, V, W and X. The four small lights on the pilot's control panel are positioned in a row and marked with the letters u_i , v_i , w_i , and x_i . These lights on the control panel are duplicates of the lights on the flange and are installed for the pilot's use; i.e. they light up in an identical manner to the lights from the flange that are marked with a corresponding letter. Each lamp of the SUB system emits the colour of light which corresponds to the variation in the magnetic field of the group of side propulsors marked with the same letter (see Figure G31). Therefore the colour pattern created by the lights is dependent on the field pulsation in the particular side propulsors. The light emitted by the SUB system uses three main colours whose precise shades are closely controlled - see **Table G3**. These shades within the light's main colour may vary depending on the pole of the magnetic field and the intensity (amplitude) of the field's pulsation. On the other hand, the main colours of the lamps' glow depend on the actual state of the output's amplitude from this group of propulsors which are signalled by a given set of lamps. For example, if the value of a pulsating output in the "V" propulsors reaches the maximum of its amplitude, all the "V" lamps emit red light - see Table G3. When the value of the field in the "V" propulsors reaches the middle of its amplitude, then all the "V" lights change colour to bright yellow (compare the diagram in Figure G31 with Table G3). When the value of the field in the "V" propulsors reaches its minimum, the "V" lamps emit a blue colour. In a similar manner colours also change in the lamps that reflect the output from the "U", "W" and "X" groups of propulsors.

The above explanation illustrates that the changing of colour patterns in each light is a visual indication of the field variation of the particular group of propulsors. Thus the SUB lights give complete information about the state of the vehicle's magnetic field. They indicate the mode of operation of the propulsors (by showing: the rotation of colours for the magnetic whirl mode, the stationary on/off flashing for the throbbing mode, or the continuous one colour

glow for the magnetic lens mode of the propulsors' operation), the direction of whirl rotation (by the direction in which given colours apparently move), the orientation of the magnetic poles (which colour is dominant), the amplitude of pulsation (by differentiation between the depths of the colours at extreme points of pulses), and the level of the constant component in the propulsors' output (by a mean shade of main colours). So in this way the lights of the SUB system warn the crews of other vehicles and people on the ground about the field configuration and parameters that prevail around a given Magnocraft. It is vital that ordinary people also learn to recognize these warnings (see also the incident quoted in subsection J2.9 of [1]).

G9. The properties of the Magnocraft

The Magnocraft is an unusual vehicle. Its completion will introduce to our civilization a technological advancement that has never occurred before. This craft will send us to the stars and carry us to the centre of the Earth, will fly with a speed close to the speed of light or will hover motionless over our gardens, will save countless lives but can also be used as a tool of destruction.

The unique operation of the Magnocraft is the source of its unusual properties. Many of these are unknown to us, as no other human device has previously been able to create them. Such attributes as the magnetic framework, inductive shield, magnetic whirl, plasma saw, vacuum bubble, magnetic lens, etc., are completely unfamiliar, so they may be difficult to comprehend as many people have no frame of reference to which these properties could be compared.

The descriptions that follow reveal the basic attributes of the Magnocraft as it appears in all three modes of operation. It should be stressed that these are very brief descriptions, and that the limited size of this treatise forces the author to introduce short cuts in the explanations provided. But further details can be deducted from the material presented here. Also the author welcomes questions, inquiries, and comments concerning any part of this treatise.

G9.1. The properties of the Magnocraft during the magnetic whirl mode of operation

The powerful whirling magnetic field creates a circulating electrical field around the Magnocraft's surface which sweeps away any ionized molecules present in the air. These molecules collide with one another, causing cumulative ionization of the air near the vehicle, and creating a plasma whirl which follows the whirling magnetic field. So the first property caused by the magnetic whirl is a plasma whirl which also circulates around the Magnocraft's surface. This swirled plasma creates an **ionic picture of the whirl** which is explained in subsection G7.3. The particles from the plasma whirl that rotate around the vehicle are acted upon by centrifugal forces. These forces cause the rejection of air from the Magnocraft's surface and the creation of a local **vacuum bubble** around its body. So when the Magnocraft flies in the air or water, it in fact flies in a small hole of the local vacuum that it created around itself. This vacuum bubble eliminates viscous friction between the craft and the atmosphere, making it possible to reach speeds much higher than would normally be possible because of the heat barrier. A rough estimation of these speeds gives the value of around 70,000 km

per hour in the air, and about 800 kilometres per hour for flights under water. In free space away from the atmosphere, this vehicle can attain a speed only a small fraction of a percent smaller than the speed of light.

The second important property of the Magnocraft is the elimination of sound waves by the plasma whirl. This principle involves the breaking of the pressure cone which is formed in front of all flying vehicles and which is the source of sound caused by their flight. This enables the Magnocraft to fly noiselessly.

Air plasma emits a light. Therefore the third property is the emission of a strong incandescent light from the ionized air. In the magnetic whirl mode of operation, the body of the Magnocraft is completely hidden inside a ionized cloud. For precise manoeuvring in this mode, it is necessary to use special periscopes (see (1) in Figure G5) which extend beyond the range of the ionized air. Because the main constituents of air are nitrogen and oxygen, whose ions glow red, yellow, green and violet, depending on the conditions, these colours are dominant in the plasma cloud produced around the Magnocraft.

High energy plasma can destroy all hard materials, as is shown in the application of plasma lancets. Therefore the plasma whirl of a Magnocraft forms a kind of circular saw of enormous power, which in this treatise is called the "**plasma saw**". This plasma saw provides another property, whereby the vehicle is able to cut into the hardest rock and tunnel through it. During these flights of the Magnocraft through solid materials, such as rocks, buildings or machinery, it leaves behind tunnels with a geometrical shape and vitreous surface - see **Figure G36**. The attributes of these tunnels are described in the subsection that follows.

Both the whirling magnetic field of the Magnocraft and the plasma saw that follows it, both create a sort of **inductive shield** that protects the vehicle from outside attack. Therefore the next property the Magnocraft has is the ability to destroy and repulse any objects in its path which are made of electrical current conductors (such as missiles, aeroplanes, meteorites, or cosmic dust). The destruction of such objects is achieved by inducing in them powerful electric currents that cause the material from these objects to instantly vaporate from the inside until they explode and then burn up in the plasma whirl. Splinters from such exploding objects are porous and full of vapour bubbles. When the distance from the Magnocraft is sufficiently great, the whirling currents induced in any electrical circuits prevent the flow of electrical power. This cuts the circuits off from any electricity supply. In the effect, certain electricity consumers or entire power stations found in the vicinity of such a vehicle, are deprived of their supply of electric power.

The magnetic whirl also produces beams of electromagnetic waves which may destroy television transmission, radio connections, telecommunications, etc.

G9.1.1. Properties of the tunnels made in rocks by the Magnocraft

The properties of the tunnels hollowed out in rock by the Magnocraft's "plasma saw" remain in strict correlation to the principles of operation of this vehicle. This means that the action of each principle applied by the vehicle causes the appearance of a particular set of properties within the tunnel. To highlight this correlation, the main principles of the Magnocraft's operation (indicated by the letters #A, #B, ..., #F) are listed first, followed by the specification of the properties of the tunnels that result from these principles (these subsequent properties are indicated by the numbers 1, 2, ..., 17).

#A. The Magnocraft flies in a magnetic (non-aerodynamic) manner, which characteristic features include: following straight lines, rapid (almost right-angle) changes of flight direction without the benefit of a curve radius, and suspending motionlessly in the same position.

1. The tunnels evaporated in rock during flights of this vehicle comprise long, straight sections which are joined together by sharp corners.

2. In locations where the Magnocraft remains motionless, the rounded, drum-shaped caves modelling the magnetic whirl outlines (e.g. the ionic picture of a whirl - see Figure G32) should appear in the middle of these tunnels. These caves should show evidence that the magnetic whirl has removed surrounding rock by vaporization.

#B. Propelling and stabilizing forces are obtained by the interaction of the Magnocraft's magnetic field with a field produced by the Earth, planets, Sun, or Galaxy.

3. Disturbances in the direction of the Earth's magnetic field should be frozen in the rocks surrounding the tunnels (a magnetic compass used within the tunnels can register false readings, varying directions from place to place).

#C. During its flight the saucer-shaped Magnocraft must all the time be oriented in the same direction, i.e. in such a manner that its base remains almost perpendicular to the local course of the force lines of the Earth's magnetic field. Therefore, depending on which direction it flies, the shape of the tunnels that it leaves behind must either reflect the vehicle's circular overhead outline or its triangular side outline.

4. When the Magnocraft flies in the direction of magnetic north-to-south or south-to-north, the shape of the tunnels left behind is elliptical in cross-section. The long axis of this ellipse is horizontal, and the ratio of the long to the short axis is proportional to the inclination angle of the Earth's magnetic field (i.e. on the magnetic equator the tunnels should be circular in cross-section) - see Figure G36 "b".

5. When the Magnocraft flies in an east-west or west-east direction, the shape of the tunnels matches the outlines of the saucer (i.e. it roughly resembles the shape of an obtuse triangle) - see Figure G36 "c".

6. When the paths of the tunnels change direction, their shape should change from elliptical into triangular, or vice versa, depending on the geographical direction of the vehicle's course.

#D. The tunnels are cut by a saucer-shaped spinning cloud of plasma (i.e. the plasma saw) which tightly surrounds the Magnocraft's body. Thus the appearance of these tunnels must roughly reflect the shape obtained by the intersection of the vehicle with the solid material that surrounds it.

7. The tunnels are geometrically shaped, even, and of a technological appearance.

8. The shape, dimensions, and patterns (ripples) on the walls of the tunnels should remain the same as long as the spacecraft which made them was maintaining an unchanged speed and direction of movement and did not cross the path of another tunnel (i.e. each straight section of the tunnels should look approximately the same along its entire length).

#E. The rock in the vehicle's path is removed through the melting and evaporation by the plasma saw.

9. The tunnels should have a smooth, glossy surface, resulting from the melting of the rocks by the plasma whirl of the vehicle.

10. The plasma whirl should leave some characteristic, repetitive indentations (ripples) on the surfaces of the tunnels. The shape, course, and intensity of these ripples depend on the mutual positioning of the tunnels' walls and the direction of the whirl rotation. In elliptical tunnels, formed during north-south flights of the Magnocraft, the indentations should take the

form of shallow grooves running around the periphery of the tunnel at even distances from one another (the distance between successive grooves depends on the speed of the Magnocraft which produced them). The appearance of these ripples should resemble those left by drilling tools. At the ends of the drum-shaped caves formed by motionless vehicles, the indentations should be shaped in clear spirals whose flutes recede towards the centre of the vehicle's whirl rotation. Such spirals should resemble the shape of a magnetic whirl illustrated in the lowest part of Figure G30.

11. The tunnels should have a rough and craggy apparent floor (the "apparent floor" is the one that can be seen when someone enters these tunnels; the "original floor" is hidden under this apparent one). This should have been created by the falling and subsequent hardening on the original floor, of the rock particles melted during the flight of the Magnocraft.

12. The shape of the tunnels' lowest surface ("original floor"), which is hidden under the layer of hardened rock particles creating an apparent floor of the tunnels, is symmetrical to the shape of the tunnels' ceiling.

13. The thermally induced changes in the crystallographic properties of native rock located close to the tunnel's surface should be detectable. Such changes, disappearing at some distance from the tunnel's surface, do not appear in the rocks of the caves created by hydraulic or mechanical interactions.

#F. The volume of rocks, evaporated when acted upon by the Magnocraft's plasma whirl, form a kind of super-hot, highly compressed vapour which expands along the area of the tunnel created behind the vehicle.

14. The particles of vaporized rock, when hardening on the surfaces of the tunnel (especially on its floor), must form a monotropic structure whose arrangement reflects the direction of movement of this medium.

15. At shallow locations of the long tunnels, the expanding gases cause breaches to the land's surface (see "2" in Figure G36). These breaches and cracks take advantage of the occasional weak spots within native rock and can be formed at random without displaying any regularity in shape or course.

16. At crossing points of the tunnels the movement of expanding vapours creates hardening drifts which may block the entrance to the tunnel which had been made earlier.

17. Particles of hardened vaporized rock should be spread over a wide area in the vicinity of the entrance (not the exit) to a tunnel, i.e. the place where the Magnocraft descended below the surface of the ground, as well as in the vicinity of the outlets from breaches formed by the expansion of vapour from a long and shallow tunnel. The effects caused by this should be similar to the raining down of volcanic ash after a small eruption.

* * *

It should be mentioned here that numerous tunnels which display properties exactly corresponding to those listed above have already been found on Earth. Examples are listed and discussed in chapter K (see subsection K2.2).

G9.2. The properties of the Magnocraft during the throbbing mode of operation

During the throbbing mode of the Magnocraft's operation, most of the properties characteristic for the magnetic whirl mode disappear. Thus the vehicle becomes safe and non-destructive. But also the latitudinal component of the thrust force no longer exists. The Magnocraft in this mode is only able to fly vertically and in the direction of the meridian.

Because the magnetic whirl does not exist, the cloud of luminous air disappears as well. Thus during the day, observation of the Magnocraft's surface is possible (in this mode the Magnocraft's crew are also able to observe visually {i.e. without any instruments} the vehicle's environment). Because there is a local air ionization at the outlets from the propulsors (see Figure G33), some glowing areas can be visible on a cloudy day and at night. As the magnetic field separates the ions, the light from these areas has two different colours, depending on the field's dominant pole. Near the north (N) pole of each propulsor, the light is red-yellow, whereas near the south (S) magnetic pole of the propulsors, it is blue-green (see Figure G33).

The pulsating field generated by the Magnocraft during the throbbing mode has some characteristics similar to the field in our electricity transformers. Therefore in this mode electrical currents are induced in every closed circuit which is present in the field's range. This is especially effective where there is a transformer at the beginning of the circuit. Thus the nearby flight of the Magnocraft may cause the activation of radio and television sets and other items of electrical equipment (e.g. commutator electric motors) which are disconnected from the electrical power supply. It should be noticed that the effect of the Magnocraft acting in this throbbing mode on electrical equipment is opposite from the magnetic whirl mode, when electrical devices cease working because they are cut off from the electricity supply.

G9.3. Humming noises appearing in both the magnetic whirl and throbbing modes of operation

There also exists a number of effects caused by the Magnocraft, independently of whichever mode of operation described above is in force. The most common of these are "humming noises". These noises are similar to the buzzing of high voltage transformers, but with a higher tone (rather like a flying bumblebee) because of the higher frequency of field pulsation. The generating of such sounds depends on the induction of electrical currents in conductive objects found within the range of the pulsating field. The currents around these conductive objects produce their own magnetic field which interacts with the Magnocraft's pulsating field, and as a result the objects vibrate at the same frequency as the vehicle's pulsating field. Accordingly, these sound waves are produced by the conductive objects which are present in the Magnocraft's environment, not by the Magnocraft itself (this vehicle is made of material which is resistant to the induction of currents). One of the unusual properties of these humming noises is that they **spread electro-magnetically with the speed of light** (not the speed of sound) and thus they can be heard instantly, regardless of the distance at which a Magnocraft appears.

Some people may develop a hyper-sensitivity of a nerve inside their ears which allows them to perceive the magnetic vibrations of a Magnocraft at a long distance (people who at some stage find themselves very close to an operational Magnocraft can be especially sensitive). These people may hear humming sounds when a Magnocraft approaches, even if they can't see it and no one else hears any noise. Although in the majority of cases these people may believe that the noises they unexpectedly experience result from an unrecognized medical problem, knowledge of their capability can be extremely useful as it gives them (and other people nearby) a remote sensing of the approaching Magnocraft.

G9.4. The properties of the Magnocraft during the magnetic lens mode of operation

The Magnocraft's Oscillatory Chambers can also be so controlled that they produce a constant (i.e. non-pulsating) and stable magnetic field - see subsection F6.1. In such a case the vehicle displays a manoeuvrability identical to that present during the throbbing mode of operation (i.e. it is only capable of meridional and vertical flights), but it forms additionally the so-called "magnetic lens".

By the term "**magnetic lens**" the combination of two different optical effects is described. The first and the most significant of these is bending the path of light with the energy density of the vehicle's concentrated magnetic field. This effect originates from the equivalence of mass to energy (i.e. from the famous equation: $E = m \cdot c^2$) expressed by the theory of general relativity. The enormous concentration of energy within the Magnocraft's field (see subsection G5.5) is equivalent to the concentration of additional transparent matter around the vehicle's surface. This matter, although it is invisible, increases the "density" of the air, thus changing its optical properties. An effect of this is similar to surrounding the Magnocraft with a thick layer of invisible glass which has an index of refraction different from that of air. Therefore, the electromagnetic radiation entering the range of the vehicle's dense field must be deflected significantly. Such deflection can be comparable to that caused by optical lenses.

The second effect that contributes to the formation of the magnetic lens results from the monotropic nature of magnetic fields. This nature causes that in the magnetic fields of extreme density light can only pass along the fields' force lines, but is stopped or bent when passing across these lines. This causes the Magnocraft to have a tendency to bend light so that it follows the path of their magnetic circuits.

The magnetic lens allows the Magnocraft's crew to make the vehicle completely invisible to radar observation and to the naked eye. It also deflects the beams of military lasers from targets, shields the crew from the action of electromagnetic radiation caused by a nuclear explosion, screens the vehicle from heat radiation, etc. Therefore it makes the Magnocraft not only invisible, but also indestructible by any high-energy emissions.

Contrary to the optical lenses, the magnetic lens does not have any clearly distinguishable surfaces that may reflect light. It displays a transparency identical to that of air, but its mass density and saturation of space with magnetic force lines gradually change. Therefore the magnetic lens may remain unnoticeable even if an observer is only a few meters from it.

The complete version of the magnetic lens appears only when the Magnocraft produces a constant (i.e. non-pulsating) magnetic field. However, when other types of field surround this vehicle (especially the throbbing one) a partial magnetic lens effect can also be created. In such cases the light bends near the outlets from the vehicle's propulsors, thus distorting the apparent shape of the Magnocraft's shell. (Note that the complete magnetic lens cannot be produced by the pulsating magnetic field because at moments when the field extinguishes itself during reaching minimums of pulses, the lens effect must cease to exist.) There is also a special case when such a partial effect of a magnetic lens becomes highly noticeable. This case reveals itself when a Magnocraft ascends. Because it represents one of the most common occasions when the action of a magnetic lens becomes obvious to outside observers, it requires a separate explanation.

G9.4.1. The magnetic lens action in ascending Magnocraft

The central magnetic circuits of ascending Magnocraft produce a unique magnetic-lens effect based on the course of magnetic force lines. This effect facilitates the visual observation of twin-chamber capsules from the main propulsors of these vehicles, but obstructs the visibility of remaining parts of these vehicles. Thus it allows outside observers to see and precisely describe the main twin-chamber capsule from the Magnocraft, and even to photograph this capsule. The mechanism involved in producing this particular magnetic-lens effect is as follows.

In the ascending Magnocraft, the power of a magnetic field involved in the vehicle's central magnetic circuit exceeds many times the power involved in the main and side circuits. For this reason force lines of the central magnetic circuit hermetically surround not only the entire body of such an ascending vehicle, but also its main and side magnetic circuits which become wrapped into a kind of a magnetic doughnut (i.e. looping magnetic force lines). Principles involved in the formation of this doughnut are illustrated in **Figure G37**.

As was stressed in the previous subsection, the extremely concentrated magnetic field of the Magnocraft interferes with light. This interference manifests itself most evidently by allowing the light to pass easily along the field force lines, but bending the paths of the light which try to pass across these lines. The above mentioned magnetic doughnut formed around the ascending Magnocraft means that to reach the vehicle's shell, the light would need to pass across the doughnut's field force lines. Therefore anything contained inside this donut becomes invisible to an observer looking from underneath, as the picture of it (i.e. light reflected from it) would need to cross the field - see path (1) in Figure G37. But in order to reach the main propulsor, the light needs to follow these lines - see path (2) in Figure G37. For this reason, outside witnesses who observe such an ascending Magnocraft can easily see a twin-chamber capsule from the main propulsor, but they are unable to see any other part of the vehicle's shell. While looking at an ascending Magnocraft, these people notice that at a certain angle the entire sides of the vehicle gradually disappear from view, and the only element remaining visible becomes a small "diamond-shaped" device located in the centre of the vehicle. This device is in fact the twin-chamber capsule from the vehicle's main magnetic propulsor (some witnesses, unaware of the principles described here, can wrongly take this "diamond" for a new kind of vehicle whose shape differs from that of the Magnocraft). The cubical edges of this capsule, when looked at from an angle, take the shape of a diamond. Notice that the situation described above changes drastically when the Magnocraft terminate their ascent. While they are hovering or descending, their main magnetic circuits stop being dominant over other circuits, thus the entire vehicle must appear visible again to observers.

G10. The landing sites of the Magnocraft

When a vehicle contacts the solid ground it must leave recognizable marks. For example, the wheels of a car leave rather characteristic tracks, whereas a hovercraft produces a band of swirled and flattened vegetation. The Magnocraft's propulsion utilizes a very powerful magnetic field which is capable of cooking the soil in a manner similar to that utilized in microwave ovens. Therefore when the Magnocraft lands, its propulsors must also scorch on the ground a number of distinctive marks. These marks can provide vital information about the vehicle which produced them. They reflect the type of vehicle, its orientation, configuration, mode of operation, etc. To enable the correct interpretation of such marks, the subsection that

follows is devoted to the description of the main attributes of the Magnocraft's landing sites.

It is worth emphasizing here that the popular understanding of the term "**landing**" is inspired by the operation of helicopters and aeroplanes. These machines lead us to believe that if a flying vehicle lands, the burning of its fuel must be shut down and its propulsion system must go into a dead, passive state. However the principles of the Magnocraft's operation are more like those of a balloon or airship than those of our helicopters or aircraft. Therefore when applying the term "landing" to the Magnocraft, consideration must be given to the fact that this vehicle does not dissipate its energy resources during motionless hovering. Therefore the Magnocraft's landing more involves hovering close to the ground (with its propulsion still remaining operational) so that its crew and passengers are able to leave or enter the deck, rather than an actual "sitting" on the ground and extinguishing of its propelling field.

G10.1. Environmental damage caused by the landed Magnocraft of the first generation

Five major categories of environmental damage should be distinguishable in the Magnocraft's landing sites. These categories can be classified as: (1) scorching, (2) biological impact, (3) changes in energy level, (4) chemical changes, and (5) mechanical destruction. The primary cause for all of them is the action of a highly concentrated magnetic field that is yielded from the propulsors of a landed vehicle. But some types of damage appear as the effect of an indirect action of this field, e.g. its ability to produce a highly aggressive ozone that attacks the chemical components of soil and air. Although real landing sites must incorporate the simultaneous action of a number of causes discussed below, for the clarity of analysis this subsection describes separately each major category of damage.

1. **Scorching** is the most dominant type of damage caused by the magnetic circuits of a landed Magnocraft. It occurs because a highly concentrated magnetic field passes through solid matter. The result is similar to that caused by an over-active microwave oven. In the effect, all organic matter (e.g. plants, animals, insects) in the range of the vehicle's magnetic field is cooked (e.g. wood is completely bleached), incinerated, or turned into brown-grey ash. The non-organic matter (e.g. soil) is parched, demineralized and emaciated.

One of the unusual attributes of such magnetic scorching is that it differs in principle from scorching by a fire or by oxidation. Therefore ashes of the organic matter produced during such scorching can be burned later with a high intensity (unlike the ashes from a fire). On the other hand, highly flammable materials that display signs of such scorching do not ignite a fire when the scorching occurs.

2. **Biological destabilization** is the most noticeable and long-lasting type of environmental damage resulting from the landing of the Magnocraft. It is caused by the extermination of all micro-organisms found in the range of the vehicle's magnetic circuits. Thus, within the former Magnocraft's landing sites, all the parasitic micro-organisms that normally would keep the population of mushrooms under control are killed. The biological effect of such an extermination is an exact equivalent to that of a thermal sterilization of the compost utilized by mushroom growers. Of course after a vehicle ascends, the mushroom spores present in free air instantly take advantage of such ideal growth conditions and take over the sterilized soil. The biological balance, once so disturbed, is then extremely difficult to restore. Therefore, within the Magnocraft's former landing sites, an explosive growth of mushrooms is observed which may last for many decades (the author estimates that in the

case of non-cultivated soil of a low vitality - e.g. such as this existing in New Zealand, the natural restoration of a biological balance at the former Magnocraft's landing sites may take even up to 100 years; in more dynamic soils like these from tropical countries or from Europe the restoration time will of course be much shorter). Because such a technologically induced growth must outline the circular pattern of the vehicle's propulsors (see Figures G38, G39 and B1), these mushroom circles are called here by their folk name of "fairy rings".

It should be stressed that in order to biologically destabilize the soil, the Magnocraft must hover in the same place over a period of time that exceeds the so-called "critical time". This critical time is the duration required for the vehicle's magnetic field to completely cook all microorganisms from the soil. It can be compared to the minimal time needed to cook a particular product in a microwave oven. For the K3 type of Magnocraft the author estimates this critical time to exceed at least ten minutes. If a vehicle hovers above a particular landing site shorter than this critical time, then the soil is not destabilized and a long-lasting fairy ring is not established in it. Thus all signs of such a short-duration landing would disappear after only a couple of months.

The "fairy rings" produced by the effect of the Magnocraft's long-duration landings must display a number of **unique attributes** which are absent in natural mushroom growths. The most important of these attributes, which can be used as identification characteristics of the Magnocraft's landing sites, are listed below:

(A) The dimensions which exactly correspond to the "d" diameters (nominal) of the vehicles that made them. These "d" diameters are the Magnocraft's equivalent to the widths of wheel tracks made by motor cars - see Figures G23 and G25. Thus the nominal diameters of fairy rings, when determined according to the rules described in subsection G10.3.1, must fulfil the equation (G30) and must correspond to the data from column "d" of Table G1. Practically this means that the sizes of fairy rings comprise the terms of a geometric progression with ratio two, and that these rings repeat the binary progression of the "d" diameters from K3 to K10 types of the Magnocraft, i.e. every subsequent ring is twice as big as the previous one. Note that the nominal diameters of the fairy rings depend only on the type of vehicles that produced them, and for the same type they must remain exactly the same independently of: soil conditions; species of mushrooms that populate the landing site; area, country or continent where the sites are found; etc.

(B) The repetitive growth in precisely the same locations year after year for many decades. No slow drifting away or transformations, so typical of natural growths, will be observed.

(C) Remaining exactly the same size from year to year. Note that if the rings were to grow naturally they would increase their diameter by not less than about 2 metres each year.

(D) Remaining in a perfect circular or elliptical shape, independently of soil and topographic conditions that may stimulate a monotropic growth.

(E) A complete taking over of the entire sterilized soil by mushroom spawn, as the natural self-defense mechanisms of this soil are totally destroyed by the magnetic circuits of a landed vehicle. Thus, mushroom spawn completely chokes up every pore of the soil, leaving no air or space for parasites and other micro-organisms. Also, if a surface layer of the affected soil is replaced, the spore should take it over again by attacking from below (i.e. the rings are extremely difficult to remove).

(F) The underground distribution of mushroom spawn so that it reflects the course of the magnetic circuits of a landed vehicle. This means that inside the soil the pattern formed by spawn must exhibit all the elements characteristic of the Magnocraft's landing site, i.e. must

consist of a central patch formed by the main propulsor, which is surrounded by a ring formed by the side propulsors - see Figure G39.

Moreover such "fairy rings" may sometimes be accompanied by imprints of the vehicle's legs lying within the circle (if the Magnocraft did not hover just above the ground, but used its legs while landing).

It should be stressed that the biological consequences of fairy rings involve a variety of effects which are strongly dependable on the season of the year. For example in some seasons (e.g. spring) the mushrooms may stimulate a faster growth of grass, in other seasons (e.g. autumn) they may tend to kill the grass. Because of their ability to heat the soil, such mushroom rings also encourage animals and birds to gather and rest on their surfaces.

3. **The increase in energy level** causes the damage done to all substances affected by the Magnocraft's magnetic field. It is already established that solid matter exposed to the action of an extremely strong magnetic field changes its energy-related properties and begins to behave in a completely different manner. For example such magnetic impact is already utilized commercially for making a concrete stronger than steel, for producing a non-destructible rubber, for growing monocrystals, etc. In the Magnocraft's landing sites it must similarly affect the environment, changing the properties of the soil in a way that may last for many years.

The changes in energy level of the soil affected by a landed Magnocraft **should be detectable by a number of instruments and techniques**. The most simple of these techniques involves the measurement of the electric resistance of the affected soil with an ordinary "ohmmeter". This resistance should be many times higher than the resistance of the non-affected soil from the same landing site. (Note that ordinary soil that is only affected by mushroom spore while its energy level remains unchanged, has its electric resistance much smaller than from the same soil which is free of mushrooms.) Similarly, X-ray diffraction techniques should produce results that differ from those for non-affected soil. The increased energy level of the soil must also be manifested through the changes to its inter-particle (surface) tension. This means that the soil affected by the Magnocraft's field refuses to absorb water. Thus the ordinary measurements of the water absorption capability (or humidity) of such soil should provide results that differ from those of unaffected soil. The action of a turbulent magnetic field on the soil should also alter its magnetic properties (e.g. polarity and the level of magnetization). Thus sensitive magnetometers should indicate anomalies in readings at the Magnocraft's landing sites. Finally, the exposure to a highly concentrated magnetic energy together with the bombardment by air ions may also cause short-term radioactivity of the landing site. This radioactivity should be registrable by various radiometers and radiation detectors.

4. **Chemical changes** are the next type of damage appearing at the Magnocraft's landing sites. These changes involve highly complex phenomena occurring in two steps. In the first step, circuits of the vehicle's magnetic field act on the particles of oxygen found in the field's range and transform this oxygen into a highly active ozone. In the second step, the ozone so obtained attacks all substances in the vicinity, producing a mixture of chemical products (usually various salts). Then these chemical products either fill up pores existing within the soil (if the ozone was formed within the soil), or fall down covering the surface of the scorched marks (if the ozone was formed in free air above the ground).

5. **Mechanical destruction** is the last category of damage caused by a landed Magnocraft. Three forms of destruction originating from the vehicle's magnetic field can be classified into this category, i.e. (a) flattening of plants, (b) soil compression, and (c) soil

extraction. In addition, the mechanical damage can also be caused by various parts of the vehicle (e.g. its legs) which touch the ground. But because the damage from such parts is rather obvious, elaboration here would be unnecessary and so is omitted.

(a) **Flattening of plants** can be caused by two different mechanisms. The first of these involves the spinning magnetic circuits of a vehicle. It appears at sites where the Magnocraft hovered at low height for a very short duration (i.e. shorter than the "critical time"). In such cases the vehicle's field had insufficient time to scorch the vegetation, but spinning magnetic circuits have exerted enough force to push down every single blade of grass. The strands of force lines of these circuits act like huge combs which brush down thoroughly all vegetation within the circuits' path. A characteristic attribute of sites formed in such a manner is that all the blades of grass (or crops) are flattened with astonishing precision. They all lie down parallel to each other, perfectly straight and evenly distributed, forming a kind of mirror which reflects the light. If looked at (or photographed) from a distance the site looks as if it is flooded with water. In folklore nests of flattened vegetation displaying the above attributes are called "devil circles".

The second mechanism of the flattening of the plants is caused solely by the air that spins around the Magnocraft during the magnetic whirl mode of operation, or by the plasma whirl that surrounds a landed vehicle. This type of damage frequently appears at the sites where a vehicle hovered at a significant height so that its magnetic circuits looped entirely in the air (see Figure G41 and description from subsection G10.3). Most frequently it takes the form of a swirling and flattening of chaotic circular nests of grass or crops. In some instances trees can be cut down by a plasma whirl.

(b) When a heavy Magnocraft hovers suspended near the ground, the magnetic circuits of this vehicle transmit its weight onto the soil. This in turn must cause the detectable **compression of soil** within the landing site. Because in addition to such a compression the soil is scorched, magnetically energized, and its pores are choked with the mushroom spawn, the soil thus becomes almost totally impervious to water.

(c) **Soil extraction** occurs when the vehicle's magnetic circuits rapidly pull up the material they envelope. Because these circuits simultaneously magnetize the material they act upon, they are able to extract it from the surrounding soil and lift it into the air. A perfect example of such a mechanical extraction of soil would be the case where a Magnocraft, hovering motionless with its magnetic circuits looped under the ground (see Figure G39), rapidly initiates a very fast ascent. In the throbbing mode of operation, such a rapid ascent would cause lumps of soil contained within the magnetic circuits to be extracted, pulled away and dropped in other areas. In the magnetic whirl mode of operation, the entire cylinder-shaped volume of ground placed within the spinning magnetic circuits may be cut out from its surroundings and transported to another place. Notice that during slow ascents of the Magnocraft this kind of damage will not occur.

It is worth mentioning that the rapid ascent of a Magnocraft that hovered just above a water reservoir would cause the extraction of water as well. The principles involved here are similar to those for the extraction of soil. Therefore eye-witnesses may sometimes see this vehicle departing into space with huge balloons of water attached to the underneath of it (one can imagine what kind of speculations this would induce in witnesses who are unaware of the principles explained here).

G10.2. Three main cases of the Magnocraft's landings

There are two factors which define the attributes of the marks left on the ground by a landed Magnocraft. These are: (1) the mutual positioning of the Magnocraft and the ground level at a particular landing site, and (2) the dynamic state of the vehicle's magnetic field. This subsection reviews the main classes of landing sites of the Magnocraft, formed as a result of variations on the above factors.

Figure G38 illustrates the impact that the height at which a particular Magnocraft hovers has on the type of marks that this vehicle leaves on the ground.

Depending on the total distance " h_t " from the vehicle's base to the end of the Magnocraft's magnetic circuits (i.e. "span" of the vehicle's circuits), there are only three possible positions of the Magnocraft in relation to the ground level. In these positions the vehicle's magnetic circuits in relation to the ground level can be such that:

(1) The magnetic circuits of the Magnocraft are looped under the surface of the ground. (The term "are looped" means that the circuits first enter underground and then turn back to the surface.) This occurs when the height " h_x " at which the vehicle hovers is less than the total length " h_t " of the vehicle's magnetic circuits (see Figures G38 & G39).

(2) The looping of these circuits occurs along lines exactly level with the surface of the ground. This occurs when the Magnocraft hovers exactly at the height " h_t " (see Figure G40).

(3) The magnetic circuits of the Magnocraft are located totally in the air and so do not touch the surface of the ground. This occurs when the Magnocraft hovers at a height that is much greater than the total length " h " of the vehicle's magnetic circuits (see Figure G41).

Since the marks left in each of the above cases must differ, they are discussed separately in the subsections that follow.

Where the dynamic states of the vehicle's magnetic field are concerned, two of these can be distinguished, i.e. (1) a stationary (non-whirling) field - which prevails in the throbbing and the magnetic lens mode of the Magnocraft's operation, and (2) a field whose force lines are spinning around the spacecraft - this prevails when the vehicle operates in the magnetic whirl mode. The impact that these two modes have on the marks left on the ground mainly concerns the mutual connection between subsequent marks. In general, the non-whirling magnetic field produces a series of mutually separated marks (see part "b" of Figure G39), each of which is left by a different side propulsor, whereas the whirling field joins all the marks from the side propulsors into one continuous ring (see part "c" of Figure G39).

G10.3. The landing sites for the magnetic circuits looped under the ground

In **Figure G39** is shown an example of the Magnocraft hovering so close to the surface of the ground that its magnetic circuits are looping (turning back) under the surface. In such a case the columns of a strong, pulsating magnetic field produced by the particular propulsors have no opportunity to spread out before they enter the ground. Therefore their action upon plants and soil is very concentrated, and affects only the small areas located exactly opposite the outlets from the propulsors - see part (b) in Figure G39. Moreover, between the place where the column from the main propulsor (1) and the places where the columns from the side propulsors (2) enter underground is an area of unaffected vegetation. Because this area is within the reversible parts of the magnetic circuits, the highly

concentrated magnetic field does not act upon it directly.

As an effect of the Magnocraft's field acting upon plants and soil located at the outlets from the propulsors, a very characteristic pattern of marks is formed. This pattern consists of a central mark (1) surrounded by a ring of side marks (2). The side marks (2) are located exactly under the outlets from the side propulsors, as the magnetic axes of these propulsors are kept perpendicular to the Magnocraft's base during landing. The nominal diameter "d" of the circle on which these marks are located is dependent on the type of landed vehicle, and corresponds to the data collected in Table G1. Also the number of marks is equal to the number "n" of side propulsors in this type of Magnocraft, or is equal to four - if the vehicle is landing with only the "four-circuits" mode of operation (see subsection G8). On flat ground, the location of the central mark (1) must be shifted from the geometrical centre of the landing site. This shifting is caused by the slanting of the magnetic axis of the main propulsor to a position tangential to the local course of the force lines of the Earth's magnetic field. Therefore for a single vehicle, the central mark (1) is displaced in the direction of magnetic north in the Northern hemisphere and in the direction of magnetic south in the Southern hemisphere - see Figure G39 "b". The degree of its displacement from the central location on the site depends on the inclination angle (l) of the Earth's magnetic field and on the height of the suspension of the main propulsor above the level of the ground. This allows the Magnocraft's log computer to utilize this displacement for the detection and maintenance of the vehicle's distance from the ground (similarly as boats do with their "acoustic depth sounder"). When this "sounder" is switched on, all types of landed Magnocraft produce similarly-shaped landings in which the central mark touches the ring of marks from the side propulsors (in such a location the main magnetic circuits respond the most to even a small change in the vehicle's height).

For the throbbing mode of the Magnocraft's operation, the above marks are the only ones left at the landing site. But if the vehicle's propulsion during landing remains in a magnetic whirl mode of operation, then the circulation of the magnetic field causes additional scorching of the circular trail (see (3) in Figure G39 "c") joining together the individual marks from the side propulsors. This trail is formed by the force lines of the main magnetic circuits jumping from each side propulsor to the other during the formation of a magnetic whirl.

The configuration of the landing site presented in parts (b) and (c) of Figure G39 appears only when the Magnocraft hovers just above the ground at a height " h_y " less than the so-called "critical height - h_c " but greater than the span " h_s " of the vehicle's side circuits (see part "b" of Figure G38). For heights " h_x " greater than this critical one " h_c ", the curvature of the vehicle's magnetic circuits causes a patch of the central mark (1) to expand into an inner circle located within the outer circle (2). The illustration of this curvature and the effect that it has on the shape of the landing marks is shown in part "a" of Figure G38. On the other hand for heights " h_z " less than the span " h_s " of side circuits, the side magnetic circuits (S) produce an additional ring appearing outside of the outer circle (2). The illustration of this ring and the effect that it has on the shape of the landing marks is shown in part "c" of Figure G38.

G10.3.1. Determination of the Magnocraft's dimensions from the scorch marks left at landing sites

It was proven in subsection G4 that the shape and dimensions of the Magnocraft must

follow strictly a set of equations listed in Figure G23. Thus a knowledgeable observer who applies these equations should be able to determine every detail of the Magnocraft's structure if he/she knows only the diameter "d" on which the vehicle's side propulsors are located. The descriptions from subsection G10.3 have shown that the diameter "d" is precisely reflected by the dimensions of a scorched circle left at the landing site by a vehicle whose magnetic circuits looped under the ground (see Figure G39). This justifies the search for a simple technique which would allow the exact diameter "d" of a Magnocraft to be determined by the measurement of the marks that the spacecraft leaves after landing. Such a technique is described below.

The equation for the theoretical value of the diameter "d" can be obtained by combining two equations (G9) and (G13) already derived in subsection G4. The final equation that expresses this diameter takes the following form:

$$d = \frac{C_c}{\sqrt{2}} \quad \{\text{where } C_c=0.5486 \text{ [metres]}\} \quad (\text{G30})$$

The constant "C_c" from the equation (G30) is called a "cosmic cubit" and it represents the unit of length used by builders of the Magnocraft for defining all its dimensions. Thus "C_c" represents a kind of "Cosmic Meter". There is a strong justification for believing that all civilizations that are mature enough to build the Magnocraft, standardize their units of length, using the same cubit. Therefore, in all instances of a landed Magnocraft, probably the unit "C_c" must take exactly the same value. In the calculations from this treatise this value is always equal to C_c=0.5486 [metres].

If it is assumed that the builders of a particular Magnocraft use the above specified cubit (C_c=0.5486 [metres]), then determining the type of Magnocraft that has landed becomes quite an easy task. It involves only the following steps: (1) measurement of the diameter "d" of the circle scorched by the vehicle on the ground, and (2) determining from the equation (G30) or from column "d" of Table G1 the type of vehicle which made the circle.

The problem becomes more complex, although still resolvable, if we do not know the length of the cubit used by the builders of a particular Magnocraft, or if we wish to verify the cubit that was determined by someone else. In such cases the examination of scorch marks left by a landed vehicle must establish two different values, i.e. the number of side propulsors "n" and the diameter "d". Knowing these two values, the type "K" of the landed vehicle can be established from the equation (G6) or equation (B1), and then the value of the cubit used by its builders can be calculated from the equation (G30).

The determination of the number "n" of side propulsors in a particular landed vehicle is quite an easy task, as each one of these propulsors should scorch a clearly visible mark on the ground opposite its own outlet - see (2) from Figure G39. These marks scorched by individual side propulsors are usually more extensively damaged than the circular trail that joins them together, as the scorching occurring just under the outlets from the propulsors is the most intensive (e.g. the grass below should be burned to expose bare soil). Therefore, in most cases the determining of "n" depends on the simple counting of the number of extensively scorched patches appearing at the landing site under examination.

A more difficult task is the precise measurement of the diameter "d", especially as the accuracy of determining the value of cubit "C_c" depends on the precision of this measurement. The complication of this measurement comes from the unknown height at which a particular

vehicle hovered. As can be seen from Figure G38, the magnetic circuits that scorch the landing site are curved inwards. Therefore the higher a vehicle hovers, the smaller is the outer diameter " d_o " of the scorched site, and the greater the difference between this diameter " d_o " and the nominal diameter " d " that we intend to determine. Only a Magnocraft whose base touches the ground would cause scorch marks with dimensions that would exactly correspond to the dimensions of the vehicle.

Fortunately, there is a distinctive regularity in the curvature of the Magnocraft's magnetic circuits which allows us to develop a correction technique for an "under" error, to be applied in determining the exact value of " d " diameter (an "under" error appears when: $d_o < d$). This regularity is illustrated in Figure G38. A Magnocraft shown in Figure G38 hovers at an unknown height " h_x " which is greater than the height " h_c ". For such a height two circles (not one) must be scorched on the ground, the inner one of which is an equivalent of the central mark (1) shown in Figure G39. The regularity discussed here depends on such curving of the vehicle's magnetic circuits so that the changes in the inner " d_i " and outer " d_o " diameters of these two scorched circles are symmetrical for a particular height. This means that the distance between the outer diameter " d_o " of the outer scorched circle and the diameter " d " of the vehicle are equal to the distance between the inner diameter " d_i " of the inner circle and the site's central point. This can be expressed mathematically by the following equation:

$$d - d_o = d_i - \text{zero} \quad (\text{G31})$$

Note that "zero" in this equation represents the diameter of the site's central point. If this equation (G31) is changed so as to define the value of the " d " diameter, it will take the following final form:

$$d = d_o + d_i \quad (\text{G32})$$

The above equation (G32) expresses the essence of the correction technique described here for an "under" error (i.e. the error distinctive for the sites which contain two concentric rings). It states that if we measure precisely the outer diameter " d_o " of the outer ring scorched by a landed Magnocraft, and also the inner diameter " d_i " of the inner ring scorched on the same site, the algebraic sum of these two diameters must yield the exact value for the nominal diameter " d " that we are searching for.

In all cases where a Magnocraft hovers at a height smaller than " h_c " so that its central mark is not shaped into a circle, the measured value of " d_o " must lie between " d " and " $(d+a)$ " - see part "b" of Figure G38. In these cases the measurement of " d_o " diameter involves an "over" error (i.e. an "over" error appears when: $d_o > d$). For such landing sites the appropriate correction technique can be developed as well. The principle of this technique for an "over" error is shown in part "b" of Figure G38. It depends on the precise measurement of the diameter " d_a " of the most intensively scorched patch in the single central mark left below the main propulsor. Knowing this diameter " d_a " and the outer diameter " d_o " of the outer ring, the exact value for " d " can be determined from the following equation:

$$d = d_o - d_a \quad (\text{G33})$$

The manner of deriving the equation (G33) is similar to that already described for the equation (G32).

* * *

At this point it should be mentioned that in various parts of the world (especially in New Zealand and England) mysterious circles of scorched vegetation keep appearing. All the attributes of these circles correspond to those from the Magnocraft's landing sites - see the description from subsection G10.1. The author has conducted field measurements for a large number of such circles, using the correction techniques described in this subsection. As a

result he has established that the diameters of these circles exactly fulfil the equation (G30), and that the cubit used for their formation corresponds to the one applied in this treatise (i.e. $C = 0.5486$ [metres]). The summary of results obtained during these measurements, together with photographs of the circles, are presented in chapter K and treatise [3F].

G10.4. The landing sites with magnetic circuits looped along the surface of the ground

Figure G40 presents a Magnocraft which hovers in the inverted position. Its height is such that the main magnetic circuits are looping back just as they touch the surface of the ground. In this case, the pattern of marks formed in the throbbing mode of operation takes the form of one central spot "C" and a number of concentric trails "M" - see part (b) of Figure G40. The spot "C" is formed by the pillar of the central magnetic circuit, whereas each separate trail "M" is scorched by one of the main circuits (such main circuits join the main propulsor with every operative side propulsor).

In the magnetic whirl mode of operation, the hovering Magnocraft causes a slightly different pattern - see part (c) of Figure G40. In this case, one circular, wide strip of damaged soil replaces the previous concentric trails. In this strip not only damage originating from a magnetic field occurs (described in detail in subsection G10.1), but also mechanical destruction caused by a spinning of ionized air that follows the magnetic whirl.

It should be noted that the width of a scorched trail for the landing in an inverted position is much narrower than for the upright Magnocraft. This results because only a central part of each main magnetic circuit touches the ground, whereas the side circuits do not leave any marks at all. If the Magnocraft were to hover in an upright position, then the side circuits would also cause damage, and therefore the size of the site would approximately be close to the size of the vehicle. But in this position the central spot (C) would not be formed, as the lower slip point would be far above the surface of the ground - see also Figure G32.

Figure G40 presents the situation where the inclination angle (I) of the Earth's magnetic field is equal to 90 degrees. Therefore all marks illustrated are symmetrically located. But in reality the value of this angle changes with the geographic latitude at which the Magnocraft lands. Therefore the pattern of marks presented in Figure G40 must also be appropriately altered (deformed).

G10.5. The landing sites for circuits looped in the air

If the magnetic circuits are not touching the ground, scorch marks are not formed. However, during the magnetic whirl mode of operation a whirl of air (sometimes called a "devil's whirl") is produced. This whirl is able to flatten plants located even a long distance under the base of the Magnocraft. Therefore the attribute of the landing sites discussed here is a complete circle (not just a ring) of plants aerodynamically laid flat and swirled in the direction of the magnetic whirl rotation - see **Figure G41**. The destruction of these plants is caused mainly by a mechanical breaking, although when acted on for a long time by a magnetic field of the vehicle's central circuit they can also be slightly scorched.

It should be mentioned here that patches (complete circles) of swirled and flattened vegetation can also be produced sometimes when a vehicle hovers with its circuits looped

under the ground. For example flying clusters produce this kind of landing - see Figure G17. However there is a difference in appearance between the vegetation swirled aerodynamically by whirling air, and the vegetation swirled magnetically by spinning magnetic circuits. In the latter case individual grass blades are perfectly aligned with one another and spread horizontally, like after being brushed thoroughly with a huge rotating comb. So when looked at or photographed from a distance, such a magnetically brushed site looks shiny, as though covered with water.

G10.6. The landing sites formed by arrangements of the Magnocraft

All classes of the Magnocraft's landing sites discussed above are made by a single vehicle. But various arrangements of the Magnocraft can also produce appropriate landing sites whose properties can differ from those left by solo flying vehicles. This subsection discusses the properties of the landing sites produced by such arrangements.

In general, the landing sites produced by various arrangements of the Magnocraft can be divided into two groups: (1) those which look very similar to the landing sites left by single vehicles (e.g. sites produced by spherical and cigar-shaped complexes), and (2) those whose appearance is unique to a given arrangement (e.g. sites produced by flying systems and by flying clusters). Where the sites which look similar to those made by single vehicles are concerned, most of the information from the previous subsections also applies. But two details differ from those provided so far. The first of these is that the sites central scorch mark is displaced from the centre of the site into the opposite direction from what it would be in at the site when produced by a single vehicle (i.e. in the Southern hemisphere, single vehicles displace this central mark towards a south direction, whereas arrangements of the Magnocraft displace the same central mark towards a north direction). Such an opposite displacement of the central mark results from the use by flying arrangements of a different principles for balancing their motionless weight during hovering. The second different detail is that the magnetic field produced by flying arrangements is much more powerful than that produced by single vehicles. Therefore in the sites where such arrangements have landed, damage to the soil must also be much more extensive.

The arrangements of the Magnocraft whose landings significantly differ from those for single vehicles are flying clusters. An example of their landing is presented in Figure G17. Note that such a landing must take the shape of a chain of scorched circles joined together with a linear central burning. Every second circle of this chain takes the distinctive shape of a concentric ring (or rings) surrounding a central circle. This distinctive shape is caused by the unique field distribution under each unstable unit of the cluster. Note that for linear clusters all circles of the chain are placed along a straight line extending towards the direction of flight (e.g. for meridional flights approximately along magnetic south-north direction - Figure K11), whereas for two-dimensional clusters subsequent scorched rings form a net (or mesh) extending along two or three sets of mutually crossing lines.

The arrangements of the Magnocraft which produce the most distinct landing sites are flying systems. **Figure G42** shows three examples of such landings. The most characteristic pattern left on the ground by a flying system is the one produced by a single cell, illustrated in Figure G16. Such a cell scorches a unique pattern that resembles a "four-leaf clover" - see Figure G42 (A). An analysis of the landing produced by such a cell shows that it is characterized by two different dimensions, marked as " $d_v = D + d = 2D - 2L$ " and " $d_r = 2d$ ". The

values of these dimensions can easily be determined if the diameters "D" and "d" (plus a length "L") of the vehicles which scorched a given site are known.

As this is explained in subsection G3.1.5 and illustrated in Figure G16, an almost unlimited number of various shapes can be achieved by joining Magnocraft into flying systems. For this reason, apart from the "four-leaf clover" pattern described above, there is almost no chance that two landing sites produced by such systems can have an identical shape. Thus also an analysis of the landing sites left by such systems can not relate to their shapes, but must concern general regularities existing in them. There are two regularities that such sites display: (1) their dimensions " d_u " and " d_i ", and (2) the characteristic configuration of curvatures that is repeated along their edges. General principles that apply to both of these regularities can be worked out from Figure G42.

G11. Explosion sites of the Magnocraft

It was determined in subsection G5.5 that the amount of magnetic energy accumulated within the propulsors of the smallest K3 type of the Magnocraft is an equivalent of about 1 Megaton of TNT. Thus a rapid release of all this energy (e.g. through the exploding of a vehicle) must produce an enormous area of destruction.

The sites where any magnetically propelled (i.e. Magnocraft-like) vehicle have exploded must be characterized by a number of unique attributes which are absent in land formations of a natural origin. The uniqueness of these attributes directly results from the unconventional construction and operation of the Magnocraft. The most distinctive of these attributes can be used for identification of the Magnocraft's explosion sites and for distinguishing them from any other catastrophic formations, such as meteorite impact craters, volcanic eruptions, etc. These distinctive attributes are as follows:

#1. An energy yield comparable to that of the most powerful thermonuclear bomb. Magnocraft's explosion sites must show an enormous yield of energy which should always exceed 1 Megaton of TNT (i.e. 1 Megaton of TNT is the minimal energy content of the smallest type K3 of the Magnocraft. This means that the blasting of the smallest Magnocraft is equivalent to the simultaneous explosion of about 80 atomic bombs of the size dropped at Hiroshima). Such an enormous energy yield on the one hand will NOT be accompanied by a detectable radioactive pollution of the area (as would be the case with a nuclear explosion), on the other hand it WILL be accompanied by a strong, turbulent magnetization of the surrounding area (see #7).

#2. Devastation that is distinctive for an explosion, not for the impact of a space object or for an eruption. The destruction at the Magnocraft's explosion site is caused by the effects of a powerful explosion in mid-air or near/at the ground level. So such a site will NOT display any attributes of an impact crater (i.e. alien debris, uplifted rejection rim, etc.) or an eruption crater. If the vehicle exploded in mid-air, the effects will be similar to that of an aerial nuclear explosion (i.e. no crater present, trees still standing below the zero point, etc.). If the vehicle exploded on or near the ground, a rimless elliptical crater of shockwave origin (not impact origin) will be formed.

#3. Sequence of detonations. Each Oscillatory Chamber contained in an exploding vehicle constitutes a separate bomb heavily loaded with magnetic energy. Thus, there must appear short time delays between the explosions of subsequent Oscillatory Chambers. If the exploding vehicle consists of a cigar-shaped flying complex (see Figure G8), the blasting of

which spread from one of its ends to the other, slightly longer time delays should also appear between the explosions of subsequent vehicles. Therefore eye witnesses who survived such an explosion of a cigar-shaped configuration of the Magnocraft should NOT describe the explosion as a single "bang". They rather should recall it as a few separate series of detonations. Each one of these series would indicate a different vehicle exploding and thus would comprise a fast sequence of bangs from the explosions of individual Oscillatory Chambers inside this vehicle. An appropriate counting of individual bangs should allow them to determine the type of vehicle (because of their "n" number), whereas counting the number of series allows them to determine the number of vehicles that exploded.

An unusual feature of the acoustic effects caused by the explosions of the Magnocraft is that their sound is carried by two independent media, i.e. magnetic field waves and acoustic waves. The disturbance of the magnetic field moves with the speed of light and causes a shaking of the individual ions contained in the air. Thus bangs carried by these magnetic waves must be heard simultaneously with the flash of the explosion, and are not able to reach witnesses who are beyond the horizon. The acoustic waves move slower (depending on the distance from the exploding Magnocraft, they will arrive appropriately later) and they are able to reach beyond the horizon.

#4. Cumulative explosion. Contemporary military technology uses an advanced type of missile containing so-called "cumulative charges". Such cumulative explosive charges are formed into a parabolic concave shape that resembles the mirror from a spot-light. They are designed to produce directed shockwaves, so that crushing of otherwise indestructible objects (such as tanks, bunkers, shields, etc.) can be achieved. The placement of Oscillatory Chambers within the Magnocraft also resembles the parabolic mirror from a spot-light. Thus this placement is equivalent to the distribution of explosives within missiles with cumulative charges. Therefore the explosion of the Magnocraft must also display a cumulative character in which shockwaves are channelled in the direction perpendicular to the vehicle's base.

#5. Formation of a triangular devastation area. Because a Magnocraft flies almost always with its axis slanted towards the ground (in order to match the local course of the Earth's magnetic field), the shockwaves of its cumulative explosions must hit the ground at an angle. Therefore the area of destruction caused by an explosion of this vehicle should have a roughly triangular (butterfly) shape. The explosion site itself, i.e. the area into which the energy of explosion was directed (e.g. a crater) should have an elliptical shape with a triangular entry. The geometrical axis of the destruction area and explosion site must lie along the line that at the time of explosion was occupied by the magnetic south/north direction.

#6. Magnetic south/north orientation of the site. The axis of the explosion site and the devastation area must always be oriented towards a magnetic north-south or south-north direction. Because throughout the years the positions of the magnetic poles are changeable, the explosion site is always oriented according to the date of the explosion (thus this date can be more easily determined):

- If the direction of flight of the vehicle that exploded has been observed by eye witnesses, the orientation of this axis may drastically contradict the expected direction of the vehicle's impact (e.g. eye witnesses may have seen a vehicle descending westward, expecting the impact to also be channelled in the same direction, whereas in fact the explosion is directed southward).

- If the considered site is suspected to be made by a meteorite impact, the above does not agree with the general direction of the flights of meteorites (it is known that the configuration of our solar system causes the direction of meteorite falls to coincide with the

eastward/westward vertical plane).

The attributes #5 and #6 listed above result from the general principle that the central axis of a magnetically propelled vehicle should always be aligned towards the Earth's magnetic field force lines. Thus this axis must also be directed to the Earth in the plane of a magnetic south-north direction for the time of the explosion.

#7. Turbulent magnetization of the site. The entire area of the explosion site must be strongly magnetized in a turbulent (i.e. disorganized) manner. Such turbulent magnetization originates from a rapid release of the magnetic energy contained in the propulsors of the magnetically propelled flying vehicle. It should manifest itself through:

- The anomalies in the direction and strength of the local magnetic field. Thus a sensitive magnetic compass used in the area should indicate wrong directions, its needle should spin, and the readings should vary from place to place.

- Unusual radio-communication problems (e.g. self-vocalization of radio signals, diminishing reception).

- The appearance of unusual weather anomalies, especially those which are perpetuated or conditioned by the electromagnetic mechanism (e.g. thunder storms, ionic winds, tornadoes).

#8. Magnetic stimulation of the environment. The strong electro-magnetic disturbances frozen in the explosion sites should lead to the destruction of the subtle magnetic balance of the soil. This in turn, when combined with the long term action of increased magnetic activity, could cause unpredictable biological consequences. For example:

- Mutation of some plants, insects, and animals.

- Deficiency of some sensitive microelements (e.g. selenium). This deficiency may in turn affect the health of organisms living in the area, causing some unusual illnesses to appear, etc.

#9. The presence of fragments from the vehicle's structure (most probably made of, or consisting of, metals). During the explosion this structure is torn apart and partially melted or evaporated. It also may mix with local materials lifted from the ground, creating forms that contain parts of the structure from the exploding vehicle and a congealed silicate from the soil. Note that during the explosion all ferromagnetic metals become magnetized, therefore iron remains of the vehicle should appear as "magnetite" (i.e. magnetized iron oxide particles).

#10. The presence at the site of some minerals originating from the liquidation and subsequent hardening of the site's native soil, lifted (sucked) or rejected as the result of the explosion. These minerals may take either the form of trinitite-type dust falls or china-type (ceramic) stones.

The "trinitite" dust falls originate from the sucking of loose soil dust by the explosion, the melting of this dust, and subsequent dropping of it after being hardened. It contains numerous globules of silicate in small, glassy droplets or bulbs, like the congealed particles of "trinitite" found in 1945 at the atomic test site at Alamogordo, New Mexico.

The larger ceramic "china stones" are formed from big lumps of clay and soil originating from an explosion site that were blasted into the air, compressed by the pressure of the explosion, aerodynamically shaped by the flight, baked by the heat, and then dropped along the direction of the shockwaves. Thus they take aerodynamic shapes, and their properties resemble those of china. Sometimes china stones may incorporate organic matter (leaves, branches, grass, etc.) that during the explosion mixed with local soil. China stones can be formed only during near ground or ground level (i.e. not mid-air) explosions whose shockwaves spray lumps of soil into the air.

#11. Eye witness reports. Local stories describing the explosion should contain some eye witness accounts which indicate that a flying vehicle had been seen just before the actual explosion took place.

#12. Interest in the site displayed by pilots of other magnetically propelled vehicles. This interests originates from the three following sources:

(a) Operational. The strong magnetization of the explosion site must disturb the environmental magnetic field, thus interacting with the vehicles' propulsion systems. In effect, some reaction on the part of the controlling computers is forced. This in turn must draw the attention of the crews of such vehicles to the site, as a slippery road draws the attention of car drivers. Of course, the scientifically-minded members of the crews should try to check what the cause of these flight disturbances is.

(b) Psychological. The place where a magnetically propelled vehicle exploded must fascinate pilots of other similar vehicles. This fascination corresponds to that of car drivers who are drawn to the sites of fatal car accidents. Therefore, just for pure curiosity, pilots of similar vehicles may take the opportunity of flying nearby to have a close look at the place where their colleagues died so spectacularly.

(c) Scientific. Because of the cataclysmic consequences of each Magnocraft's explosion, the designers of this vehicle must do everything possible to prevent a recurrence of such a catastrophe. Therefore, there will not be many places where such a vehicle exploded. But if an explosion in fact occurs, its site must be the subject of intensive scientific research to investigate the causes, course, and consequences of such an explosion.

Of course, any more noticeable interest in a particular area by pilots of such advanced vehicles as the Magnocraft must be noticed by the local population. Moreover, all landings of these vehicles must leave marks on the ground, which are described in subsection G10. Therefore, reports of local citizens of the frequent sightings of the Magnocraft, supported by the presence of numerous landing marks, will provide further distinctive attributes that should help to identify a Magnocraft's explosion site.

* * *

It is worth mentioning at this stage that two sites whose attributes exactly correspond to those listed above have already been discovered and investigated. These are: the Tunguska Blast Site (formed on 30 June 1908 in the Tunguska region of Central Siberia, USSR) and the Tapanui Crater (formed on 19 June 1178 in West Otago, New Zealand). A further description of both these sites is provided in chapter K (see subsection K2.1) and in separate treatise [5].

G12. Summary of the attributes of the Magnocraft

This subsection summarizes all the attributes of the Magnocraft that have been discussed or revealed in previous parts of this chapter. A review of them makes us realize how a powerful vehicle the Magnocraft is and what type of phenomena its observers and users may encounter. For the consistency of the review, various attributes are grouped in classes depending on their mutual relationship (not on the order of their presentation in previous subsections). These classes are numbered from #1 to #12.

#1. The unique, disc-like shape similar to that of an inverted saucer. The characteristic attributes of this shape are:

(a) Its flattening ratio " $K=D/H$ ", expressed by the design factor called "Krotność", is a

mathematical function of the number "n" of side propulsors (see equation G6) and takes the integer value from the range $K=3$ to $K=10$.

(b) It forms the eight basic types of the Magnocraft which can be recognized from this shape, or from the value of their design factor "K", diameters "D" and "d", or the number of propulsors "n" (see Figure G25).

(c) It repeats the same main elements in the shells of all types of the Magnocraft, although the shape and mutual configurations of these elements may differ slightly in various types.

(d) It is strictly defined by the set of equations listed in Figure G23.

#2. An ability to couple a number of Magnocraft into various flying arrangements which appear as essentially different shapes. The manifestation of this ability is that:

(a) Apart from the saucer-like shape of a single unit, the flying Magnocraft can also be observed taking almost any shape that can be imagined, e.g. sphere, cigar, cone, fir-tree, beads, spool, four-leaf clover, honeycomb, platform, cross.

(b) The Magnocraft is able to form six different classes of flying arrangements. These are: (1) flying complexes, (2) semi-attached configurations, (3) detached configurations, (4) carrier platforms, (5) flying systems, and (6) flying clusters (see Figure G6).

(c) Arrangements of a number of Magnocraft are able to couple and decouple during flight.

(d) The gelatinous hydraulic substance which fills the space between two vehicles (angel's hair) drops to the Earth's surface at the moment of the disconnection of a spherical flying complex or a double-ended cigar-shaped complex.

#3. The lack of parts cooperating mechanically which could become worn out with wear and tear. The reasons for this are:

(a) The principles of the Magnocraft's operation do not require any moving parts.

(b) The moving parts that are introduced for the convenience of the crew are designed in a manner in which mechanical cooperation is unnecessary (see the free-floating suspension of the Oscillatory Chambers within the propulsors - subsection G1.1).

The effects gained by this are:

(A) An almost unlimited time for use of the vehicle.

(B) An extremely low potential for failure.

(C) A low cost of production.

#4. The propulsion unit of the Magnocraft is constituted as the balanced arrangement of two different types of propulsors producing counter-acting forces, the first of which supports the vehicle while the other stabilizes it. The important points associated with such a formation of the propulsion are:

(a) The configuration of propulsors that form a bell-shape (i.e. where one propulsor is uplifted at the centre of the vehicle, and the others positioned around it but slightly below the central propulsor).

(b) The formation of magnetic circuits.

(c) An unique layout of the burnt marks left at landing sites that correspond to the location of the propulsors.

(d) The existence of the "magnetic framework" which strengthens the resistance of the vehicle's shell.

(e) The controllability over the magnetic interactions with other vehicles. These interactions can be changed smoothly from attraction into repulsion (see Figure F8).

#5. The utilization of magnetic interactions with the environmental field for producing

propelling forces. This provides:

- (a) Noiselessness in flight.
- (b) The achievement of speeds in a vacuum close to the speed of light.
- (c) The ability to produce propelling forces in all environments.
- (d) Magnetic changes forced on surrounding areas, such as:
 - (1) burn marks on plants and on the ground;
 - (2) properties of the soil changed by the magnetic action;
 - (3) disturbance of the Earth's magnetic field;
 - (4) neutralization of the natural magnetism of materials;
 - (5) erasure of tape recordings and the recording on them of a pulsating signal.

(e) Magnetic forces acting on metal objects. Such forces may cause: (1) the momentary joining together of adjacent parts of machines (which in turn causes engines to stop working, turbines to stop rotating, etc.); (2) the pushing or pulling (depending on the wishes of the crew - see Figure F8) of complete objects from the pulsating magnetic field generated by the Magnocraft; (3) the humming of conductive objects (when they are supported by any flexible material).

(f) The physical effects on living organisms. These may appear as: (1) an unusual impression of a humming sound sensed by a person under the influence of the field but which in reality does not exist; (2) a metallic taste in the mouth that doesn't have any connection with what has been eaten; (3) a special kind of paralysis that numbs the mind and actions of a person in the range of the Magnocraft's field.

#6. The ability to create a magnetic whirl. Its effects can be:

(a) A whirl of air or water which follows the whirling magnetic field (this whirl breaks a sound wave produced by the vehicle).

(b) The creation of a local vacuum bubble near the surface of the craft, which makes possible the noiseless flight of the Magnocraft in air or water, with speeds much higher than those possible with the heat barrier.

(c) A flattening of plants in swaths around the Magnocraft's landing sites.

(d) Creation of the "Pajak Effect" which produces a thrust force acting in the latitudinal direction.

(e) The formation of an inductive shield around the vehicle, which is able to destroy any objects made of good electric conductors in its path. The effects of using such a shield can include: (1) all objects that are made of metal explode when they come in contact with the Magnocraft; (2) splinters from the exploding objects are porous and have an uneven surface; (3) the temperature of all metallic objects entering the range of the shield rapidly increases.

(f) The formation of tunnels and craters of geometric shapes in solid objects and in the Earth's crust.

#7. The ability to operate in three different modes called: the magnetic whirl mode, the throbbing mode, and the magnetic lens mode. The manifestation of the use of these modes is:

(a) The appearance to eye-witnesses on one occasion as material vehicles with clearly distinguishable surfaces, and on another as clouds of ionized air. From both of the above modes they can also be re-controlled into a magnetic lens mode, thus disappearing completely from view.

(b) The displaying of opposite and reciprocally negating properties, for example:

- in the magnetic whirl mode: (1) the burning, destroying and falling down of everything within the vicinity of the Magnocraft; (2) induction of an electrical "cork" which cuts off the flow

of current in electric power mains.

- in the throbbing mode: (1) safe and nondestructive work of the propulsors; (2) generation of the flow of current in electrical devices which are disconnected from sources of energy.

#8. The induction of electric currents. The effects of these currents produce the following phenomena:

(a) The electrical charging of non-conductive materials (e.g. hair, clothing, plants).

(b) Causing the operation of appliances that have been disconnected from their source of electricity (e.g. radio and television receivers, vacuum cleaners, etc.).

(c) Ionization of the surrounding medium and the production of highly active ozone. When the Magnocraft is flying in the air, this causes: (1) a smell of ozone near the Magnocraft itself and on its path of flight; (2) the formation of chemical components (salts) from the close contact of materials and the ionized air - these salts are produced because of the reaction of environmental substances (soil, air, pollution, etc.) with very active ozone; (3) emission of radiation, caused by the bombardment of hard materials with high energy ions; (4) condensation of steam in the wake of the flying Magnocraft.

#9. The emission of various light signals. The sources of these signals, resulting from the vehicle's operation (i.e. "natural" sources of light) are:

(a) In the magnetic whirl mode of operation: the ionic picture of the whirl. The light from the whirl displays approximately the same colour and the same intensity in the whole volume. The luminous flux produced is very high.

(b) In the throbbing mode of operation: a glowing of the surrounding medium in two "opposite" colours at the propulsor outlets (i.e. in the air, a yellow-red near the north (N) pole and a blue-green near the south (S) magnetic pole of each propulsor). Characteristic for this glow are: (1) the "opposite" colours of the light are emitted from the main and side propulsors' outlets situated on the same side (on topside or underside) of the vehicle; (2) the colours that the same propulsors glow are reversed when viewed from below and above the vehicle; (3) the change of colours into "opposite" ones after the Magnocraft flies over one of the Earth's magnetic poles (this change is caused by the need to reorientate the propulsors).

(c) In the magnetic lens mode: a very sensitive photographic film should be able to detect a light from the crew cabin (if any is produced) passing through the lens from inwards. The naked eye or radar is not able to detect the presence of the vehicle.

The sources of the "artificial" light signals emitted by the Magnocraft are:

(d) The SUB system performing the function of navigation lamps.

(e) The propulsors used by the crew as searchlights for lighting a chosen area under the vehicle.

#10. Interference with the paths of electromagnetic radiation. This interference may take one of the following forms:

(a) A "magnetic lens" which deflects electromagnetic radiation from the vehicle, making it totally invisible to visual and radar observation. The lens is obtained when the Magnocraft's field is constant and forms the shape of the lens whose boundaries display a smooth change in the field's density. A partial lens can also appear when the vehicle's field is pulsating. Such a partial magnetic lens may obstruct or deform the visibility of the shell near the outlets from the Magnocraft's propulsors.

(b) An enhancement of the observation of the main twin-chamber capsule in an ascending Magnocraft, connected with the simultaneous diminishing of the whole body of the vehicle.

(c) "Black bars" joining the outlets of the facing propulsors in some arrangements of coupled Magnocraft (e.g. semi-attached and detached configurations, cigar-shaped complexes, etc.) and black areas visible inside the twin-chamber capsules. These bars and areas are obtained when the columns of a highly concentrated pulsating magnetic field with clearly distinguishable boundaries (e.g. produced between facing propulsors of the coupled vehicles) are observed from the direction perpendicular to the magnetic field force lines.

(d) Disturbances in radio reception, television broadcasts, radar images, and telephone signals. These are induced when the Magnocraft's whirling magnetic field emits its own electromagnetic waves.

#11. Fully controllable, and reversible, energy management. It is manifested in the following ways:

(a) The character and parameters of the vehicle's field are formed exactly as are necessary for the flight conditions.

(b) The produced field can be reduced without any change in the amount of energy accumulated in the propulsors.

(c) The Magnocraft can hover motionless near the ground like a balloon for any period of time without decreasing the amount of its energy.

(d) The vehicle's magnetic field accumulates (before flight) the entire energy necessary for a long-distance trip.

(e) The vehicle's energy resources are self-rechargeable. If the flight does not involve friction, the energy resources at the moment of finishing a round trip are the same as at the moment of starting this trip.

#12. The magnetic (non-aerodynamic) manner of flying which adheres to the laws of magnetism. This is characterized by:

(a) Flights with the base almost perpendicular to the force lines of the environmental magnetic field. This means that the Magnocraft always maintains the same orientation (i.e. its base faces roughly a north-south direction), independently of the direction of its movement and the type of manoeuvre it is performing. Moreover, the Magnocraft moves in directions that are independent from its orientation, even if these directions produce the highest aerodynamic resistance of its shell.

(b) Flying along straight lines, with rapid changes of direction without the benefit of a curve radius.

(c) Rapid jumps into random directions mixed with frequent stops, which to observers resemble the behaviour of a "dragon fly".

(d) The ability to hover motionlessly in one place for extensively long periods of time (e.g. hours, days, or even longer).

G13. Military aspects of the Magnocraft

It must be emphasized that building a Magnocraft will promote peace through providing the facilities for interstellar expansion and for the utilization of unlimited cosmic resources. However, in our highly militarized world it is impossible to create a new kind of vehicle which potentially would not be used for military purposes. Therefore, to complete the picture of this vehicle, its basic military capabilities must also be highlighted. This is because today's predictions of the Theory of the Magnocraft may in the not-too-distant future become a surprising reality for those citizens of our planet whose taxes maintain scholars preoccupied

with condemning subjects which in their opinion are unbecoming to scientists, to still have time for observing what is happening around them.

The most simple military application of the Magnocraft is a rapid releasing (for example through a detonation) of the huge amount of energy accumulated in its propulsors. The explosion caused in this way in its effects and range could be compared only to the famous Tunguska (USSR) blast, which on 30 June 1908 devastated over a thousand square kilometres of taiga in the Tunguska region of Central Siberia. As was the case with this event, the exploding of the Magnocraft would not pollute the environment radioactively. Therefore the affected area would immediately be available for occupation and colonization.

However, using the Magnocraft as a flying bomb would be a waste of its huge military potential. The other possible applications of this vehicle offer even greater advantages. It can act as a transportation facility carrying weapons and military forces for attacking the command centres and government locations of the opposite side, or as a very selectively acting weapon for controlled destruction. This subsection reviews the capabilities of the Magnocraft in both of these applications.

G13.1. Use of the Magnocraft as a weapons platform or transportation facility

In the transportation or weapons platform mode, the following characteristics of the Magnocraft can be significant:

#1. Very high speeds. In excess of 70,000 km per hour in the atmosphere and almost at the speed of light when travelling in the near vacuum of space.

#2. The capability to move through any medium, i.e. space, air, water, solid materials (such as soil, rocks, buildings, or bunkers) and also molten media such as the Earth's nuclei or the centres of stars. It can also move from one medium to another with no preparation necessary.

#3. The capability to move directly to the target despite any man-made or natural obstacles in its path. The Magnocraft can tunnel through the Earth's surface, buildings, pillboxes, barriers and anything else that can be used for the protection of command centres and underground bunkers.

#4. The Magnocraft, when flying, is completely noiseless and has the capability to switch on optical and radar invisibility.

#5. Special characteristics enabling a Magnocraft to withstand any weapon that could be used against it. The features which protect the vehicle against weapons are:

(a) A spinning magnetic field that creates an "inductive shield", a destructive "plasma saw" made from ionized air molecules that follow the spinning magnetic force lines, and the repelling action of a pulsating magnetic field (see Figure F8). These effects act on missiles, guns, and other projectile (non-energy) weapons.

(b) A "magnetic framework" formed within the vehicle which provides support many times stronger than any physical body can. This framework is able to withstand the shockwaves of nearby explosions.

(c) A "magnetic lens" which deflects laser beams and other energy-beam weapons as well as the thermal radiation from a nuclear explosion.

#6. An effective resistance to extreme environmental conditions:

(a) Very high temperatures. Heat transfer is made impossible because the environmental medium is kept away from the Magnocraft's surface by the plasma whirl which

uses the centrifugal force to reject all alien particles.

(b) Very high pressures. These are neutralized by the "magnetic framework" which can withstand any possible external pressure.

(c) High energy electromagnetic radiation. This is deflected by the "magnetic lens" which is produced by the constant output from the Magnocraft's propulsors.

#7. The ability to switch on a "field of attraction" which would intercept and neutralize any nearby objects that are constructed of ferromagnetic materials. This applies to cars, large guns, tanks, and even aeroplanes. The attraction force is created by the constant component of the magnetic field yield from the vehicle's propulsors - see Figure F8. Its range and attraction effect can be controlled by balancing with the repulsion force which is produced by the pulsating component of the vehicle's magnetic field.

G13.2. Use of the Magnocraft as a selectively acting weapon

To use the Magnocraft as a selectively acting weapon for controlled destruction concentrating its impact on the metallic objects of the other side, the destructive properties of its "inductive shield" are utilized. Simultaneously the "plasma whirl", always appearing together with the inductive shield, is prevented from acting on people and on organic substances so that they stay uninjured. The method by which the Magnocraft can be used for military operations, aimed at the destruction of the enemy's equipment only, is as follows:

Step 1. Switching to maximum power the spinning magnetic field that forms the magnetic whirl circulating around the vehicle. The force lines of that field passing through nearby conductive objects induce in them powerful electric currents that explosively evaporate their material.

Step 2. Forming from this spinning field a broad inductive shield with a range of evaporation to about 100 metres from the vehicle's surface (when the destructive plasma whirl has a range of only about 5 metres).

Step 3. Flying at an altitude of around 10 to 30 metres above an enemy's territory. As a result of such a flight, every object which is constructed from electrically conducting material will explode. This effect has a radius of about 100 metres from the craft. The disintegration of these materials will cause in turn:

(a) Complete destruction of every object made of metal, such as: weapons, machinery, factories and their equipment, iron bridges, electric-power connections, underground installations made of metal, storage facilities, etc.

(b) Destruction or damage of objects containing some parts made of metal, such as: buildings, concrete bridges, bunkers, roads, airfields, ports, etc.

Step 4. Undertaking a systematic flight covering every part of the target area, similar to the way a farmer ploughs a field.

It should be noted that the very high speed and manoeuvrability of the Magnocraft would allow operation in such a manner as to render totally powerless a middle-sized European country, with only one Magnocraft, in about 12 hours.

The military properties of the Magnocraft used as a weapon have no equivalent in any other fighting facility made by man to date. There are neither weapons nor defense methods that can oppose this vehicle. However, there is a major difference between the action of the Magnocraft and the effects of other means of mass destruction. The Magnocraft acts selectively against the weapons, equipment, and technology of the other side, but not against

people. So it disarms the enemy but leaves the population alive. Therefore even when used as a tool of destruction, it can still promote peace and serve humanity.

Table G1. Construction parameters data sheet for eight basic types of crew-carrying Magnocraft. The interpretation of symbols used is illustrated in Figures G20, G23, and G25. The dimensions of particular vehicles are determined on the assumption that the outer diameter "D" in each type fulfils the equation (G13): $D = 0.5486 \cdot 2^k$ [meters]. All dimensions from this table are expressed in metres.

Basic NoTy-pe	Outer shell dimensions H L Gs d	Location & dimension of side propulsors	Main propulsor details	No.C-Weight of r- of
K n D	H L Gs d	Arc Ds as h DM	aM gs w	
- - - m	m m m m	m m m m	m - - tonne	
1.K3 3 8	4.39 1.46 0.64 0.43	3.10 1.220.430.25	1.03 0.86 0.49 4 3	1
2.K4 4 12	8.78 2.19 1.28 0.72	6.20 1.630.560.32	1.55 1.28 0.74 3 4	8
3.K5 5 16	17.56 3.51 2.57 1.13	12.41 2.440.750.43	2.48 1.88 1.09 4 5	54
4.K6 6 20	35.11 5.85 5.14 2.17	24.82 3.901.260.73	4.14 3.43 1.98 4 6	360
5.K7 7 24	70.2210.0310.28	3.84 49.65 6.502.041.18	7.09 5.88 3.39or 7	2 472
6.K8 8 28	140.4417.5620.57	6.78 99.3011.143.331.9212.4110.11	5.84 4 8 17	317
7.K9 9 32	280.8831.2141.1412.52198.6119.505.763.3222.0718.2810.56 4	9123 113		
8.K101036561.7656.1882.2822.94397.2234.669.975.7539.7232.9119.00or 10886 448				



The equations that describe the mutual interrelations occurring between items presented in the above table (see also Figure G23):

$H=D/K$ $K=D/H$ $n=4(K-1)$ $Arc=\pi d/n$ $D_M=H(2-\sqrt{2})$ $a_M=D_M/\sqrt{3}$ $as=Ds/\sqrt{3}$ $Crew=K$

$h=d/h$ $K=d/h$ $L=(D-d)/2$ $d=D/\sqrt{2}$ $Gs=D_M-Ds$ $Ds=D_M^3/\sqrt{n}$ $Weight=0.05\cdot D^2\cdot H$

lamp U V W X Colours emitted by
time subsequent lamps:

t = 0 red = n

t = 1/4T yellow = 0

t = 1/2T blue = s

t = 3/4T

t = 1T



Table G3. The colour changes in the lights of the SUB system of lamps (the location of these lamps on the Magnocraft's shell is presented in Figure G35). The SUB system indicates the Magnocraft's mode of operation. The sequence of colours emitted by each lamp of this system and shown by this table is characteristic for the magnetic **whirl mode** of the Magnocraft's operation (this particular table illustrates colour signals that would accompany the magnetic whirl from Figure G31). Symbols: t - time; T - period of the propulsor's output pulsation; n, o, s - output levels of amplitude in a particular propulsor (i.e. maximal, middle, minimal).

The rows in this table show the subsequent colours that each lamp (represented by the column labelled U, V, W, or X) emits at a given moment of time to describe the operation of propulsors which are labelled with a letter corresponding to that lamp (i.e. U, V, W, X). By observing only one lamp (e.g. that labelled V) it is evident that its colours change according to a sinusoidal curve that simulates the change of the magnetic field in a given (e.g. V) group of propulsors - e.g. compare the changes of curve V in Figure G31 with the changes of colours for V lamp in the above table. In this way the oscillation of colours simulate the pulsation of the magnetic field. But by observing only one colour (e.g. red) this table shows that with the elapse of time (i.e. after each quarter of the propulsors' period of pulsations) each colour moves to the next lamp. In this way the apparent motion of colours in the SUB system of lamps reflects the motion of the magnetic waves around the Magnocraft.

Note that for the **throbbing mode** of operation the colours of the lights would change in the same way in each lamp (i.e. all lamps would simultaneously change into the same colour), whereas in the magnetic **lens mode** all lamps would emit a yellow colour at all times.

Table G2. The correlation between the value of **the "K" factor and the "D/H" ratio** for main configurations of the coupled Magnocraft. It allows to determine the type of individual vehicles arranged into a given configuration.

Fig. G1. This diagram demonstrates **the principle of tilting a column of the magnetic field** that is yielded from a hypothetical propulsor. In the propulsor illustrated, the magnetic axis "m" of a twin-chamber capsule which yields this field is controlled by two sets of mechanical rollers. The upper part "A-A" of the diagram presents this propulsor from two positions: as an overhead view (i.e. the right half of the diagram) and as the horizontal cross section along its top half (i.e. the left half of the diagram). The lower part "B-B" shows the same propulsor in vertical cross section (i.e. in the cross section passing through the magnetic axis "m" and the tilting plane "x"). Illustrated are: 1 - the spherical casing of the propulsor (the diameter "Ds" of this casing is equal to: $D_s = a_o \cdot \sqrt{3}$); 2 - one of four rollers operating in the vertical plane "x" (as well as these, the propulsor also contains another set of four similar rollers operating in the vertical plane "y"); 3 - the carrying structure, tilted by rollers, which holds the twin-chamber capsule; 4 - the inner cubical Oscillatory Chamber of the twin-chamber capsule, whose side edge is marked as "a_i"; 5 - the outer cubical Oscillatory Chamber of the twin-chamber capsule whose side dimension "a_o" is equal to: $a_o = a_i \cdot \sqrt{3}$; m - magnetic axis of the propulsor (this axis represents the direction in which the propulsor's output is pointed); x, y - the two vertical tilting planes, perpendicular to each other.

Fig. G2. The magnetic propulsion unit of the Magnocraft. Illustrated are: the single main propulsor (M) involved in a repulsive interaction with the Earth's magnetic field; eight side propulsors (U, V, W, X) situated so as to attract the environmental field. Each of these propulsors consists of a twin-chamber capsule (formed from one inner and one outer Oscillatory Chamber) located inside a spherical casing. Through an appropriate synchronization of the field pulsations in the side propulsors, a whirling magnetic field can be produced by this unit. Symbols: N - north magnetic pole, S - south magnetic pole, 1 - frame which joins the propulsors together; d - the maximal distance between the centres of any two side propulsors located diagonally opposite from each other in the unit (this distance "d" represents the "nominal diameter" of rings burned by side propulsors during landings of the Magnocraft); h - the height of the centre of the main propulsor above the bases of the side propulsors; R - the force of magnetic repulsion.

Fig. G3. Two alternative positions of the Magnocraft during flight, called the "upright position" and the "inverted position". To illustrate the polarization of propulsors and the type of force interactions they create, both Magnocraft type K3 are shown in vertical cross-sections while hovering above the north magnetic pole of Earth. Crossed lines mark the location of their crew cabins. Note that independent of which one of these two flight positions is taken, the orientation of the magnetic poles of the propulsors in relation to the Magnocraft's shell remains unchanged. Therefore, when two vehicles so positioned (i.e. one in the upright position and the other in the inverted position) fly directly above/beneath each other, each one faces the other with like magnetic poles. Thus only repulsive forces can be created between two such Magnocraft (see also Figures G18 and G19). Symbols: R - a force of magnetic repulsion; A - a force of magnetic attraction; G - gravity pull; N, S - North and South magnetic poles.

(a) The **upright position**. The lifting force (R) is created by the main propulsor, whereas the side propulsors create stabilization forces (A).

(b) The **inverted position**. This reverses the functions of the vehicle's propulsors, i.e. the main propulsor acts as a single stabilizer (A), whereas the side propulsors produce the lifting forces (R). During horizontal flights close to Earth, the gravity pull (G) acts like an additional stabilizer.

Fig. G4. The appearance of the Magnocraft type K3, as it is defined by the theory from this treatise. The general shape and outlines of this vehicle are strictly defined by the set of mathematical equations derived from the design and operational conditions (these equations are listed in Figure G23). Its dimensions are also defined by these equations (the outer diameter for the Magnocraft type K=3 is equal to: $D=0.5486 \cdot 2^k=4.39$ metres). The vehicle's shell is made of a mirror-like material whose degree of transparency and light reflectiveness can be strictly controlled. Thus, when the crew makes this shell transparent, elements of the internal structure (e.g. propulsors, compartments, separatory chambers, etc.) can be seen by an outside observer. In the above illustration seven spherical propulsors (out of a total number of $n=8$) placed in the horizontal flange are visible. Each of these propulsors contains inside a twin-chamber capsule composed of two Oscillatory Chambers. The eight vertical partitions divide the vehicle's flange into eight separate chambers, each housing one side propulsor. The horizontal separatory ring placed at the top-half of the flange separates both magnetic poles (N and S) in each of these side propulsors, thus forcing the magnetic field which is produced to circulate through the environment. On the upper part of the flange three lamps of the SUB system (i.e. equivalent to the position lamps in aeroplanes) are indicated - see also Figure G35. In the centre of the vehicle the single main propulsor and its twin-chamber capsule are shown. Within the ring-shaped crew cabin a pilot's seat is visible. (Compare this illustration with Figure B1).

Fig. G5. The internal design of the Magnocraft and the main features of its shell. It is illustrated using an example of the middle-sized vehicle type K6, which utilizes $n=20$ side propulsors and whose outer dimensions are: $D=0.5486 \cdot 2^6=35.11$, $H=D/6=5.85$ meters. The material impenetrable by a magnetic field (magnetoreflexive) is indicated by a broken line.

The diagram presents:

- Magnetic propulsors: main (M), and two examples of side propulsors (U), (W).
- Magnetoreflexive shells: ceiling (5), topside alignment cone (2), complementary flange (6), crew cabin edge (7), base (11), underside alignment cone (12), central cylinder (3) and (13), separatory ring (9).
- Magnetoconductive shells: topside dome (4), flange's aerodynamic cover (8), flange's base (10), underside bowl (14).
- Compartments: crew cabin (CC), central propulsion compartment (C) subdivided into north (C_N) and south (C_s) sections, lateral propulsion compartment (L) with its north (L_N) and south (L_s) sections.
- Facilities: periscopes (1), telescopic legs (15).

Fig. G6. Examples of **six classes of arrangements of the Magnocraft**. Each class is obtained through coupling in a different manner several discoidal vehicles (illustrated above are arrangements of mainly K3 type Magnocraft). Within each class a number of further specific arrangements (not shown in this illustration) can be distinguished. For example, flying complexes (class #1) can be subdivided into: (a) spherical flying complexes (shown in Figure G7), (b) cigar-shaped complexes (shown above) and (c) fir-tree complexes (Figure G10). Also vehicles arranged in any of the above classes can further cluster or couple with other arrangements, forming in this way an almost unlimited variety of shapes. Illustrated are examples of:

#1. Flying complexes - obtained when coupled vehicles are fixed in a steady physical contact. Illustrated is a cigar-shaped stack consisting of six Magnocraft type K3.

#2. Semi-attached configurations - in spite of labile (point) contact, vehicles are steadily bond together with magnetic circuits visible as black bars.

#3. Detached configurations - vehicles do not physically touch each other, but are bond with repulsive and attractive magnetic interactions in equilibrium. The black bars mark the columns of magnetic field that join the side propulsors oriented as to attract one another (the main propulsors of both vehicles repel each other).

#4. Carrier platforms - obtained when smaller Magnocraft are suspended under the side propulsors of a bigger mother-ship (shown is a K5 type mother-ship carrying four K3 type vehicles).

#5. Flying systems - formed when several flying cigars are physically coupled together by their side propulsors.

#6. Flying clusters. These are formed through the bonding (without physical contact) of any other arrangements listed before. A two-dimensional "flying cross" is illustrated here. Its magnetic circuits that separate subsequent vehicles are shown with broken lines (these are always accompanied by numerous holding circuits which, for the clarity of illustration, are omitted here).

Fig. G7. A spherical flying complex. An example illustrated here is obtained by coupling base-to-base two Magnocraft type K3. Notice that the coupling of larger vehicles (i.e. types K4 to K10) will produce a more flattened shape of such complexes.

(Upper) External (side) view of the whole complex.

(Lower) Cut-away view of the complex. Illustrated is the interaction between the propulsors and the relative positioning of the compartments in both coupled vehicles. Symbols: 1 - upright vehicle; 2 - inverted vehicle; A - gelatinous hydraulic substance ("angel's hair") which assists the structure of the vehicles to withstand the forces of mutual attraction appearing between the main propulsors of both spaceships; C - deposit of magnetically scorched organic matter called "onion charcoal" which during horizontal flights forms itself at the "N" outlet from the main propulsor; M - main propulsor of the upright vehicle; U - a vertical cross-section of one of the eight side propulsors of the upright vehicle; N, S - the orientation of the north and south magnetic poles in the propulsors of both vehicles.

Fig. G8. A stacked cigar-shaped flying complex which represents one of the most efficient configurations obtainable through the magnetic coupling of a number of Magnocraft. This configuration is formed by stacking a number of subsequent Magnocraft of the same type (illustrated is a stack consisting of seven vehicles type K6) one on top of the other, like a pile of saucers stored in a kitchen cupboard. The outer dimensions of the Magnocraft type K6 are: $D=35.11$, $H=5.85$ [m] - see equations G13 and G7. After landing, this type of vehicle scorches a ring on the ground having the nominal diameter $d=D/\sqrt{2}=24.82$ [m] - see equation G9.

(a) External (side) view of the whole complex.

(b) Vertical cross section of the complex showing the interaction of propulsors and the relative positioning of the compartments in the coupled vehicles. Symbols: G_s - the thickness of the complementary flange which is equal to the gap between the flanges of two subsequent vehicles (because this is equal, a number of such cigar-shaped flying complexes can be further coupled rim-to-rim into flying systems - see Figure G22); N, S - polarity of the subsequent magnetic propulsors.

Fig. G9. Cut-away view of a **double-ended cigar-shaped flying complex** made by coupling further units to both ends of a spherical complex. The hydraulic substance "angle's hair" is shown between the two central Magnocraft joined at their bases.

Fig. G10. An example of a **"fir-tree" shaped flying complex** formed by the stacking of smaller types of Magnocraft upon larger types.

(a) Sectional view of the complex, showing the cooperation of propulsors and the relative positioning of compartments in the coupled vehicles.

(b) External view of the whole complex.

Fig. G11. An example of the simplest **semi-attached configuration**. The spool-shaped arrangement illustrated here is formed by coupling together two Magnocraft type K3 whose topside domes touch each other. The physical contact between both vehicles is at only one point, thus it is unable to provide a bond sufficient for a safe flight. Therefore the vehicles are bonded with the magnetic forces. The mutual attraction of the main propulsors of both vehicles keeps the configuration joined together, whereas the mutual repulsion of the vehicles' side propulsors maintains the permanency of the reciprocal orientation of both Magnocraft. The propulsors with a high output which lift the entire configuration are: the main one in the lower vehicle and the side ones in the upper vehicle. The main propulsor of the upper Magnocraft and the side propulsors in the lower vehicle produce only a very small output, just enough to maintain the stability of the configuration. Both vehicles have their high-output propulsors oriented by unlike magnetic poles towards each other. Therefore the outlets of these propulsors must be joined by the columns of a highly concentrated magnetic field which looks like bars made of a black substance (see also the black bars from Figure G13). The cross-section of these black bars reflects the square shape of the Oscillatory Chambers that yield the magnetic field. The above illustration shows the course of the black bars. The letters "N" and "S" indicate the polarity of the field yield of particular propulsors.

Fig. G12. An example of a **semi-attached configuration** ("flying necklace") formed from a chain of spherical flying complexes which are further coupled together by their topside domes. The principles of this coupling are the same as for the configuration shown in Figure G11. The forces that keep the configuration joined together are obtained from the mutual attraction of the vehicles' main propulsors. The side propulsors of both complexes are oriented repulsively towards each other, thus maintaining the steadiness of the mutual positioning of these complexes. To illustrate the polarity of the vehicles' propulsors the above diagram shows a cut-away view of the Magnocraft. Inside each spherical complex the presence of "angel's hair" is indicated (see also Figure G7). The outlets of some propulsors in the above configuration are mutually linked with black bars of the highly concentrated magnetic field. As the course and shape of the black bars would be identical to the one from Figure G11, to avoid obscuring the clarity of the illustration presentation of these bars is not repeated. Note that in the illustrated manner any number and any type of complexes can be joined together, thus forming "flying necklaces" with almost unlimited length, shape, and variation of individual beads.

Fig. G13. An example of the **detached configuration**. Illustrated is the coupling of two Magnocraft type K7 oriented base-to-base. The lower cross-section of this configuration illustrates the polarity of the propulsors in both vehicles. The mutual interaction between these propulsors produces two counter-balanced sets of forces which keep the vehicles apart, but also simultaneously fasten them together. The first set, formed by the main propulsors, causes the repelling of one Magnocraft from the other. The second set of forces, formed by the side propulsors, causes an attraction between both craft. The columns of the magnetic field joining the outlets of every pair of side propulsors facing each other are shown in black. As these columns have clearly distinguishable boundaries, they trap the light and therefore they appear as black bars. The cross-section of these bars must be square, as they reflect the shape of the Oscillatory Chambers that yield the magnetic field.

(Upper) An external view of the whole configuration. The shape, location, and the number of visible black bars is illustrated. Notice that during an actual appearance of this configuration the shape of the lower vehicle could become distorted by the action of a magnetic lens.

(Lower) A vertical cross-section of the configuration. The mutual cooperation between propulsors is shown. An INSERT illustrates the polarity of two side propulsors facing each other, each one of which belongs to a different vehicle (notice a square black bar joining the outlets from both of these propulsors).

Fig. G14. An example of the **carrier platform**, i.e. a configuration formed when a number of smaller Magnocraft are suspended under the base of a bigger mother ship. The distinctive characteristic of this flying arrangement of Magnocraft is that the main propulsor of each suspended Magnocraft is facing a side propulsor from the mother ship. The forces that join all the spacecraft together are created as the effect of mutual attraction occurring between one of the side propulsors of the mother ship and the main propulsor of each Magnocraft suspended under it. The illustration shows four Magnocraft type K3 (out of a total of eight vehicles type K3 possible to be carried by the sixteen side propulsors of a K5 type mother ship) clinging under the base of a K5 type Magnocraft.

Fig. G15. The **carrier configuration** formed when two Magnocraft of the same type are coupled base-to-base in such a way that the main propulsor of each of them faces the side propulsor of the other one. Illustrated is an example of the coupling of two type K6 vehicles. The above configuration is the other version of the carrier complex - see Figure G14, and differs from the spherical flying complex presented in Figure G7. At night, the glowing magnetic circuits of such a configuration produce a characteristic "**zigzag**" shape.

Fig. G16. Flying systems. These are the most highly developed homogenous arrangements of the Magnocraft. They provide a physical coupling of vehicles that belong to the same type, and usually are formed for the duration of interstellar travel.

(a) A honeycomb-like single cell of such a flying system. The example shown here contains four cigar-shaped complexes obtained by stacking together the following number of Magnocraft type K3: (1) six, (2) two, (3) five, and (4) three. Indexes 1 and 3 are used to mark the magnetic axes of the Magnocraft oriented in the upright position, indexes 2 and 4 mark the axes of the vehicles oriented in the inverted position. "Z" is the central axis of the cell (the outermost edge of all the Magnocraft forming this cell must touch "Z" axis). Figures G21 and G22 illustrate basic principles involved in the formation of the above cell. The single cell from this illustration may be extended by attaching rim-to-rim an even number of stacked, cigar-shaped complexes that would form further similar cell formations. Examples of extended flying systems obtained in this manner are shown in the next two parts of this illustration.

(b), (c) Examples of unusual shapes that can be formed by the Magnocraft arranged into flying systems. Shown are: (b) panpipes, and (c) honeycomb.

Fig. G17. An example of a **flying cluster**. Illustrated is one of the simplest cases of the linear clustering together of two spherical complexes type K6. The main advantages of the resultant configuration include: ability to couple together the Magnocraft of any possible arrangements and types (not only spherical complexes shown here), preserving the original configurations of vehicles that form the cluster, and flying the whole cluster with only one pilot. A flying cluster is obtained through the magnetic bonding of a number of independent vehicles which do not touch one another. Such bonding without physical contact is obtained by the formation of two opposite types of magnetic circuits: i.e. those that repel coupled vehicles (see circuits labelled (2) that are shown with a broken line) and those that simultaneously attract the vehicles (i.e. circuits (3) to (6)). The function of the links for these circuits is performed by "unstable units", i.e. vehicles whose propulsors produce only lifting and attraction forces (i.e. no stabilization forces) - see the complex on the right. Note that any other vehicles or arrangements can be attached in addition to the above cluster, with the condition that between every two stable units an unstable unit is placed to link them together.

(a) A side appearance of this linear cluster. Illustrated are: the polarization of propulsors (N, S) in the coupled vehicles characteristic for the Northern Hemisphere; examples of magnetic circuits that provide each class of interactions required between both vehicles (i.e. separating (2), holding (4) to (6), tuning (3), and compensating (Ts)); and the penetration of the ground (G-G) by these circuits (this penetration causes the formation of very distinctive landing marks shown in part (b)). Note that to keep this illustration simple it has not been shown that every side propulsor of the unstable unit is either linked with the main propulsor of the stable unit by a holding circuit (see (6)) or is involved in a tuning circuit.

(b) An overhead view of a distinctive landing site which such a linear cluster produces if it hovers at a low height with the magnetic whirl mode of operation. The labels link each characteristic element of this site with the appropriate class of magnetic circuits that produces this element. Note that a change in the height of the vehicles must result in a slight alteration of the site's shape and main features.

Fig. G18. The principle of coupling two Magnocraft into a spherical flying complex involving the so-called "**routine through a detached configuration**". The active vehicle, which undergoes all necessary transformations, is the lower one. The passive vehicle, to which the active Magnocraft is to be joined, is the upper spacecraft. The coupling routine consists of the following phases:

(a) Orienting. The effect of this phase is the reciprocal confrontation of the propulsors from both craft. These propulsors, however, only interact with repulsive (R) forces because they face each other with like magnetic poles.

(b) Docking. The effect of this phase is the formation of a detached configuration, in which both vehicles magnetically cling to each other because of the equilibrium of their mutual repulsion (R) and attraction (A). In the docking phase the vehicles do not make physical contact with each other.

(c) Linking. As the effect of this phase the spherical flying complex is formed in which both vehicles are physically linked and kept together by the forces of mutual attraction (A) of all their magnetic propulsors.

Fig. G19. The principle of **coupling two Magnocraft** into a spherical flying complex, alternative to the principle shown in Figure G18. The routine illustrated here is called the "**routine through a semi-attached configuration**". In this illustration the active vehicle is the upper one, whereas the passive vehicle is the lower one. Shown are:

- (a) The orienting phase.
- (b) The docking phase.
- (c) The linking phase.

Fig. G20. The forces of **magnetic interactions** caused by the Magnocraft's propulsors. Shown are: R, A - repulsion and attraction of the vehicle's propulsors by the environmental magnetic field (the action of these forces R and A tenses the Magnocraft in the axial direction); Q - relative attraction of the side propulsor and the main propulsor; Q_d - radial components of the Q forces (compressing the Magnocraft in the radial direction); Q_h - axial components of the Q forces (compressing the vehicle in the axial direction); E - relative repulsion between two side propulsors; E_d - the result of the repulsive forces E acting on a particular side propulsor (the set of the E_d forces tenses the vehicle in the radial direction).

(a) Sectional view of the Magnocraft presenting forces acting in an axial plane. The interpretation of the dimensions involved is shown in an outline of the K3 type of Magnocraft drawn with a broken line.

(b) Plan view of the Magnocraft showing forces which act in the radial plane.

(c) Equilibrium condition of forces acting in the axial plane, illustrated using vector notation.

(d) Equilibrium condition of forces acting in the radial plane illustrated using vector notation.

Fig. G21. An overhead view of **one cell of the flying system** arranged from four stacked cigar-shaped complexes joined rim-to-rim by the forces of attraction from their side propulsors. The diagram illustrates that the dimensions of the Magnocraft must obey the equation: $D=d\cdot\sqrt{2}$ (see also Figures G16 & G23, and equation G9). Symbols: M - main propulsors; U, V, W, X - four groups of side propulsors the output of which pulsates with mutual phase shifts of 90° ; Z - central axis of the cell (the outer edge of each Magnocraft forming this single cell of the flying system must touch the Z axis); d - the nominal diameter of the circle on which centres of the side propulsors within each spacecraft are located; D - the outer diameter of the Magnocraft. Indexes 1 and 3 are attributed to the spacecraft oriented in the upright position, indexes 2 and 4 are assigned to the spacecraft in the inverted position.

Fig. G22. The principles involved in the **meshing of flanges in flying systems**. These principles are illustrated with examples of vertical cross sections of pairs of cooperating cigars taking part in the formation of such systems. As shown, the cigars coupled rim-to-rim are oriented in reverse of each other (see Figure G16). The joining forces are created by the positioning of the side propulsors of the coupled spacecraft in a straight line so that each is able to attract the propulsor of its counterpart. The diagram presents the coupling of the following types of Magnocraft: (a) K3, (b) K6, and (c) K7.

Fig. G23. A compendium of **basic equations** which combine the most important parameters describing the shape of the Magnocraft's shell. An interpretation of the dimensions involved is shown in an outline of the K10 type of this vehicle. Symbols: "H" is the height of the craft (base to top); "D" is the outer diameter of the vehicle (it is expressed by the equation $D=0.5486 \cdot 2^K$, thus for the Magnocraft type K10 it is equal to $D=561.75$ metres); " D_M " and " D_s " are the diameters of the spherical casings that cover the main and side propulsors; "K" represents the "Krotność" factor which in consecutive types of Magnocraft takes the integer values ranging from $K=3$ to $K=10$ (for the vehicle type K10 this factor takes the value $K=10$); "n" represents the number of side propulsors.

Fig. G24. Side outlines of **eight basic types of Magnocraft**. These outlines are obtained when equations describing the Magnocraft (listed in Figure G23) are resolved for each individual value of the "K" factor. Shown are the shapes of the crew cabin, the flange with side propulsors, and the transparent top bowl with the main propulsor. Because each type of Magnocraft looks different, knowledge of the above outlines allows for fast identification of the type of vehicle in question. Although this diagram does not illustrate the vehicles' underneath, each type of Magnocraft has a symmetrical concavity in its base which corresponds exactly to the topside convexity (in this way Magnocraft of the same type are able to stack one on top of the other, forming cigar shaped configurations as shown in Figure G8). Note that in order to show all vehicles with reasonable clarity, they are not drawn to the same scale (i.e. in this illustration the outer diameters D of subsequent vehicles are linearly increased with the value of their K factor, whereas in reality these diameters are described by the exponential equation: $D=0.5486 \cdot 2^K$).

Fig. G25. Compendium of easy to use **methods of identifying the type of Magnocraft** through determining its type factor "K". (Because all technical details of this spaceship are derived from "K", when this factor is known, the rest of the vehicle's dimensions and parameters can be learned from Table G1 or calculated from a set of appropriate equations listed in Figure G23.)

#1. The method involving proportion of main dimensions. It allows for the direct determination of the vehicle's type factor "K", through measurement of the apparent height "H" of the observed spacecraft (base to top) and then determining how many times this height is contained within the outer diameter "D" of the vehicle's flange (the result of the division $K=D/H$ represents the value of "K" which must take one of the following "integer" numbers: $K=3$, $K=4$, $K=5$, $K=6$, $K=7$, $K=8$, $K=9$, or $K=10$). In the above example the apparent height "H" is contained three times in the vehicle's apparent diameter "D", thus the illustrated vehicle is type K3 (i.e. its type factor is equal to: $K=3$).

#2. The method involving counting the number "n" of the vehicle's side propulsors. The "K" factor is then determined from the following equation: $K=1+n/4$ (see equations B1 and G6).

#3. The method involving counting the number "Crew" of the vehicle's crew members. The "K" factor is equal to this number: $K=Crew$ (see Table G1).

#4. The method involving measurement of the nominal diameter "d" of the circular marks scorched during landings on the ground by the vehicle's side propulsors. The relationship between this diameter and the "K" factor is: $d=(0.5486/\sqrt{2})\cdot 2^K$ [metres] (see equation G30). Thus knowing "d", the value of "K" can either be calculated from this equation or learned from Table G1.

#5. The method involving identification of the vehicle's outlines by matching with the shapes of all eight types of Magnocraft listed in Figure G24 (K is determined through this identification).

Fig. G26. The principle involved in **the creation of a latitudinal thrust force** by the magnetic whirl of the Magnocraft. In two points, higher "H" and lower "L", a different density of the environmental magnetic field prevails. This environmental field opposes the rotation of the magnetic whirl. It forms elemental forces of magnetic resistance " T_H " and " T_L " which counteract the rotation of the vehicle's field (this resistance can be compared to that posed by the ground to a rotating wheel). The value of these elemental forces is proportional to the local densities of the environmental magnetic field. Therefore their integration along the perimeter of the vehicle's whirl produces the resultant thrust force "P" acting on the Magnocraft, causing its latitudinal flight.

Fig. G27. The method called **the "rolling sphere rule"** for determining the direction in which the Magnocraft is propelled by a particular spin of its magnetic whirl. In this method, the vehicle's whirling magnetic field is replaced by an imaginary sphere which rotates around the vehicle's central axis and whose surface touches the ground. The direction this sphere would roll is also the direction in which a given magnetic whirl propels the Magnocraft. In the illustrated example, the direction of the whirl's spinning would "roll" the imaginary sphere from east to west. Therefore the diagram presents the "solar" magnetic whirl which creates the thrust force "P" that propels the spacecraft in an east-to-west direction.

Fig. G28. The principle for **the creation of a rotary torque** " T_s " which counteracts the magnetic whirl reaction and allows for control over the rotation of the Magnocraft. The vehicle is illustrated flying in a direction from south to north. The meridional thrust force " R_H " is produced by the main propulsor " M ". The side propulsors located on the eastern " E " and western " W " sides of the Magnocraft produce stabilization forces " A_E " and " A_W " which are greater than such forces from the other side propulsors. The inclination angles " I_E " and " I_W " of these side propulsors are so controlled that each propulsor produces the same value of the vertical component of the stabilization forces, i.e. $V_E = V_W$. But the horizontal components of the stabilization forces are not equal, and thus the side propulsor located in the eastern part of the vehicle dominates over the western one, i.e. $H_E > H_W$. The difference in the values of both these horizontal components acting on the radius " R " produces the rotary torque: $T_s = R \cdot (H_E - H_W)$.

(a) The overhead view of the flying Magnocraft illustrating the forces acting in the horizontal plane and the propulsors which produce them. For simplicity, only two side propulsors, vital for producing the rotary torque, are shown. Of course, during the actual flight, all the side propulsors would usually be operational (except that the output from the other side propulsors would not be so high).

(b) The vertical cross-section of the side propulsor located in the western (W) part of the Magnocraft. Note that the total stabilization force " A_W " produced by this propulsor can be resolved into the vertical component " V_W " and horizontal component " H_W ".

(c) The vertical cross-section of the side propulsor in the eastern part of the Magnocraft. Note that by controlling the inclination angle " I_E ", a change in the relation H_E/V_E can be obtained.

Fig. G29. **The magnetic circuits** formed by the K6 type of Magnocraft producing a stationary (i.e. non-whirling) magnetic field. All three types of circuits are illustrated, i.e. the central "C", main "M", and side "S". Symbols: N, S - magnetic poles of the vehicle's propulsors.

(a) A vertical cross-section of the Magnocraft illustrating the path of particular circuits and the polarity of vehicle's propulsors.

(b) An overhead view of the Magnocraft illustrating the distribution of the magnetic circuits around the vehicle's shell. The vehicle is shown as if it is operated in the "four-circuit mode".

Fig. G30. The spinning magnetic circuits of the Magnocraft type K6. The formation of a magnetic whirl is illustrated. The strands of the magnetic field presented here should be visible on photographs taken with a very short time of exposure, i.e. when the motion of the strands is unnoticeable on a single frame. All three magnetic circuits are present. In the central magnetic circuit two "slip points" are indicated. Because the non-whirling magnetic force lines do not ionize air, outwards from these slip points the central circuit becomes invisible. Symbols: N. S - magnetic poles in the vehicle's propulsors.

(a) A vertical cross-section of the Magnocraft illustrating the polarization of propulsors and the vertical course of the whirling magnetic circuits.

(b) A side view of the Magnocraft illustrating the main and side magnetic circuits in one of their many possible positions. The location of the field's strands reflects the situation shown in diagram (c).

(c) An overhead view of the Magnocraft presenting the spinning magnetic circuits frozen in one of their many positions. Notice that the thickness of the successive strands of the field has a sinusoidal distribution, i.e. if the side propulsors "V" have their maximal output, the propulsors next to them (i.e. "U" and "W") are in the mean value of their output, whereas propulsors "X" produce no output at all - see also Figure G31 "b".

Fig. G31. The principle of the magnetic whirl formation (illustrated on an example of a K3 type of Magnocraft).

(a) The pulsation curves for the outputs from the side propulsors. The sequence of phase-shifting in the pulsation of output in successive side propulsors is illustrated. The broken lines indicate two moments of time for which the parts (b) and (c) of this Figure present the distribution of a magnetic field. Symbols: F - value of the magnetic flux; t - time; T - period of the field pulsation; A - angular position of a magnetic wave maximum; U, V, W, X - curves of the output time variation for successive side propulsors.

(b) The distribution of a magnetic field around the K3 type of Magnocraft at the moment of time $t=1/4T$. The outlines of the vehicle are shown from an overhead view. The lengths of radial broken lines coming outwards from the side propulsors are proportional to the value of output produced by these propulsors. The thick continuous line indicates the distribution of a magnetic field around the vehicle. The illustration shows the positions of two magnetic waves formed by the output from the side propulsors. Symbols: M - main propulsor; U, V, W, X - side propulsors; A - angular position of the magnetic wave under observation - here this wave is at 45° .

(c) The distribution of a magnetic field at the moment of time $t=1/2T$. Notice that the maximum of the magnetic wave now occupies the angular position $A=90^\circ$.

Fig. G32. An example of the **"ionic picture of a whirl"**. This picture represents the apparent shape of the magnetic whirl surrounding an operational Magnocraft (illustrated above is a whirl formed by a motionless single Magnocraft type K3). The visible part of the ionic picture is formed from particles of ionized air (whose spin follows the rotation of force lines of the magnetic field around the central axis of the spacecraft). The outline of the vehicle is indicated by a broken line. Continuous lines illustrate the path of the three types of magnetic circuits formed from the output of the Magnocraft's propulsors, i.e. C - central circuit looping through the main propulsor only; M - main circuits passing through the main and side propulsors; and S - side circuits looping through the side propulsors only. The force lines of these circuits are kept spinning permanently. The blackened areas indicate the shape which appears to an eye-witness. The characteristic features of this shape are: 1 - the "upper slip point" of the central pillar; 2 - the pillar of central swirling; 3 - the block of main swirling; 4 - the flange of side swirling; 5 - the bulges of the lower part of the main swirling; 6 - the "lower slip point" usually concealed behind the main and side swirlings. Note that the motion of the Magnocraft may change (disperse) the visible shape of the magnetic whirl presented here.

Fig. G33. General view looking upward at a K3 type Magnocraft. Layers of ionized air at the outlets of the propulsors are indicated. These outlets are shown as if the twin-chamber capsules of all propulsors operate in the inner flux prevalence mode (see also Figure F5). When the light is subdued these layers should be visible. Blackened areas indicate the outlets of the side magnetic propulsors (marked U, V, W, X). When the Magnocraft flies in the Southern Hemisphere, the side propulsors should emit a reddish-yellow light because their North (N) magnetic poles are oriented downwards. Crossed lines show the outlet of the main propulsor (marked M), which in the Southern Hemisphere should emit a blue-green light because its South (S) magnetic pole points downwards. Note that these colours are reversed (i.e. a reddish-yellow replaces a blue-green and vice versa) when the Magnocraft flies in the inverted position or changes hemispheres. Also, when viewed from overhead, the outlets of the same propulsors have colours which are the reverse of those seen from below.

The square shape of the propulsor's outlets as indicated above is characteristic only to the case when the vehicle's magnetic field is stationary (i.e. non-whirling). But when this field begins to spin the glowing patches of the ionized air become rounded and take the appearance as it is shown in part (A) of Figure K4. As the speed of their spinning increases, the whole air around the vehicle gradually starts to glow and the picture firstly transforms into similar to that shown in parts (d) and (e) of Figure K2, and then transforms into that shown in Figure G32.

Fig. G34. The principle of forming **a multiple image of glowing magnetic circuits in night-time photographs of a Magnocraft** taken when this vehicle flies with a throbbing mode of operation.

(a) Outline of the Magnocraft with an indication of the glowing air which flashes when being ionized along a side magnetic circuit (i.e. along the path of magnetic field force lines which join the opposite outlets of a side propulsor). Previous flashes of this glowing air are also indicated. Symbols: V - speed vector, T - period of magnetic flux (F) pulsation, t - time.

(b) Photograph of this spacecraft taken at night. Only the flashes from the air ionized by the magnetic circuit of a side propulsor are visible in darkness. The spreading of these flashes indicates the movement of the propulsor during the time of film exposure.

(c) Curve of a variation in time (t) of the magnetic flux (F) produced by the side propulsor of the Magnocraft. This variation corresponds to the beat-type curve explained in Figure F6. Such a field ionizes the air only when its value goes through a "peak". Therefore layers of air ionized by a vehicle's magnetic circuits must appear as individual flashes (instead of a continuous glow).

Fig. G35. The SUB system of lamps that indicate the Magnocraft's mode of operation. This system is an advanced version of the navigation lights used in present aeroplanes. The colour pattern of the light flashed by each lamp reflects the state of the magnetic field produced by the group of side propulsors marked with the same letter with which this lamp is labelled (see also Figure G31), whereas the dynamic state of colours from all lamps simulate the general state of the field produced by the whole vehicle.

(a) The location of SUB system lamps in the Magnocraft. The capital letters U, V, W, X are assigned to the lamps installed on the vehicle's flange. The small letters u_i , v_i , w_i and x_i label the four smaller versions of these lamps installed on the pilot's control panel.

(b) A table showing the sequence of colours emitted by each lamp of the SUB system during the magnetic whirl mode of the Magnocraft's operation. (This particular table illustrates colour signals that would accompany the magnetic whirl from Figure G31.) The table's rows show the subsequent colours that each lamp emits at a given moment of time to describe the operation of the propulsors labelled with a letter corresponding to that lamp. Observing only one lamp, it is evident that its colours change according to a sinusoidal curve that simulates the change of the magnetic field in a given group of propulsors. But observing only one colour (e.g. red), this table shows that with the elapse of time (i.e. after each quarter of the propulsors' period of pulsations) each colour moves to the next lamp. In this way the apparent motion of colours reflects the motion of the magnetic waves around the Magnocraft. Note that for the throbbing mode of operation, the colours of the lights would change in the same way in each lamp, whereas in the magnetic lens mode all the lamps would emit a yellow colour all the time.

Fig. G35. The location of SUB system lamps in the Magnocraft. The capital letters U, V, W, X are assigned to the lamps installed on the vehicle's flange. The small letters u_i , v_i , w_i and x_i label the four smaller versions of these lamps installed on the pilot's control panel.

The SUB system of lamps indicates the Magnocraft's mode of operation. This system is an advanced version of the navigation lights used in present aeroplanes. The colour pattern of the light flashed by each lamp reflects the state of the magnetic field produced by the group of side propulsors marked with the same letter with which this lamp is labelled (see also Figure G31), whereas the dynamic state of colours from all lamps simulate the general state of the field produced by the whole vehicle. The sequence of colour changes in these lights, characteristic for the magnetic whirl mode of the Magnocraft's operation, is illustrated in Table G3.

Fig. G36. Tunnels formed during underground flights of the Magnocraft, illustrated as they would be observed if the ground were transparent.

(a) Principle of penetration of the native rock by a "plasma saw" of the Magnocraft flying in an east-west direction. Symbols: 1 - the Magnocraft whose magnetic field spins and thus produces a whirling plasma saw, 2 - the breach formed by the compressed vapours expanding to the surface of the ground.

(b) Shape of the tunnel left by the Magnocraft flying in a north-south or south-north direction.

(c) Shape of the tunnel formed by the Magnocraft flying in an east-west or west-east direction. Symbols: 3 - the smooth, glossy walls, 4 - the rough and craggy floor, 5 - hardened particles of native rock which bury the lower part of the tunnel, 6 - the range of magnetic and crystallographic changes in the native rock, α - the angle of the vehicle's inclination reflecting the course of the force lines of the Earth's magnetic field.

Fig. G37. The explanation for a magnetic-lens effect produced by the central magnetic circuits of an ascending Magnocraft. This effect means that an observer who watches such an ascending Magnocraft from below sees only a twin-chamber capsule from the main propulsor, whereas the entire shell of the vehicle remains invisible to him/her. This is because in the ascending Magnocraft, the power of the magnetic field involved in the central magnetic circuit exceeds many times the power involved in the main and side circuits. Thus force lines of the central magnetic circuit hermetically surround not only the entire body of the vehicle, but also its main and side magnetic circuits. The extremely concentrated magnetic field from this central circuit interferes with light reflected to the observer. This interference manifests itself in the following two ways: (1) paths of light which pass across the field force lines are bent (i.e. the light reflected from the vehicle's body is deflected so that it does not reach the eye of an observer), but (2) light which passes along the field force lines is unaffected (i.e. the light reflected from the twin-chamber capsule reaches the eye of an observer). Therefore the observer, who watches such an ascending Magnocraft from below, can easily see a twin-chamber capsule from the main propulsor, but he/she is unable to see all the other parts of the vehicle which are hermetically sealed in magnetic force lines (see also Figures F5, L5, and L4). Symbols: 1 - path along which light is unable to pass through; 2 - unaffected path of light.

Fig. G38. The dependence of the shape of landing site from the height (h_x, h_y, h_z) at which a single Magnocraft hovers. The illustrated shapes are typical for the following situation: the base of a single vehicle is parallel to the surface of the ground, the axis of the main propulsor is parallel to the central axis of the vehicle, the position of the vehicle is upright, the magnetic circuits are spinning. When any of the above factors change, the shape of the landing site must also alter. For example a Magnocraft with a slanted base produces an elliptical landing, the tilting of its main propulsor shifts the central scorching (d_a/d_i) towards the magnetic north or south (see Figure K10B), turning the vehicle upside down eliminates the ring from side circuits (S), whereas a stationary (non-whirling) field produces a circle of evenly spaced scorched patches located under outlets from side propulsors.

a) The shape of marks formed when the height of hovering (h_x) is greater than the critical span (h_c) at which the central column of main magnetic circuits (M) separates into two loops. In the upper part of the drawing a vehicle's magnetic circuits are illustrated. A single Magnocraft has three kinds of such circuits, marked as: central (C), main (M), and side (S); e.g. the main circuits (M) join the outlets of the main propulsor with the outlets of all side propulsors (see Fig. G29). In the lower part of the drawing the landing site scorched by these circuits is shown. The distinct features of this site are two concentric rings: the outer having the maximal diameter " d_o " close to the nominal diameter " d " of the vehicle, and the inner ring with the inner diameter " d_i ". Because of the symmetry in bending the magnetic circuits, their intersection with the surface of the ground "G-G" fulfils the condition (G31): $d-d_o=d_i$ -zero. After the transformation this condition leads to an extremely important corrective equation (G32): $d=d_o+d_i$, which makes the determination of nominal diameter " d " of the marks scorched on the ground independent from the height " h_x " at which the vehicle hovered. Therefore such landing sites (Fig. K10A) allow for precise measurement of these vehicles.

b) A mark scorched when the vehicle hovers at height " h_y " which is smaller than " h_c " but larger than the span " h_s " of the side circuits. Apart from the ring of diameter " d_o " (smaller than " d ") a further patch with the intensive centre of the diameter " d_a " is scorched. The corrective equation (G33) for this landing takes the form $d=d_o-d_a$ (see Figure K10B).

c) Concentric rings scorched when a given vehicle landed on its base, or hovered at a height " h_z " smaller than span " h_s ". In this case the inner diameter of the outer ring is equal to the outer diameter D of the vehicle.

Fig. G39. Typical landing marks left by the Magnocraft hovering close to the ground (i.e. when the vehicle's main magnetic circuits "M" penetrate the soil and reverse their paths underground). See also case (b) in Figure G38.

(a) Cross-section of a type K3 Magnocraft and the ground showing distribution of the magnetic field from the main circuits "M". Note that when the spacecraft is hovering so close to the ground, damage to vegetation occurs only at points where magnetic circuits enter the soil. Symbols: P_M - the main propulsor, M - the main magnetic circuits whose force lines loop through the main and side propulsors; K3 - the crew cabin, P_U - one of side propulsors; G - the surface of the ground; I - the inclination angle of the Earth's magnetic field.

(b) An overhead view of the ring of scorch marks left by this vehicle during the throbbing mode of operation. Symbols: 1 - the mark from the column of the magnetic field produced by the main propulsor (in the Northern Hemisphere this mark is dislocated towards magnetic north from the centre of the landing site); 2 - one of the burn marks produced by side propulsors; d - the nominal diameter of the vehicle's propulsion unit (i.e. diameter of the circle that passes through the centre of the side propulsors).

(c) An overhead view of marks formed during the magnetic whirl mode of operation. Apart from the scorch patches "1" and "2" also formed during the throbbing mode of operation, the magnetic whirl additionally burns the circular trail "3". Note that when the vehicle hovers at a height greater than the critical " h_c " (see Figure G38) then the central scorch patch "1" expands into an inner scorch ring (shown in Figure G38 "a").

Fig. G40. **The marks left on landing sites by the inverted Magnocraft** hovering just at the height where its magnetic circuits are tangential to the surface of the ground. The illustrated pattern of marks is not distorted by any slanting of the magnetic axes of the propulsors (as would be the case during a real landing). Symbols: C - the pillar of the central magnetic circuit and the mark caused by it; M - the main magnetic circuits and marks caused by them; S - the side magnetic circuits (note that in this orientation of the vehicle they do not reach the ground).

(a) A cross-section of the vehicle and ground, showing the course of the magnetic circuits and the range of ground affected by them.

(b) The series of concentric lines scorched by individual magnetic circuits during the throbbing mode of the Magnocraft's operation.

(c) An overhead view of the almost complete scorched circle devastated during the magnetic whirl mode of this Magnocraft's operation.

Fig. G41. **The formation of a circle of swirled plants caused by a low hovering single Magnocraft** whose magnetic circuits loop entirely in the air. Illustrated are: 1 - the stationary Magnocraft type K3 whose propulsion system operates in the magnetic whirl mode, 2 - the spinning magnetic circuits of the vehicle (these spinning circuits ionize the air, causing it to rotate also), 3 - the whirlwind of air (sometimes called the "devil's whirl") formed by the vehicle's spinning magnetic field, 4 - the nest of plants aerodynamically flattened and swirled in the direction of the whirlwind's rotation.

Fig. G42. Examples of various **landing patterns scorched on the ground by Magnocraft-like vehicles arranged in flying systems**. The pattern (A) resembling a "four-leaf clover" is formed by the single cell of such a system (similar to the cell shown in Figure G16 "a"). Pattern (B) is scorched by a flying platform six-rows wide, in this case consisting of forty-six cigar-shaped configurations coupled together with their side propulsors. Pattern (C) represents a circular flying system eight-rows wide. For each example of the landing pattern shown are:

- a complicated curve (outline) of scorched vegetation left by side propulsors around the peripheral of an entire system (see a **thick line** composed of small half-circles),

- outer outlines of the cigar-shaped stacks of vehicles that participated in a configuration which scorched a pattern illustrated (i.e. complete circles drawn with **thin lines** represent overhead outlines of cigar-shaped arrangements that are positioned upright - see also Figures G16 and G8); these outlines are shown to realize the number and mutual positioning of the individual vehicles that scorch a given pattern, but - of course - they would not be visible in real landings,

- a net-like pattern of marks (**thick dots**) scorched on the ground by the main propulsors of each cigar-shaped arrangement,

- the principles for determining equations that describe two basic dimensions of each flying system (these dimensions are marked with **symbols** " d_u " and " d_i ", and they should be measured in directions slanted 45 degrees towards each other).

Chapter H.

THE FOUR-PROPULSOR SPACECRAFT

This chapter is to present the next vehicle the propulsion of which utilizes Oscillatory Chambers. This vehicle is called the "**Four-Propulsor Magnocraft**", or the "Four-Propulsor Spacecraft". In order to clearly distinguish it from the vehicle described in chapter G, that previously described vehicle will be referred here to as the "**discoidal Magnocraft**" or simply the "Magnocraft". The Four-Propulsor Spacecraft, after the discoidal Magnocraft, represents the second basic application of magnetic propulsors. While the operation of the first propulsion system is the most optimal if utilizing the so-called "twin-chamber capsule", this second basic spacecraft requires the use of a second arrangement of Oscillatory Chambers, called the "spider configuration" - see subsection F6.2. Each propulsor of the Four-Propulsor Spacecraft consists of one such spider configuration. A magnetic field produced by this configuration displays all the attributes required for flight and for manoeuvring a space vehicle. This is the reason why the Four-Propulsor Spacecraft can limit its entire propulsion system to four propulsors only (contrary to the eight side propulsors plus one main propulsor minimum required for the flight of the discoidal Magnocraft). Because the number of propulsors is the most distinct feature of this spacecraft, its name incorporates this number. Each of its propulsors is attached to the corner of crew cabin. Thus, the four barrel-shaped propulsors protruding outside the main body of the spacecraft also form a visual feature very characteristic of this type of vehicle.

Where the chronology of completion of subsequent Magnocraft is concerned, the Four-Propulsor Spacecraft most probably will be built as the third vehicle utilizing Oscillatory Chambers (after the discoidal Magnocraft based on spider configurations, and the discoidal Magnocraft based on twin-chamber capsules are completed - see period 1C in the classification provided in subsection J3). The reason for this is that the Four-Propulsor Spacecraft requires much more advanced controlling systems than the ordinary Magnocraft. Thus such advanced control systems become developed only after our civilization exploits discoidal Magnocraft for some time and thus gathers appropriate knowledge and experiences about vehicles with magnetic propulsion. Although spider configurations used in Four-Propulsor Spacecraft are much simpler to build from twin-chamber capsules used in the propulsors of discoidal Magnocraft, these higher control requirements will cause the vehicle discussed here to wait slightly longer for its turn to be completed.

H1. The general design of the Four-Propulsor Spacecraft

The general design of the Four-Propulsor Spacecraft is shown in **Figure H1**. This vehicle is composed of two basic components, i.e. body (2) and propulsors (3).

The main body (2) represents the most apparent part of this vehicle. Usually it takes the form of a cubicle, or a hut. On the top of this cubicle (or hut) a gable roof (1) shaped as a small pyramid is placed. This roof provides the vehicle with the required aerodynamical properties, and simultaneously it allows for the recognition at a distance the type of the Four-Propulsor Spacecraft.

The main body (2) of this vehicle is occupied by its living compartment. This

compartment is hermetically covered with a shell made of material magnetically impenetrable (i.e. displaying the property called "magnetorefectiveness".) Therefore the interior of the Four-Propulsor Spacecraft is screened from the access of dangerous magnetic field. The living compartment houses the crew cabin, life support system, passenger decks, cargo holds, log computer, control devices, navigation instruments, equipment utilities, etc.

The walls of the living compartment are made of a mirror-like transparent material, whose degree of transparency and light reflectiveness can be regulated by the crew. Therefore during flights at night the crew can make these walls completely transparent, thus making the vehicle look like it is made of glass. On the other hand, during flights near the Sun they can transform the walls, making them completely reflective so that inside the spaceship a pleasant shade can prevail. In other cases of flights the walls can be smoothly controlled at any degree of transparency between these two extremes. Therefore there will be no need to provide the vehicle with windows. However, to enable crew and passengers to go into (and from) the deck, the Four-Propulsor Spacecraft must contain a door.

At all four corners of the living compartment, individual, barrel-shaped or jug-shaped propulsors (3) are placed. Each of these propulsors produces its own column of a spinning magnetic field, whose core is marked as (4) in Figure H1. Within each column, a dark core (4) and lighter crust (5) (or vice versa - depending if propulsors operate with the inner or outer flux prevalence) can be distinguished. For reasons described in the later part of this chapter (see subsection H4), these columns will be clearly visible for outside observer, who perceives them as kind of black, fast spinning, drills.

The general design of a propulsor for the Four-Propulsor Spacecraft is shown in **Figure H2**. It consists of five Oscillatory Chambers arranged together into the "spider configuration" and covered with a magnetically penetrable shell. The propulsor's shell can take either the shape of a barrel (see (1) in part (a) of Figure H2) or the shape of a jug (see (2) in part (b) of Figure H2). The propulsor's spider configuration is composed of the main Oscillatory Chamber (M) which is surrounded by four side chambers (U, V, W, and X).

H2. The operation of the Four-Propulsor Spacecraft

The operation of the Four-Propulsor Spacecraft is slightly different from the operation of both of the magnetic propulsion systems utilizing Oscillatory Chambers, i.e. from the discoidal Magnocraft and Personal Propulsion System. But this operation is also quite similar. In the Four-Propulsor Spacecraft, each of its four propulsors forms a kind of miniature Magnocraft. This means that each of its propulsors is capable of independent flight and manoeuvring. Therefore the living compartment of the Four-Propulsor Spacecraft is carried by something like four independent, miniature Magnocraft, flying on parallel paths, each of them joined to the main body. Every propulsor produces its own column of magnetic field. Thus during landings every propulsor can make its own scorch mark on the ground. This mark, depending on the mode of propulsors' operation (i.e. inner or outer flux prevalence), is either composed of a characteristic well-scorched central mark and a less visible ring of peripheral scorching (see 6 in Figure H1), or contain a slightly scorched central mark surrounded with a more apparent ring of peripheral scorching.

The arrangement of the Oscillatory Chambers into spider configurations gives to propulsors of the Four-Propulsor Spacecraft all the attributes that previously were provided

by the entire propulsion unit of the Magnocraft - compare subsections F6.2 and G1.2. For example, it is able to produce a spinning magnetic field, whose parameters are strictly controlled. Therefore even when acting in isolation from the rest of the spacecraft, this configuration would be able to fully control its flight and manoeuvres. Thus, with a large simplification, the flying of the Four-Propulsor Spacecraft could be described as depending mainly on an appropriate coordination of the actions of all four propulsors, so that the total effect is to pull the spacecraft in the desired direction. However, as readers will probably realize from the content of this chapter, detailed principles of controlling this vehicle are more complex than principles of controlling the discoidal Magnocraft.

The propulsors of the Four-Propulsor Spacecraft are capable of producing two kinds of magnetic whirls: local and vehicle. Each propulsor produces a **local** magnetic whirl which involves its own output spinning around its own axis "m". In Figure H1 these four local whirls are marked as spinning columns (4) of magnetic field. Simultaneously all four propulsors can cooperate in producing an amplitude magnetic whirl that circulates around the entire **vehicle**. But this whirl is not as efficient as the one formed by the Magnocraft. Thus it is switched on only in special circumstances (e.g. during fast flights at high altitudes or in free space). An entirely different principle is employed in the creation of this whirl than that used in an ordinary Magnocraft. A rotation of amplitude (buoyancy) is employed here instead of rotation of the magnetic circuits used in the Magnocraft. Also it rotates around a different path. Therefore, the whirl just suffices to create an inductive shield that protects the Four-Propulsor Spacecraft from material objects directed at it (e.g. missiles or meteorites), but it is insufficient to produce an effective vacuum bubble. For this reason, as this will be explained later in this chapter, the Four-Propulsor Spacecraft will not display any of the attributes which depend on the creation of an effective vacuum bubble.

All propulsors in the Four-Propulsor Spacecraft produce a very high magnetic output. At the same time, the like-poles of these propulsors are oriented in the same direction (e.g. "N" poles of each propulsor towards the roof of the vehicle). Therefore, if their output was non-spinning, they would repel one another with a powerful force. However, because their output spins, they create the relativistic phenomenon described below, which significantly reduces the forces of this reciprocal repulsion. Moreover, the magneto-dynamic effect described in subsection G6.3.2 produces forces acting in the opposite directions, and therefore further neutralizing the repulsive interactions among propulsors. In this way, the force stability of the Four-Propulsor Spacecraft is achieved in a dynamic manner. To maintain this stability, the output from the spacecraft's propulsors must always be spinning. For this reason, the basic requirement of the mutual neutralization of inter-propulsor interactions explained above is that the magnetic field produced by each propulsor must spin all the time, even when the vehicle is motionless.

The relativistic phenomenon employed in neutralization of interactions between propulsors of the Four-Propulsor Spacecraft is quite well known amongst experts in magnetism. It depends on extending the effective length of a bar magnet as the result of a very fast spinning of its force lines around the magnet's central axis - see subsection G5.3. If the force lines spin fast enough around the magnet's central axis, their curvature contracts, and as a result the flux is limited to an area just around the magnet. This transforms a short bar magnet so that it acts like a very long thin one. Of course, it is not possible to mechanically spin a magnet fast enough to obtain the desired results. But the spider configuration simulates this spinning by forming a rotating magnetic wave similar to the wave produced by the side propulsors of the Magnocraft (see explanation in subsections G7.2 and F6.2). This

wave is formed due to the synchronization of subsequent outputs from four side Oscillatory Chambers. It spins around the propulsor's main magnetic axis "m". It can reach any desired angular velocity, causing the formation of the relativistic phenomenon which keeps the Four-Propulsor Spacecraft stable.

H3. The properties of the Four-Propulsor Spacecraft

The differences in the operation of the Four-Propulsor Spacecraft, in comparison to the operation of the Magnocraft, cause differences in the properties of both these vehicles. In general, the Four-Propulsor Spacecraft is not able to create an effective vacuum bubble around its surface (see subsection G9.1). Therefore all properties connected with the existence of the protective vacuum bubble do not apply to this vehicle. For example its flights are accompanied by friction with the atmosphere and by the sound effects produced from such friction (e.g. by a **loud bang** after passing the sound barrier). Therefore the vehicle's speed in the atmosphere will also be limited by the heat barrier. However, in free space, its speed may still be close to the speed of light. The absence of a vacuum bubble protecting this spacecraft will also make its flights through solid matter impossible (e.g. in rocks). The manoeuvrability of the Four-Propulsor Spacecraft will be on the same level as the manoeuvrability of the Magnocraft. But its ionic picture will have quite a different shape and features. During the ascent of this vehicle the picture will contain four very distinctive columns of ionized air, placed around the perimeter of the amplitudinal magnetic whirl that surrounds the spacecraft's shape (e.g. a gable-roofed hut). This hut-shaped whirl will be much less intensive than the four local whirls produced by the propulsors. During the descent of the Four-Propulsor Spacecraft, the local whirls from its propulsors can diminish, thus only a resultant hut-shaped whirl may remain visible.

A number of Four-Propulsor Spacecraft are able to couple with one another into several configurations known from the Magnocraft. Two or more of these vehicles can join together forming an equivalent of the cigar-shaped flying complex (see Figure G8) or an equivalent of the spherical flying complex (see Figure G7). Also, the set of flying cigars formed in this way may join further into a higher ranking arrangement, representing an equivalent to the flying system or flying cluster of the Magnocraft (see Figure G6).

The Four-Propulsor Spacecraft may also form configurations with the discoidal Magnocraft. In these configurations the spacecraft clings to the Magnocraft in such a way that the outlets from its four propulsors exactly align with the outlets of the Magnocraft's side propulsors. In order to enable such an alignment, the Four-Propulsor Spacecraft will only be built in such sizes which correspond to the sizes of the Magnocraft (i.e. which allow for the exact alignment of outlets from propulsors of both these vehicles). For this reason, eight separate types of the Four-Propulsor Spacecraft will also be distinguished. Their dimensions are provided in **Table H1**. The subsequent types of this spacecraft are marked as T3, T4, ..., and T10. Each of these types corresponds to an appropriate type of Magnocraft (e.g. type T3 of the Four-Propulsor Spacecraft corresponds to type K3 of the Magnocraft, T4 to K4, etc.).

H4. The external appearance of the Four-Propulsor Spacecraft

The external appearance of the Four-Propulsor Spacecraft is shown in Figure H1.

Because of the dynamic neutralization of magnetic forces acting between subsequent propulsors, the shape and dimensions of the living compartment in the Four-Propulsor Spacecraft is not limited by strict stability conditions, as was the case with the Magnocraft (see subsection G4). Therefore, the main design criteria for this spaceship are: (1) enabling the magnetic coupling of a given vehicle with discoidal Magnocraft, (2) allowing for the fastest and simplest identification of a given vehicle, (3) providing the highest comfort for the crew and passengers, (4) ensuring the easiest landing, (5) supporting the easiest carrying and unloading of the transported cargo.

The above criteria allow for a relative freedom in designing the shape of the Four-Propulsor Spacecraft. However, because of the highest usefulness of a cubical shape for the transporting of people and cargo, most frequently this vehicle will be built as a cubicle with a roof resembling a small pyramid - such as shown in Figure H1. On some occasions it can take the shape of a hut-like shape also with a pyramidal roof. Of course, on special occasions many other forms can be used, for example spherical, rocket-like, or cone-like (because these other shapes will be used rather rarely, an illustration of their characteristics is not provided here).

Criteria number (1) and (2) listed above superimpose several mathematical conditions on the dimensions of the Four-Propulsor Spaceship. In order to satisfy these conditions the dimensions must fulfil various equations the deduction of which will be omitted here, but which are listed at the bottom of Table H1. Because of these equations, the dimensions of all types of the Four-Propulsor Spaceship will be strictly defined. Their values are listed in Table H1. The availability of this table allows for an instant determining of all the details of a given vehicle (e.g. dimensions, weight, propulsors) if only one of its data (e.g. the number of crew members) becomes known.

The vital elements of the appearance of the Four-Propulsor Spaceship are long, thin columns of the spinning magnetic field produced by each propulsor. Because these columns possess clearly defined boundaries and the magnetic field which forms them is pulsatory, they will represent a kind of trap for the light. During the day to the casual witness they will appear as columns of a black material (i.e. black bars - see subsection G3.4). Because they will be in a permanent spin, they will give an observer the impression of looking at a set of four black drills rotating with enormous velocity.

These columns will assume an entirely different shape if witnessed during the night. Because they ionize air, their appearance on the background of a black environment will resemble a "white noise" usually seen on screens of TV sets (this "white noise" is the picture composed of white and black moving dots which appears on the screen of a TV set if this set remains switched on but it does not receive any station).

In every column of the magnetic field yield from propulsors of the Four-Propulsor Spaceship to the environment two areas can be distinguished, i.e. the darker core (4) and the lighter crust (5) - see Figure H1. The core (4) is formed because the output of the main Oscillatory Chamber (marked M in Figure H2) of the propulsor's spider configuration spins around its own magnetic axis "m". But the four segments of the crust (5) are formed because the four columns of magnetic field produced by the side Oscillatory Chambers (marked U, V, W and X in Figure H2) rotate at some distance from the magnetic axis "m". These four side crust segments and their central core appear like elements of a dark drill (this is because they are attached to each other and spin together around the same central axis "m" just like body of a drill).

As it was explained above, for an outside observer during the daytime the appearance

of these two parts of the field's columns make them look like spinning black drills. In turn these drills bear some resemblance to helicopter blades, except that they are quite narrow and long instead of wide and short. This, combined with the rectangular, helicopter-like shape of the vehicle, could cause that some amateur witnesses not acquainted with the latest aircraft technology may occasionally confuse the Four-Propulsor Spacecraft with a multiple-rotor helicopter.

H5. Identification of the type of Four-Propulsor Spacecraft

To allow other space travellers to identify from a distance the type of Four-Propulsor Spacecraft they are approaching, significant geometrical features of this vehicle are built in appropriate proportions. Therefore the identification of its type is very simple and can be done by a computer. It only requires to determine the mutual proportion between the vehicle's significant dimensions. In turn, these proportions describe the type factor "T" of a given Four-Propulsor Spacecraft. The value of this "T" factor is equal to the ratio of the crew cabin total height "H" to the height "Z" of the roof, or to the height "h" of a propulsor (see Figure H1):

$$T = H/Z = H/h \quad (H1)$$

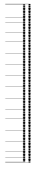
Each type of Four-Propulsor Spacecraft has a corresponding type of discoidal Magnocraft (e.g. T3 has K3, ..., T10 has K10). For this reason, the shape and dimensions of the Four-Propulsor Spaceship were so designed, that they also allow for the determining of the type factor "K" of the Magnocraft to which a given spaceship corresponds. This "K" factor can also be determined through dividing the total height "H" of this spacecraft by the height "Z" of its roof, or by the height "h" of its propulsors, i.e.:

$$K = H/Z = H/h \quad (H2)$$

When a given Four-Propulsor Spacecraft reveals the value of its factors T or K, all its remaining data can either be learned from appropriate tables (e.g. see Table H1) or can be determined from appropriate mathematical relationships describing these vehicles (e.g. see equations listed under the Table H1).

Table H1. Data sheet of construction parameters for eight basic types of the Four-Propulsor Magnocraft. The interpretation of symbols used is shown in Figure H1. The dimensions of the square base version of these vehicles (cubicles) are determined on the assumption that the mutual distance "l" between magnetic axes of the subsequent propulsors is described by the equation: $l = 0.5486 \cdot 2^{(T-1)}$ [meters]). All linear dimensions from this table are expressed in meters.

No	Type	Crew cabin dimensions square base vehicles (cubicles)	Distance between propulsors d	Dimensions H	Weight G	Volume Z	Angle ANG	Base width lw	Base length lb	Height h	Area a	Volume v	Weight e	
1.	T3	2.01	1.46	0.73	2.19	3.10	22.5	2.86	1.19	2.19	0.73	0.18	3	0.5
2.	T4	4.11	3.29	1.09	4.38	6.20	30	5.37	3.10	4.39	1.09	0.27	4	4
3.	T5	8.35	7.02	1.76	8.78	12.41	33.75	10.32	6.89	8.78	1.76	0.43	5	33
4.	T6	16.82	14.64	2.93	17.55	24.82	27	15.64	7.97	17.56	2.93	0.73	6	270
5.	T7	33.86	30.09	5.02	35.11	49.65	30	43.00	24.83	35.11	5.02	1.25	7	2 164
6.	T8	68.02	61.44	8.78	70.22	99.30	32.14	59.46	37.36	70.22	8.78	2.20	8	17 312
7.	T9	136.54	124.84	15.60	140.44	198.61	28.128	125.123	86.66	20140.44	15.60	3.90	9	9138 497
8.	T10	273.86	252.79	28.09	280.88	397.22	30	344.00	198.61	280.88	28.09	7.02	10	1107981



The list of equations that describe the mutual interrelations occurring between variables presented in the above table:

$$\begin{aligned} T=H/Z \quad T=K \quad Z=h \quad d=l\sqrt{2} \quad a=h/4 \quad d^2=l_w^2+l_b^2=2\cdot l^2 \quad l=0.5486\cdot 2^{(T-1)} \quad [m] \\ Z=H/T \quad H=l \quad Z=l/T \quad \text{ANG}=\arctan(lb/lw) \quad h=l/T \quad \text{Weight}=0.05\cdot l^2\cdot H \quad \text{Crew}=T=K \end{aligned}$$

Fig. H1. A Four-Propulsor Magnocraft which, after two subsequent implementations of a discoidal Magnocraft - see subsection J3, represents the third basic application of magnetic propulsors (the fourth basic application of these propulsors is Magnetic Personal Propulsion System described in chapter I). Illustrated are: the appearance, components, and basic dimensions of this vehicle. Symbols: 1 - a gable roof; 2 - a cubical living compartment containing crew cabin; 3 - one of the four propulsors; 4 - a core of high density spinning magnetic field yield from the M chamber of the vehicle's propulsors (see "M" in Figure H2), 5 - a crust of spinning segments of magnetic field yield from the U, V, W and X chambers of each vehicle's propulsor; 6 - one of the four scorch marks left on the ground by a low hovering vehicle. Dimensions: H, Z, G, W - describe the size of a cubical-like crew cabin (i.e. total height, roof height, wall height, width); $d, l_w=l_b=l$ - describe the span of the vehicle's magnetic axes; h - describe height of propulsors.

Fig. H2. The shape, dimensions, and components of **propulsors utilized in the Four-Propulsor Magnocraft**. These propulsors utilize the arrangement of Oscillatory Chambers called the "spider configuration" (for details see Figure F7). Symbols: M, U, V - subsequent chambers of the spider configuration; 1 - barrel-like aerodynamic shell that may cover the propulsor (note that this shell can take any form, from barrel-shaped to rectangular; not just the shape shown in this illustration); 2 - jug-like aerodynamic shell that may cover the propulsor; a - side dimensions of cubical Oscillatory Chambers; h - the height of the propulsor; N, S - the orientation of magnetic poles in subsequent Oscillatory Chambers; m - magnetic axis of the propulsor.

(a) The barrel-shaped propulsor.

(b) The jug-shaped propulsor.

Chapter I.

MAGNETIC PERSONAL PROPULSION

Almost everyone at some stage dreams about flying. Let us now remind ourselves how this dreaming looks like. Our brain swells with the decision of ascending, and the body obediently and weightlessly followed directives of the mind. We have no need to flap with our hands or fidget with our legs. Whatever we thought of, it was immediately completed.

It is interesting where this divergence of our dreams with logic originates from. After all the logic says that flying should require energetic flapping, as all birds always earn their flight with heavy wings waving. The author believes that our intuition already knows what is going to come in a not-too-distant future. Thus the effortless dreams of our flights probably are intuitive pictures of the propelling devices the completion of which is about to occur.

How our descendants will complete their flights can already be deduced from the operation of discoidal Magnocraft flying in the inverted position. This operation is illustrated in Figure I1 (a) - see also Figure G3 (b). Let us recap it briefly. The eight side propulsors (U, V, W, X) repel the vehicle from the environmental magnetic field thus producing the lifting force which carries it into the space. Simultaneously a single main propulsor (M) placed in the centre, is attracted by the environmental magnetic field thus producing a stabilizing force which fixes the orientation of the Magnocraft in space and controls its ascent, hovering and descent.

It's easy to predict that one day Oscillatory Chambers will be miniaturized to the size of only a few millimetres, without any significant decrease in the output. Therefore, the propulsors of the Magnocraft can be built small enough to allow for their assembly into articles of human apparel (i.e. belts and shoes) without causing any noticeable discomfort or change in the size and weight of these articles. In this manner a new type of the propulsion system will be obtained, which is called here "magnetic personal propulsion system". This new propulsion system will provide all the advantages of the Magnocraft, simultaneously its propulsors hidden inside of the garment will remain almost unnoticeable for an outside observer. Thus, without the use of any visible vehicle, it will provide the wearer with the ability to fly in the air or space with a speed limited only by the performance of physiological functions (especially breathing), with enormous physical strength, with invisibility, and with protection from the action of any weapon that could be used against him/her.

The propulsion unit utilized in magnetic personal propulsion system represents only a slightly modified unit of the Magnocraft. It is shown in **Figure I1** (b). The main characteristic of this new unit is that its framework creates a human-shaped structure. Similarly as is the case with the Magnocraft, personal propulsion also contains a set of eight side propulsors (marked U, V, W, and X) and a set of two main propulsors (in Figure I1 (b) marked M_L, M_R). Both these sets are connected by the body of the user into one effective propulsion system. The body performs the function of a "carrying structure" or a framework. Each propulsor from both sets contains a single twin-chamber capsule, only a few millimetres in size, which is assembled inside of a spherical casing. The casing and its capsule are similar to that used in the Magnocraft (see Figure G1), only they are drastically miniaturized. Each of the twin-chamber capsules is composed of two small Oscillatory Chambers inserted one inside the other, as was described in subsection F6.1.

Where the order of completion of subsequent propulsion systems is concerned,

magnetic personal propulsion will be build as fourth system on Earth utilizing Oscillatory Chambers (see period 1D in the classification explained in subsection J3). The reason for this will be the initial technological difficulties with the miniaturization of twin-chamber capsules to the sizes small enough to be applicable for this type of propulsion system.

11. The standard garment of personal propulsion

The standard garment of personal propulsion is shown in **Figure I2**. This garment includes a number of components resembling the elements of a typical human dress. Their only difference from the ordinary dress depends on the ability to perform propelling functions in addition to the dressing functions. Thus for an unfamiliar observer it will not be possible to visually detect such a propulsion, and the existence of it will become apparent only after propelling effects caused by it become revealed (e.g. the user will ascent into the air).

The following elements compose a standard garment of a personal propulsion system. Shoes (1) contain miniature magnetic propulsors built into the soles. These are called "main propulsors". Apart from them, the personal propulsion garment uses another eight miniaturized propulsors assembled into a segmented belt (2). These are called "side propulsors". The garment also includes a kind of magnetoreflective "skin". This "skin" consists of a one-piece costume (3) with a protective hood (5), and gloves (4). These are worn to prevent the magnetic field from looping through the person's body. The hood (5) and gloves (4) are so designed that they hermetically join with the costume (3), thus forming a single-piece garment. At the back of the user's neck a controlling computer and sensors which reads the controlling signals directly from the head's bio-currents are build in.

Each part of the garment's "skin" is made of a magnetoreflective material, which cannot be penetrated by a magnetic field, so that it protects the body from the destructive action of a strong, pulsating magnetic field. This material deflects the magnetic field in a way similar as a mirror deflects the light. Even though the face remains uncovered, the magnetic field cannot penetrate the brain because the design of the hood makes the looping of the force lines impossible. A graphite-based cream can be used to additionally protect the facial skin. (It was discovered that graphite is the best natural magnetoreflective material.) But this cream which stops the magnetic field from acting, also gives the face a strange colouring. In the case where there is a danger of the layer of protective cream being torn from the face (i.e. as the effect of work being performed), the user needs to wear a special mask on his/her face (similar to the type used by the "spiderman" and "superheroes" in American movies, or to masks favoured by bank robbers).

The special gloves (4) complementing the magnetic personal propulsion are so designed that they not only protect the fingers from the magnetic field, but also from electric charges. These charges are a by-product of the propulsors' operation. The pulsating magnetic field generated by the side propulsors (2) induces a strong electrical field around the person's hip. Charges from this field accumulate at the tips of the person's fingers. The forces of relative repulsion from these charges part the fingers (similar to the way they do with the foils of an electroscope). This action is too weak to cause bodily injury, but after a length of time could cause a painful stretching of the skin and muscles. The web-like connectors between the fingers of the gloves protect the wearer from these unpleasant effects.

When the wearer of this costume is required to do heavy physical work, he/she wears two additional enhancement propulsors, which are placed on the joints of the wrists (similar

to our wrist watches - see (3) in Figure I4 (a)). These propulsors, by cooperation with the magnetic framework created by the other propulsors, give unusual strength to his/her hand movements. Therefore, a person so equipped is able to lift loads weighing several tons, remove strong structures, tear trees out by the roots, and so on.

I2. Principles of operation of magnetic personal propulsion

The principles of operation of magnetic personal propulsion are illustrated in **Figure I3**. The left part of this Figure shows the **external** (or outside) forces created due to the interaction of the personal propulsion with the environmental magnetic field. Eight side propulsors are assembled into the belt, and are oriented so as to repel the Earth's magnetic field. By this they create a lifting force "R" which carries the wearer. The miniature main propulsors in the soles of the shoes are oriented to produce the attraction with the environmental magnetic field. Thus they form stabilization forces "A" which determine the position required by the person during flight. Both forces "R" and "A" are produced by the Earth's magnetic field interacting with the field generated by the main and side propulsors. This is why the product of this group of interactions can be called the "outside" forces. Apart from these, the personal propulsion produces another type of interaction, which can be called **internal** (or inside) forces. These are formed by the relative interactions between the subsequent propulsors themselves. The "inside" forces are shown in the right part of Figure I3. They include:

B - The forces of relative repulsion occurring between both of the main propulsors from the soles of the shoes. The repulsive forces "B" are created because the magnetic poles of both these main propulsors are oriented in the same direction.

E - The forces of relative repulsion between each of the eight side propulsors from the belt. These forces "E" will cause the outward tension and expansion of the belt.

Q - The forces of relative attraction between each main propulsor from the shoes and each side propulsor from the belt. These attraction forces "Q" are created because the magnetic poles of the two main propulsors are oriented in opposition to the poles of all of the side propulsors.

Note that there is a close correlation between the sets of "outside" and "inside" forces formed in the personal propulsion, and the similar forces formed in the structure of the Magnocraft - see Figure G20 and subsection G4.3.

The presence of the outside and inside forces benefit the person because they join the separate elements of the propulsion into one solid system. The operation of this system is so determined that opposing forces are relatively balanced. For example, when the carrying "R" and stabilizing "A" forces tense the wearer, simultaneously the forces "Q" appear which compress his/her body along the same direction. This system of mutually balanced forces creates a "magnetic framework" which holds and carries the person in a way identical to that of the Magnocraft being carried by its magnetic framework. There is, however, a condition imposed on the mutual balancing of "R/A" and "Q" forces. This condition states that the user must not bend his/her legs, because such bending causes an instant advantage of forces "Q" (whose values increase exponentially if the distance between propulsors from the shoes and propulsors from the belt is decreasing) over forces "R/A". If a user breaks this condition, once bent his/her legs will be pulled rapidly into a squat position in which they will remain for the rest of the flight. Therefore flying in a cross-legged squat position is one of two distinctive

stances characteristic for the wearers of a magnetic personal propulsion system (the second stance is the legs straighten and set apart - its description is to follow). It is interesting that flights of medieval devils was frequently described as with cross-legged squat position.

Another condition imposed by this propulsion is to balance the repulsive forces "B" acting between the legs. This requires the shoes which hold the main propulsors to be parted at all times when the personal propulsion is used. The fulfilment of this condition gives the user the other stance which is very distinctive for wearers of this personal propulsion and allows for their identification. Their legs must be kept apart not only during all flights, but also when aiding the usual manner of moving, such as walking, swimming, etc. Although this looks quite clumsy and strange, the overall performance of a user wearing such propulsion is not disadvantaged, and may surprise and impress any non-accustomed witness.

Independently from the static force interactions, a personal propulsion system will also produce dynamic actions. These actions will be caused by the magnetic whirl that spins around the hips of a user. The formation of this whirl will be almost identical as that in the Magnocraft (i.e. by 90° phase shift between pulsations of subsequent side propulsors) or in asynchronous electric motors. It will provide personal propulsion with numerous desirable advantages, for example it will form a kind of "inductive shield" around the user making him/her resistant for the action of any weapon (all bullets shoot in his/her direction will simply vaporate).

The next type of interaction in personal propulsion will be configurative actions. They will result from the fact of surrounding the user with a magnetic field taking appropriate spacial distribution. After the appropriate selection of the shape of this distribution personal propulsion is able to form a magnetic lens capable to deflect the light thus making the user invisible for naked eye observation (see the description from subsection G9.4).

To control the personal propulsion specially adjusted micro-computers are used. These computers read bio-currents from the back of the neck and translate them into control signals. So just to think of moving up, sideways or downwards causes instant achievement of the desired displacement, which is obtained without any movement from the appropriate parts of the body. The means used for flight control are similar to these utilized by the Magnocraft. Also the method of obtaining a magnetic whirl is similar. Only the frequency of rotation of the whirl is much higher here, to make impossible the creation of a plasma whirl (which could burn the person's hands). But even if the angular speed of the rotating magnetic whirl is too high to sweep up and accelerate the ionized particles of the air, the outlets of the propulsors can ionize the air locally. Therefore at night an emission of light can be noticed near the belt and the shoes. Also, foreign materials that stick to the garment and the shoes are dispelled by the centrifugal action of the magnetic whirl.

I3. The garment with the main propulsors in epaulettes

In the standard version of personal propulsion described before, the main propulsors were built into the soles of shoes. Such a solution displays, however, a serious drawback, which is the set of two forces "B" (see the right part of Figure I3). These forces, acting between the legs, cause legs to stay apart. In effect, the movements of the wearer of this propulsion are not completely free and convenient.

To eliminate these forces "B", another version of personal propulsion will be built, which is shown in **Figure I4 (a)**. In this version the main propulsors are removed from the soles of the shoes and placed in the epaulettes (1) of the user. From the operational point of view such a change of position does not introduce any difference in the effectiveness of the propulsion. But for the user it means freedom of leg movements. Therefore the version of personal propulsion presented here can be applied in every situation requiring the use of the legs. Its drawback is the closeness of the head to the sources of a strong magnetic field (i.e. to both main propulsors). Therefore the face and head must be protected particularly carefully. If there is a danger of removing the layer of a protective cream, the use of mask described previously becomes specially important for this type of personal propulsion.

Because of the tendency of widening the user's shoulders by the main propulsors placed within the epaulettes and repelling each other (see forces "B" in the right part of Figure I3), this version of personal propulsion gives its wearer a distinct triangular appearance.

During the completion of especially heavy work, also this version of personal propulsion can be complemented with additional enhancement propulsors. These propulsors are shown as (3) in Figure I4 (a).

In "heavy-duty" implementations of this version it can be necessary to strengthen the propulsion unit by adding reinforcing braces which would join the belt with the epaulettes. Such crossed braces/suspenders would make the mutual location of the main and side propulsors more stable and reliable. They would also remove the shoulders' widening tendency mentioned above.

I4. A special version of personal propulsion with cushions around the hips

The standard garment of personal propulsion described in the first subsection can be subjected to at least two different modifications, each time producing another set of useful operational attributes. The second such modification of the standard garment is shown in Figure I4 (b). In this version, the wearer's palms are shielded from the action of a strong field by a protective screen. Therefore it allows for the elimination of gloves. This enables the hands to perform precisely (e.g. to assemble a very precise device under water) without the necessity for switching off the action of the propulsors.

In the modification of the garment described here, the special protective cushions (1) are joined around the eight-segmented belt (3). These are filled with helium, the gas which has the highest resistance to ionization (or ionization electric potential). The inner surface of the outside cover of these cushions has a magnetoreflexive screen (2). Because of this, the field yield of the belt cannot act on the hands as strongly as in the standard version of the garment, so they do not need to be protected with gloves. The cushions (1) are divided by partitions (4) into eight separate chambers similar to those from the flange of a Magnocraft. Each propulsor from the belt (3) is housed in such a separate chamber. This makes it impossible to create a plasma whirl which would follow the magnetic whirl produced by the propulsors in the belt. Therefore there is no danger of the person's hands being burnt. This costume, which has the helium cushions, looks strange as it is thicker around the person's hips.

Part (b) of Figure I4 shows also an alternative protection of the user's head. In this protection the transparent and magnetically impenetrable helmet (5) replaces the hood and the graphite cream described with the standard version of personal propulsion. It should be

stressed that such a helmet can be used with every version of personal propulsion, not only with the one discussed in this section.

15. Capabilities of Personal Propulsion

The most important capability of personal propulsion is that enables the user to fly in the air or space without the necessity to use any visible vehicle. In this way, having only an appropriate dress which he/she would wear anyway because of the protection from elements, the user in any moment may ascent into the air and fly at any distance with the speed which is limited only by performing physiological functions (mainly by breathing).

Personal propulsion additionally allows to aid traditional manners of moving (i.e. walking, jumping, swimming), increasing their range, speed, making them more effective than normally, and causing their functional extension. For example it allows to: jump from a street level directly at roofs of highest buildings, chase and catch in the run the fastest cars, walking on the surface of water, walking on the ceiling in reversed orientation of body (i.e. with head directed downwards), or climbing walls with a horizontal orientation of body.

Personal propulsion also allows to increase and multiply the physical strength of a user. This capability results from the use of enhancement propulsors that are attached to hands like wrist watches or to the upper surface of gloves. The user equipped with them will be capable of knocking down buildings, uproot trees, lift huge boulders, and do many other works which require almost supernatural strength.

Finally, personal propulsion provides its users with many extraordinary abilities which can not be acquired in any other manner. One of the examples of these abilities is the resistance to our bullets and missiles obtained due to the surrounding the user with the spinning magnetic field which forms a kind of an "inductive shield". Other extraordinary ability is to become invisible. This invisibility is achieved due the formation from the magnetic field an appropriate magnetic lens. The lens deflects the path of light preventing the user from an undesirable observation.

16. Summary of the attributes of Personal Propulsion

For a civilization so low advanced like ours, which has not yet developed neither the Magnocraft nor magnetic personal propulsion system, the knowledge of attributes of personal propulsion is very important. When representatives of advanced interstellar civilizations pay us a visit, they most probably are equipped with just such propulsion systems. Therefore it is vital for us to be able to identify and to understand the origin and the characteristics of the most important attributes of their propulsion system.

Magnetic Personal Propulsion provides its users with a number of unique and very useful properties. Most of these are similar to those known from the Magnocraft, but there are also some which occur only with personal propulsion. These most important attributes, which enable us to identify the fact of its use, are as follows:

#1. The necessity for a special garment to be worn. It is not much different from the contemporary clothes worn by people (although it more resembles the dress of monks and nuns). Included in this outfit are:

a) Shoes, whose soles contain the main propulsors. Sometimes the propulsors can

be shifted from the shoes to the epaulettes.

b) The eight-segment belt carrying the side propulsors.

c) (Optionally) Two bracelets placed on the wrist joints (sometimes also attached to the outside surfaces of gloves worn on hands) containing enhancement propulsors that assist in heavy physical work. These propulsors are not used for flight, therefore they are worn only when an increase in the user's physical strength is required.

d) The controlling computer fastened to the back of the neck.

e) The one-piece garment, including the hood or helmet.

f) (Sometimes) A cape (pelerine) sown to the sleeves and to the garment along the spine. In the case of flights in the air it is spread like wings providing additional aerodynamic properties (similar to these of hang-gliders) which increase the smoothness of manoeuvres. But because after spreading it looks like wings of a bird, it gives the user the unusual appearance of a large bat.

g) The gloves with web-like connectors between the fingers.

h) The graphite-based cream to coat the parts of the skin that are uncovered (e.g. the face). In some case this cream can be replaced with a protective mask similar to masks worn by bank robbers or by super-heros from American movies.

#2. The need for the body to adopt a particular stance which is characterized by: the legs kept straight and permanently set apart (or bent into a squat position), the hands being forced away from the belt, the parting of the fingers, etc. Also, as a result of an electrical charge accumulated on the user, all hair on the uncovered parts of the body can be standing on end. All of this makes postures and movements of the users of personal propulsion look unnatural and clumsy (although in action they can impress with their effectiveness and skilfulness).

#3. Causing the user's eyes to glow. The fluorescent glow of eyes is excited by a powerful magnetic field acting upon them (similarly like some types of invisible electromagnetic radiation cause the glow of eyes in animals which are shone with it). Such strongly glowing eyes, frequently accompanied by glaring of the suit, gives the wearer of this propulsion a very unusual, supernatural appearance.

#4. The ability of a person to fly noiselessly, together with the ability to have any required orientation of the body independent from the prevailing gravity forces (e.g. hanging, standing, lying, or being at an angle). The control and positioning of the body doesn't require it to make any movement. It is achieved by the controlling computer which reads bio-currents directly from the user's neck and processes them into the execution commands.

#5. The ability to facilitate the normal manner of movement (walking, swimming, etc.). This makes it possible to perform movements which contradict our understanding of physical laws, for example:

a) Walking upside down on the ceiling.

b) Going up or down on vertical walls with the body in a horizontal position (i.e. in the manner of an insect).

c) Jumping to enormous lengths and heights (e.g. jumping from the level of street straight onto roofs of high buildings).

d) Walking on the surface of water.

#6. Extraordinary abilities given to a person using this system of propulsion. Some of these are:

a) Resistance to the effects of guns directed at them, owing to a protective action from the "inductive shield".

- b) Making oneself invisible by switching on the "magnetic lens" which bends the light.
- c) Movement at a high speed which is limited only by the physiological functions of the body (basically the breathing). This movement does not require the use of any visible vehicle.
- d) An unusual strength and force gained from the action of the enhancement propulsors. Such strength allows for the knocking down of buildings, tearing of trees out by the roots, carrying of huge boulders, and doing other work which to us would appear to be supernatural.
- e) A biological sterilization of the environment through the killing of micro-organisms that are in the range of the field (this sterilization in turn can trigger various biological consequences).

#7. The forcing of magnetic-borne changes in the surroundings, similar to those caused by the Magnocraft's propulsion. We can mention here especially: burn marks on surfaces underneath the shoes, firing away of objects which come close to the belt (e.g. mud, water, dust), the electrical charging of insulating materials (e.g. hair), ionizing of the air (which can cause a glow near the belt and shoes), production of an active ozone, the smell of which will accompany the propulsion's wearer (this smell can be confused with the smell of sulphur by those not accustomed to it), etc.

* * *

As the important addition to the above information it should be stressed that the users of magnetic personal propulsion systems of the first generation obtain all their special abilities **only in the case if they wear the garment** of this propulsion and when its propulsors remain switched on. Thus the practical (and the only) method of overpowering these users would depend on dealing with them at the moment when for some reasons they undressed this garment (e.g. to take a bath). Of course, after being undressed these users become prone to dangers as all other mortals do, and their only defence then becomes the ordinary physical fitness and their intelligence.

Fig. 11. Similarities of the Magnocraft and magnetic personal propulsion system.

(a) The Magnocraft type K3 flying in an inverted orientation (see also Figure G3 (b)).

(b) The magnetic propulsion unit composed into a human-shaped structure. This unit provides the principle for the formation of a magnetic personal propulsion system. Human figures supported with such a propulsion unit will be able to fly in the air without using any apparent vehicle. This propulsion unit contains eight side propulsors (labelled U, V, W, X) assembled inside the belt. These produce the lifting forces (R). Moreover, the unit contains also two miniaturized main propulsors (labelled M_R , M_L) assembled in the right and left soles of the shoes. These produce stabilizing forces (A). The body (1) of the propulsion's user provides a "carrying structure" that combines all these propulsors together.

Fig. 12. Components and general appearance of the standard personal propulsion garment.

Wearers of such propulsion will be able to fly noiselessly in the air, walk on the surface of water, become resistant to gunfire, be invisible, etc. This garment contains: (1) shoes, whose soles contain the main propulsors; (2) the eight-segment belt carrying the side propulsors; (3) the one-piece garment made of magnetoreflexive material, which includes a hood (5) or a helmet; (4) the gloves with web-like connectors between the fingers. All of this is complemented with the graphite-based cream that coats the uncovered parts of the skin to protect them from the strong magnetic field, and the controlling computer fastened to the back of the neck, which reads the bio-signals and converts them into propelling actions. When a heavy job needs to be done, additional bracelets containing enhancement propulsors can be worn on the wrist joints (shown as (3) in Figure 14 "a"). These propulsors will cooperate with those from the belt and shoes, thus giving the user almost supernatural strength, e.g. enabling him/her to tear trees up by the roots, carry huge boulders, knock down buildings, etc.

Fig. 13. **External and internal magnetic forces formed within the personal propulsion** (see the left and the right part respectively). Note that both these sets of forces neutralize each other. While forces "R" and "A" acting in opposite directions tense the user's body, forces (Q) simultaneously compress his/her body. Only forces "B" remain unbalanced, thus causing the user to keep his/her legs apart.

(left) The set of external forces formed because the propulsors of personal propulsion interact with the environmental magnetic field. This set of forces includes: R - lifting forces produced as the result of repulsive interactions; A - stabilization forces produced as the result of attractive interactions (indexes: R - right, L - left).

(right) The set of internal forces formed because all propulsors also interact magnetically between themselves. These forces include: B - the forces of relative repulsion of both of the main propulsors from each other (these cause a permanent separation {straddle} of the legs); E - the forces of mutual repulsion of the side propulsors from each other (these cause the outward tensing of the belt); Q - the forces of mutual attraction between each main and each side propulsor (if put off balance by bending the legs these "Q" forces cause the user to fly in a cross-legged squat position).

Fig. 14. Examples of **two useful modifications of the standard personal propulsion.**

(a) The version of personal propulsion with the main propulsors in the epaulettes. Shown are: (1) one of the two main propulsors; (2) the eight-segment belt housing the side propulsors; (3) one of the two bracelets placed on the joints of the wrists. These bracelets contain the additional enhancement propulsors (not used for flights) which multiply the user's physical strength when he/she performs heavy work. Note that to strengthen the garment, sometimes two crossed braces/suspenders can additionally join the belt with the epaulettes.

(b) The version of personal propulsion with a helmet and protective cushions around the hips. Shown are: (1) the cushions protecting the user's hands from the magnetic field and electrostatic charges; (2) the magnetically impenetrable screen and anti-electrostatic insulation around the outer perimeter of the cushions; (3) a single segment of the eight-segment belt containing the side propulsors; (4) one of the partitions that divide the cushion into eight separate chambers (each of these chambers houses one side propulsor).

Chapter J.

MAGNOCRAFT OF THE SECOND AND THIRD GENERATIONS

In chapter B of this monograph a law discovered by the author and called a "Periodic Principle" was described. This Principle reveals that our progress in the means of transportation will not be limited to building only the Magnocraft and to constructing various propelling devices derived from this vehicle (as described in chapters G to I). It also indicates that after the Magnocraft two even more advanced vehicles will be built on Earth. The propulsion of these vehicles will similarly utilize the circulation of magnetic field force lines - see two highest rows in Table B1. But their operation will be based on two phenomena not yet completely worked out by Earth's science. These are the magnetic equivalents to inertia and to internal energy. Although these two phenomena are already well known for all the physical substances, for the magnetic fields at the present level of knowledge their meaning can only be deduced theoretically with the use of the author's theory called the Concept of Dipolar Gravity which is described in chapter D and further elaborated in treatises [6] and [3] (some of the findings of this theory were also published in the article [1J] by the author, entitled "Gravitation als Dipolare Felder", published in the West-German Journal Raum & Zeit, Nr. 34, Juni/Juli 1988, pages 57 to 69). According to this theory the magnetic equivalent to inertia is the "Telekinetic Effect" described in more details in chapter C, whereas the magnetic equivalent to internal energy is the "magnetic concept of time" stemming from the Concept of Dipolar Gravity - for more details see subsection D3.

These two advanced magnetic phenomena, i.e. the Telekinetic Effect and the elapse of time according to the magnetic concept of time, can be utilized for propelling purposes. The utilization of the Telekinetic Effect become reality when our civilization develops devices capable of causing a telekinetic motion. There are two kinds of motion that a technological version of telekinesis can produce, i.e. relative and absolute (see sections B2 and C5). All propelling devices that employ technological telekinesis to produce a relative motion are called here "telekinetic motors", but all such devices producing an absolute motion are called "teleportative propulsors". In this treatise the term "teleportation" is defined as an absolute version of telekinetic motion utilized for the purposes of transportation. Thus the name teleportative propulsors originates from this term. An advanced flying vehicle which utilizes teleportative propulsors is called here the "Teleportation Vehicle". Its description is contained in the first subsection of this chapter (telekinetic motors are described in subsection C5.1.1 and in a separate treatise [6]).

The utilization of the magnetic concept of time become reality when our civilization further improves the telekinetic propulsors and adds them a capability to alter the natural elapse of time. The vehicles received in that manner will be called "Time Vehicles".

At this point it should be stressed again that for a person unfamiliar with appropriate theoretical foundations the appearance of Teleportation Vehicles and Time Vehicles will be identical to the appearance of an ordinary Magnocraft. Therefore such a person will not be able to distinguish between these vehicles of different generations, and thus also to prepare him/herself to a type of phenomena that he/she may face in their presence. All three generations of these vehicles will have exactly the same shapes, dimensions, range of types, and will also be constructed from materials displaying the same visual characteristics. For the duration of flights all these vehicles will also couple into the same flying arrangements - see Figure G6. Furthermore, their mutual similarity will be reinforced additionally by the fact

that the Magnocraft of the second and third generation will be able to switch their operation onto the magnetic convention thus displaying the same range of phenomena that an ordinary Magnocraft does. The differences existing between them become apparent only when they switch on their most advanced convention of flight, inducing in that way the phenomena characteristic for just the second or the third generation of magnetic propulsion systems. For an expert this difference will become also visible from some technical details (e.g. from the shape of their Oscillatory Chambers - see subsection J3). The aim of this chapter is to provide theoretical foundation which explain the unique phenomena and technical details characteristic for the two most advanced generations of the Magnocraft.

J1. Teleportation Vehicle as the Magnocraft of the second generation

We should expect the first Teleportation Vehicle to be built around the year 2200, when the Magnocraft's magnetic propulsors will be supplied with the additional capability of producing the Telekinetic Effect. According to the omnibus trend discussed in subsection B5, this vehicle will be developed as a more advanced modification of the ordinary Magnocraft, capable of operating in either the magnetic or teleportative convention. This explains the other name for the Teleportation Vehicle, which is the Magnocraft of the second generation.

The operation of the Magnocraft of the second generation will be based on the utilization of the Telekinetic Effect already discussed in chapter C. An explanation of this operation should be started from reminding that propulsors of every Magnocraft produce pulsating magnetic field. Of course, the very nature of pulsations is such that the magnetic field which is subjected to them, during subsequent variations in time must undergo through sequences of accelerations and decelerations. Therefore in every Magnocraft pulsations of the field must create some telekinetic pull. Unfortunately in the Magnocraft of the first generation this pull is too small and wrongly directed in order to produce any meaningful propelling thrust. But if these accelerations and decelerations of the Magnocraft's field are appropriately controlled then they are able to provide the significant telekinetic thrust to the vehicle contained in their range. Of course, in order to achieve such sophisticated control over the "variation in time" of the field produced by the Magnocraft's propulsors, a new generation of Oscillatory Chambers must be build. These new (octagonal) chambers of the second generation will have eight side walls (i.e. twice as many as in the square chambers of the first generation). For this reason, the Magnocraft of the second generation will be easily identifiable by its octagonal Oscillatory Chambers of the second generation, which it employs in all its propulsors.

Depending on the polar orientation in relation to the environmental magnetic field (i.e. in relation to the field of Earth, Sun, or Galaxy), the propulsors of every Magnocraft can be subdivided into two categories - see Figure B1 "a". The first of them (M) is oriented as to repel the environmental magnetic field, whereas the second one (U) - as to attract. The propulsors oriented as to attract the environmental magnetic field in chapter G were called "stabilizing propulsors". From the magnetism it is known that every two sources of magnetic fields which mutually attract each other must create common magnetic circuits. In these circuits the same force lines of magnetic field will loop through both sources (see Figure K6). Therefore also a significant part of the force lines of magnetic field created by the stabilizing propulsors of the Magnocraft must be simply an extension of force lines of the environmental (Earth's) magnetic field. This in turn means that the flying Magnocraft is "wrapped" into the environmental

magnetic field, the force lines of which pass through the propulsors of this vehicle. Thus, if the curves of variations in time of the pulsating field produced by the propulsors of the Magnocraft are appropriately controlled, this must also control the pulsations of the environmental field in which a given Magnocraft is "wrapped". The controlled pulsations of the environmental field will create vectors of acceleration and deceleration of this field directed at the shell of the vehicle. In turn these vectors will create the Telekinetic Effect the pull of which will produce the thrust force propelling the vehicle into a desired direction.

The mechanism for producing the telekinetic pull described above realizes that in the Magnocraft of the second generation the propelling thrust is formed by the forced pulsations of the environmental magnetic field (i.e. the field of Earth, Sun, or Galaxy) not by the field of a given vehicle. The field of the vehicle's propulsors is only used as the agent which makes the environmental field to wrap around the vehicle and to pulsate, not as the creator of the propelling forces. This in turn introduces a number of very important consequences to the magnetic field produced by the Teleportation Vehicles. The most important of these consequences is that the mean density of the field produced by the propulsors of Teleportation Vehicles does not need to differ from the density of the environmental magnetic field. Therefore, for our present research instruments the magnetic field of such vehicles can be absolutely undetectable. Practically speaking this means that at our present (relatively low) level of advancement we may not have any instruments capable of informing us about the existence of such vehicles in our close proximity.

The same number of technical versions of the Teleportation Vehicle can be built as these of the ordinary Magnocraft. Therefore, except for the disk-shaped flying vessel (refer to the disk-shaped Magnocraft described in chapter G), the Teleportation Vehicle can also be produced as a Teleportative Four-Propulsor Spacecraft (refer to chapter H), and Teleportative Personal Propulsion (refer to chapter I). In each of these technical versions, the Teleportation Vehicle will keep all its major characteristics, which are summarized at the end of this subsection.

At this point it should be mentioned that the effect of operation of the teleportative propulsors will not affect people's health as much as the use of magnetic propulsors will. (An exactly opposite phenomenon will occur - as the carrier of the Telekinetic Effect the magnetic field of these propulsors will stimulate the improvement of health of all organisms from the vicinity.) For this reason the future users of Teleportative Personal Propulsion will not need to wear the protective garments that are necessary features of magnetic personal propulsion (see Figures I2 and I4). On the other hand, in the age of teleportative propulsion systems, the process of miniaturization will be more advanced when compared with that of magnetic personal propulsion. Both the above factors together, i.e. no detrimental health effects and advanced miniaturization, will make it possible for the elements of Teleportative Personal Propulsion to be inserted surgically into the bodies of people, instead of being carried as additional equipment. Such a surgical insertion will ensure that they will not forget to take this propulsion with them wherever they go, making it always available whenever needed. As the capabilities of Teleportative Personal Propulsion are extraordinary (refer to the last paragraph in this subsection), having it ready for use in any situation could save numerous lives and prevent countless tragedies. For example, the majority of accidents would be avoided if victims could have teleportative propulsors built into their bodies. In addition to this purpose, the Teleportative Personal Propulsion will provide its users with numerous everyday advantages. To give some idea as to what could be achieved with such a built-in body propulsion system, it is sufficient to view the television series "The Magic of David Copperfield" (CB, Director: Stan

Harris). All the extraordinary achievements that the magician David Copperfield demonstrates, such as walking through walls, passing through iron gates, surviving the impact of deadly objects, flying in the air (through the Great Canyon), etc., in the future can be part of the everyday activities of ordinary people equipped with Teleportative Personal Propulsion System.

The low density of the magnetic field produced by the Magnocraft of the second generation, combined with the capability of the telekinetic component of this field to stimulate biologically the soil, cause that the landing sites of the Magnocraft of the second (and also the third) generation will differ from the landings of the Magnocraft of the first generation. The main of these differences will depend on the fact that the Magnocraft of the second (and also the third) generation which landed in their most advanced convention of flight will usually not cause any scorching nor biological sterilization of the soil. Contrary, in areas where this soil was exposed into the action of their magnetic field, it becomes stimulated biologically. In the effect of this stimulation all the vegetation (and also other living organisms) growing in the area saturated with the telekinetic field of a given vehicle rapidly experience an explosive increase of the intensity and speed of the growth. Furthermore, the healing attributes of the telekinetic field frozen in this soil will attract ill animals from the vicinity which will display the instinctive tendency to improve their health by lying on such telekinetic landing sites. Finally the soil of such landing sites may display a different proportion of elements than the surrounding soil (e.g. the content of calcium may increase even up to seven times - see subsection C2). All the above phenomena will appear in the effect of stimulants explained in subsection C2. The biological stimulation of the landing sites of these vehicles may cause even up to twelve times faster and more intensive growth of vegetation in relation to the surrounding soil. Because of the increased health of this vegetation also its colour become more vivid (healthy) than the colour of the surrounding vegetation of the same type. Because of all this, the landing sites of the Magnocraft of the second (and also the third) generation can be identified as rings on the soil where vegetation grow faster and more intensively than the vegetation from the surrounding area, and also where the colour of this vegetation is slightly different. The shape of these rings will closely resemble the shape of scorched areas left after landings of the Magnocraft of the first generation. Of course, as time elapses also the biological stimulation of the soil in former landing sites of the Magnocraft of the second generation will gradually diminish according to the (radioactive) curve of "half-life".

Although the properties of the Teleportation Vehicle do not correspond to those of any other device already known on Earth, the characteristics of this future spacecraft can be deduced from the Concept of Dipolar Gravity. The author has completed this process of deduction, and the conclusions derived are summarized below. As the limited space in this treatise allows only for the more important ideas to be elaborated in detail, readers are welcome to contact the author about any specific inquiry they may have regarding matters which are discussed.

The key to understanding the extraordinary properties of Teleportation Vehicles is to understand the unique state of matter subjected to telekinetic motion, called here a "**telekinetic state**". The telekinetic state of a material object (e.g. a vehicle or a person) is a reversal of the physical state of that object, and appears only for the duration of its telekinetic motion. Generally speaking this state is caused by the unique mechanism of the telekinetic motion (or strictly: by the way in which counter-material components pull their material duplicates - see section C2). Thus, every telekinetically moved object remains in the physical state before and after this motion occurs, and is transformed into the telekinetic state for the

exact duration of the telekinetic motion. After applying the above to Teleportation Vehicles, the telekinetic state will appear while these vehicles operate in the teleportative convention, and will cease to exist when these vehicles operate their propulsors in the magnetic convention. Of course this state also appears during biological telekinesis, although its attributes are not so obvious (e.g. one of its manifestations is recorded on some photographs of objects moved in a psychokinetic manner a previously unexplained transparency of these objects - see part (a) of Figure D4).

The material component of each object (e.g. vehicle, person, rotor in the telekinetic motor), undergoes the following three transformations when put into the telekinetic state:

(1) **Decomposition** from a material (hardware) form into a non-material (software) one. The non-material (software) form can be explained as a kind of energy pattern which is entirely stripped of physical attributes such as mass, density, inertia, optical properties, and so on.

(2) The **shift** to a new location determined by a telekinetic motion that the object is subjected to. During this shifting the material part of this object exists only in its non-material (software) form as an energy pattern.

(3) **Recomposition** back into the original, material form. After this recomposition is completed, the material component of the object begins to exist again in its physical (hardware) form. All its properties return to exactly the same state as they were in before the telekinetic transformations began.

It should be stressed that the transformations occurring within the telekinetic state do not change the level of the object's energy. Thus any work completed in this state must be accompanied by the absorption of thermal energy from the environment combined with the emission of the extraction glow.

The three transformations described above are the cause of the extraordinary properties of objects changed into the telekinetic state. Such objects lose most of the attributes and limitations characteristic of the physical state of matter, and simultaneously gain another set of attributes more characteristic of some non-material forms, such as designs, algorithms, information, etc. The new properties of objects turned into the telekinetic state are as follow:

(a) The ability to penetrate through other material objects without disturbing or damaging in any way the structure or consistency of either object.

(b) The ability to be penetrated by other material objects without causing any damage to either of these objects.

(c) The loss of basic physical properties, such as inertia, density, weight, external friction, etc.

(d) The non-absorption and non-reflection of light, thus becoming totally transparent.

(e) The exchanging of thermal energy with the environment. The amount of exchanged energy is an exact equivalent of the energy consumption (or yield) necessary for the sustaining of the telekinetic motion (see section C2).

(f) The emission of a white "extraction glow", or a white glow with a green tinge called here the "dispersion glow". The intensity of this emission is proportional to the consumption (or production) of thermal energy caused by the work done telekinetically. The area of the emission exactly reflects the object's outlines.

It should be stressed that all the above properties will be displayed by every Teleportation Vehicle operating in the teleportative convention.

Three basic transformations constituting the telekinetic state (i.e. decomposition, shift,

recomposition) are completed during extremely short pulses. Each such pulse probably requires only three separate execution commands issued by the software model of a telekinetically moved object. From the interpretation of time in the Concept of Dipolar Gravity (refer to section D3) we know that a single execution command constitutes an elementary unit of time for the object subjected to this command. Therefore a single pulse of the telekinetic state will extend only for an extremely short period of time, too small to even be registered by our instruments.

The complex manoeuvres of the Teleportation Vehicle can not always be achieved in one single pulse of the telekinetic state. For this reason the teleportative propulsors will maintain the cyclical repetition of such individual pulses, in this way extending the telekinetic state for any required length of time. There are two ways of repeating the single pulses of the telekinetic state, i.e. progressive and oscillative. The **progressive** manner depends on subjecting the propelled object into a series of telekinetic shifts having controlled ranges. This manner will be used when a Teleportation Vehicle is required to fly with a predefined speed along a specific trajectory. The **oscillative** manner depends on the repetitive shifting (oscillating) of the propelled object between two extremely close destinations. This manner will be used when a Teleportation Vehicle is required to hover, suspended motionless above the one place. The long periods of the telekinetic state, achieved due to the cyclical repetition of such single pulses, will be called here the "sustained telekinetic state".

The characteristic feature of the **sustained telekinetic state** is that a material object (e.g. a vehicle) subjected to it appears alternately in two opposite states, i.e. telekinetic and physical. The telekinetic state takes place while the single pulses are executed, whereas the physical state exists for the length of time elapsing between consecutive pulses. Depending on the frequency with which the elementary pulses are repeated, the duration of the physical state may differ. Because in both these states the optical properties of the object are opposite (i.e. in the telekinetic state the object is completely transparent and thus invisible, whereas in the physical state it is clearly visible) the visual appearance of an object subjected to the sustained telekinetic state is continually changeable from complete visibility, through all grades of partial transparency, into full invisibility. The ratio of invisibility is regulated by the frequency in which elementary pulses of the telekinetic state are repeated. For example to become completely invisible to human eyes the Teleportation Vehicles need to twinkle into the physical state with the frequency exceeding that for the changes of individual frames in motion pictures (i.e. over 24 cycles per second). If they glimmer with a frequency greater than that noticeable to our eyes, we are unable to see them, although their crew can see us perfectly. The level of visibility in the sustained telekinetic state can be smoothly regulated by the frequency with which the elementary pulses are repeated. The above realizes that the Teleportation Vehicles are capable of becoming invisible in two different ways. The first of these is the phenomenon called the "magnetic lens" which the Magnocraft of all three generations are able to switch on. Teleportation Vehicles can shield themselves with this lens in all cases when there is a need to become invisible without switching on the telekinetic convention of flight. The second way depends on the fast "glimmering" from the material state into the telekinetic one, and vice versa, which allows the Teleportation Vehicles to become partially transparent (like being made of a mist) or completely invisible, and also to gradually fade away while remaining motionless.

The ability to disappear via a fast twinkling, combined with the capability of telekinetic propulsion to fly through solid objects, provides the Teleportation Vehicles with an extraordinary property. They are able to fly directly into our houses without even being noticed.

In that way in some houses, apart from the furniture and usual inhabitants, sometimes a whole interstellar spaceship with its crew, equipment, research laboratories, and medical instruments could appear and no-one living there would notice its presence. The only sign of its activity, which most probably could only be realized by people who are made sensitive to the manifestations of the operation of these vehicles, would be a sensation of a coldness slightly greater than usually, and the fact that some electronic devices unexpectedly could start to behave in a strange manner - see subsection P2. However, if in such cases someone would decide to take a photograph, then he/she could experience a shock looking at the strange picture recorded on it (though people would tend to rationalize this picture by believing that two unfocused photos were somehow recorded at a single frame).

The ability to gradually fade away gains a special significance when applied to Teleportative Personal Propulsion. We can easily imagine the shock and confusion experienced by someone, knowing nothing about the telekinetic state, being confronted by an advanced alien using Telekinetic Personal Propulsion. Such an alien would be capable of floating in mid-air, penetrating a wall or ceiling, and its body would appear to be transparent giving an impression of a mist. Deadly objects (bullets, knives, swords, axes, etc.) directed at the alien would penetrate through its body without causing damage. This situation is not so hypothetical as some sceptics would claim. Throughout the centuries a large number of people have reported close encounters with mysterious beings whose appearance matches exactly the above description (see subsection N4). Although names assigned to these beings have varied throughout the ages - from angels and devils though to succubies and fairies, finishing with contemporary UFO-nauts - the basic attributes associated with them always correspond to those of Teleportative Personal Propulsion.

From the mechanism of the telekinetic state stem two other important properties of teleportative propulsors, i.e. the range of a single shift and the speed of the resultant motion. The range of a single shift is the distance that an object (e.g. a vehicle or a person) is moved telekinetically during an individual pulse of the telekinetic state. Its quite good illustration is provided in Figure O1. This range will depend on the amount of magnetic power involved for the creation of a telekinetic effect, and also on the size of the shifted object. The more powerful a particular teleportative propulsor, the greater the range of its single shift. The same powerful propulsors will shift smaller objects to a greater range.

As has already been explained, the duration of a single pulse of the telekinetic state is immeasurably short. Therefore for a single telekinetic shift the present concept of speed loses its validity. This is because the single shift, independently of this range, will be completed instantaneously. If it is technically possible to build teleportative propulsors powerful enough to have a range extending to an interstellar distance, such propulsors would be capable of instantly shifting a Teleportation Vehicle from one star to another. Of course the speed of such a single interstellar shift cannot be described, as it would be close to an infinitive value. It should be stressed here that this applies to a single shift of the telekinetic motion only.

However, the present concept of speed, developed for physical motion, can be applied to the slow flights of the Teleportation Vehicles completed in the sustained telekinetic state. Although in such flights all single telekinetic shifts will be completed instantaneously, between these shifts short time delays (gaps) will appear that can be physically described. Through dividing the range of a single shift by the duration of such an inter-shift delay, the speed of the resultant sustained telekinetic motion can be determined. The above explains why Teleportation Vehicles, independently of the instant shifting, can also fly at any desired

speed, or can even hover motionlessly in one place.

Let us now summarize the major characteristics of the propulsion systems operating in the teleportative convention. All the objects transported in the teleportative manner will be capable of instantly shifting to any destination lying within the range of the teleportative propulsors which cause their shift. Moreover, they will be capable also of completing slow flights of a chosen speed, or even to hover motionless in one place. The teleportative propulsors will provide these systems with the ability to penetrate through solid objects such as furniture, walls, buildings, mountains, planets, without causing any damage to themselves or the objects they will pass through. (Note that the ordinary Magnocraft, when flying through solid objects, will always leave in its path tunnels with a glazed surface - see subsection G9.1.1) While in the telekinetic state, the reverse situation can also be applied to all Teleportation Vehicles, i.e. their structures can be penetrated without damage by other solid objects such as knives, bullets, missiles, people, animals and so on. While travelling in the teleportative convention, the Magnocraft of the second generation will consume (or yield) thermal energy from (or to) the environment and emit a strong extraction (or dispersion) glow. The consumption (or yielding) of heat will cause the rapid cooling (or heating) of the environment. This in turn allows the people familiar with the theories presented here to detect the presence of Teleportation Vehicles (in spite of the ability of these vehicles to make themselves invisible) simply by monitoring the environmental temperature. For the vehicles themselves, the ability to absorb environmental energy practically means that none of the Teleportation Vehicles will need any energy supply to sustain their motion. Instead of energy supply they will absorb the required energy from their environment (for more details see explanations provided in chapter C or monograph [6]). The thin layer of the extraction glow emitted due to the use of teleportative propulsors will exactly reflect the outlines of the objects transported in a teleportative manner, whereas the white colour of the light which is emitted will give them a ghostly, unreal appearance (in folklore this type of the white light is usually considered to originate from "supernatural" sources). When observed during flight, those surfaces which are covered by a layer of white extraction glow will give the impression of being "oiled with light". Thus a thin, white, ghostly extraction glow will be the means of identifying the operation in the teleportative convention, making it easily distinguishable from the rich, colourful and voluminous lighting effects produced in the magnetic convention.

J2. The Magnocraft of the third generation (called also "Time Vehicles")

While discussing Magnocraft of the first and second generation it is also worth mentioning that the evolvement of these vehicles will not terminate on the development of the Teleportation Vehicle. The Periodic Table worked out for the propulsion systems (see Table B1) states that in about 200 years after the first Teleportation Vehicle is completed our civilization should develop an even more advanced spaceship, which can be called the Time Vehicle or the Magnocraft of the third generation. This vehicle becomes reality when the Magnocraft of the second generation obtains the additional capability of influencing the elapse of time.

Tables B1 and C1 reveal that the phenomena applied by these most advanced vehicles will be utilizing a "deformation" of magnetic fields. Apart from the altering a "normal" elapse of time (i.e. flying as "Time Vehicles"), these most advanced Magnocraft will be capable of flying as Teleportation Vehicles during which exactly the same principles as those described

in the previous subsection will be utilized. Of course the vehicles' crews will decide which mode of operation should be activated in a particular situation. In this way Time Vehicles will allow their crews to travel not only through space but also through time. Time travel will therefore be possible in all directions, allowing for fast movement into the future, as well as the shifting of time back to the past.

Let us briefly review the principles involved in such time travel. The magnetic interpretation of time given by the Concept of Dipolar Gravity (see subsection D3) indicates that the counter-material parts of physical objects, which are contained in the counter-world, behave like real-time computer programs. These parts issue sequences of control commands that execute the course of events taking place in our (material) world. In our set of dimensions this flow of the execution sequence is perceived as an elapse of time. Thus, according to the Concept of Dipolar Gravity, time is defined as the "execution control which in the counter-world flows through the counter-material (software) parts of objects". Therefore time does not move, it is the sequence of execution commands that cause our passing through time.

The above definition shows that time demonstrates the ability of the counter-world to execute pre-programmed changes in our world. Thus time has exactly the same interpretation that in our world is attributed to energy. Putting this in different words, time in the counter-world (which sometimes we call also the "world of software") is equivalent to energy in our world. Subsection D3 shows that the sequence of the execution commands that constitute time is issued by the same medium (substance) that forms magnetic fields. This means that time is also a basic attribute of magnetic fields, and that in the magnetic propulsion systems any manipulation of time has exactly the same function as the utilization of internal energy has in the matter circulating propulsion systems. Therefore, showing time as the third energy carrier in the magnetic propulsion systems in Table B1 makes this table symmetrical for all three major types of working media.

The interpretation of time resulting from the Concept of Dipolar Gravity opens new possibilities for magnetic propulsion systems. It shows that technical devices can be completed which are capable of altering the "normal" elapse of time. Although in the material world we are only able to pass through time in one direction and with a speed predefined in advance, in the counter-material world the elapse of time can be accelerated, slowed down, stopped or even reversed in the opposite direction. Such manipulations of time can be achieved through introducing alterations into the sequence of execution commands in the control signals issued by the software models of the selected objects. The introduction of such alterations will involve very sophisticated magnetic phenomena, which are much more complex than those for technological telekinesis. But after technology becomes more advanced, manipulation of time will become as simple as the manipulation of heat or the level of ionization is at present.

The flight characteristics and phenomena utilized during the operation of the Magnocraft of the third generation will significantly differ from those characteristic of the Magnocraft of the first and the second generations. For example, the Magnocraft of the third generation (Time Vehicles) instead of moving can just disappear from, or appear at, a given place simply by shifting onto a different time plane. They can also alter the natural elapse of time for chance witnesses. When observed during flight, they will be surrounded by perfectly round spheres of excited space in which the magnetic equivalent of internal energy is roused at a higher level. The diameter of these spheres will be equal to about two outer diameters of a vehicle hidden inside, i.e. around 9 metres for the smallest Magnocraft type K3. The

spheres will emit orange-red or blue-green glows. Because of their appearance, and because the Magnocraft's body that these spheres house inside will be hidden from the eyes of observers, some witnesses of Time Vehicles who have no knowledge of the Magnocraft's theory may interpret them incorrectly as huge ball lightnings.

Similarly as this is the case with Teleportation Vehicles, also numerous technical versions of the Time Vehicle can be built. It should be mentioned here that components of the personal version of the Time Vehicle will probably also be inserted surgically into bodies, in the manner which in subsection J1 was described for the personal version of the Teleportation Vehicle. In this way, the personal version of the Time Vehicle will become immediately available whenever it is needed, and can not be removed even if its user is stripped of his/her clothes by some hostile natives.

For a civilization like ours, which has not yet developed the capability to travel in time, it is immensely important to accumulate the knowledge needed to detect the activity of Time Vehicles build by other civilizations. The Concept of Dipolar Gravity already allows to foresee of few distinct phenomena which will be observable by outside witnesses, and the noticing of which is a sign of the use of a Time Vehicle in a close proximity. Two distinctive phenomena can be called (1) the "state of suspended animation", (2) the "one way trip", and (3) the "effect of time duplication". The external manifestations of these three phenomena will be presented below.

The "**state of suspended animation**" can only be observed by someone whose time elapse is accelerated by a Time Vehicle, so that the events he/she experiences take much longer than the length of time that actually elapsed around this person. To explain this state of suspended animation better, the following example is given. Let us imagine that the reader is at this moment in a busy office, and that he/she is unexpectedly visited by users of a Time Vehicle. In order to remain unnoticed while discussing the matter they have come about, the visitors change the speed of time. They accelerate the lapse of their own and the reader's time, leaving the time of the rest of the office to elapse at its normal speed. Therefore, while for the entire office only a few microseconds passes, the reader experiences events that may occupy several hours. In this way no one else has a chance to notice the visitors' presence, while the reader participates in a long conversation with them. While having this talk, he/she would be surprised to notice that everything in the office appears strangely suspended in motion: the boss, just coming through the door, has one leg lifted in the air, looking grotesque standing on the other; the fast typist is frozen motionless with fingers suspended above the keys; the water that someone pours freezes half-way between the teapot and a cup; the paper ball thrown by a colleague suspends a few centimetres above the rubbish tin. When the visitors finish their mission and depart, everything rapidly returns to normal. All the events described above continue their course from the point at which they were suspended. The only record that anything at all occurred remains in the reader's memory (if this memory is not intentionally erased by the departing visitors) and in his/her personal watch, which together with the reader's body, would also be accelerated in time.

The state of suspended animation described above reveals that the Magnocraft of the third generation are capable of becoming invisible in as many as three different ways. Apart from the "magnetic lens" which they can switch on after turning their propulsion into the magnetic convention, and "telekinetic twinkling" able to be switch on after turning their propulsion into the teleportative convention, they additionally are able to use various forms of the manipulation on time. Of course, the state of suspended animation is only the first of many such possibilities of manipulating the time to become invisible while remaining in a given

place. Other such possibilities involve for example "oscillating between two different times", and the manipulation depending on a phase shift between the vehicle's time and a local time (due to this phase shift a Time Vehicle appears in a given point a fraction of second after the light already passed through this point).

In the manner similar to that described above, the Time Vehicles are able also to cause the "**state of accelerated animation**" when the elapse of time of the person being visited is slowed down in comparison to the elapse of time in his/her surrounding (thus all the activities he/she observes in this environment will look as if someone accelerated their speed).

The state of suspended animation is only the first of numerous extraordinary advantages offered by Time Vehicles in comparison to conventional or teleportative means of travel. Another very important their ability is the "**one way trip**" advantage. This particular capability of Time Vehicles depends on the completion of physical travel in one direction only, i.e. to a chosen destination, whereas the return trip is obtained not by means of actual travel, but by shifting time back to the point when the whole trip began. In order to express the above in simple words, the one way trip depends on physical travelling in one direction only and on the manipulating time (shifting it back) in order to bring a person to the point from which a given trip was started.

In order to understand the principles involved in such "one way trips", it is necessary to remind ourselves the definition of time provided by the Concept of Dipolar Gravity and repeated at the beginning of this subsection. This definition says that the "**time is the flow of execution control through our counter-material (software) duplicates**". The understanding of this definition is more easy if the reader is aware of the similarity of our counter-material duplicates contained in another parallel world to contemporary computer programs working in the so-called real-time. As we know such programs are composed of sequences of individual instructions, which are executed by the computer one after the other. But it is possible to return to any point of execution simply by placing a "label" at the beginning of a given sequence of operations, and then by completing an unconditional jump to this label. The same happens with the Time Vehicles. They label a certain point in someone's execution sequence (i.e. a certain point in time), and then they execute the shift of this person's execution control back to that label. The person whose software model is subjected to such a process perceives it simply as the shifting back of time. Therefore, if some advanced creatures who have a Time Vehicle at their disposal wish to take a particular person for a trip, they only need to attach a "label" to his/her execution sequence and then - when the trip is completed - instead of travelling back with this person, they simply shift his/her execution control to that label. In the final effect a person who completed such a trip will remember only the way in one direction (this is because the way back does not occur at all), and also after the return he/she will discover with a surprise that the actual time is the same or even earlier than the exact time when a given trip began.

The above analogy also easily explains the principles involved in slowing and accelerating the elapse of time occurring e.g. during the "state of suspended animation" (i.e. such actions are similar to living with a "normal" speed, except that the execution control passes slower or faster through our counter-material duplicates).

The "one way trip" capability of Time Vehicles allows for an abduction which takes up no recordable period of time. In this abduction a chosen individual is taken on a journey which, regardless of the duration, finishes at exactly the same time as it started. Thus, if during such an abduction someone would continuously observe the abductee, or even hold his/her hand, the observer would not be able to notice the absence, because for the sight and

senses of this observer the abductee would continue the presence through the point in time when the abduction actually took place. The occurrence of such an abduction would be vigorously denied by investigators, as acknowledging it would contradict the most fundamental theories of contemporary science (which assume that it is time that flows, whereas we stay motionless within this flow, thus moving in time is presently unexplainable). Therefore, it is possible that various people have already experienced such abductions, but because their memories have been erased at the point of return, neither they nor anyone else are able to have any knowledge of the events that occurred. Even if sometimes the final memory erasure may fail or is incomplete, the incredible reports of abductees are not taken seriously as no-one is prepared to believe their claims of having visited distant planets from other stars, while people close to them had insufficient time to blink their eyes. Especially as the person who tells the story explains with details the trip in one direction, but is unable to explain how he/she returned!

If trees were the most advanced life form on Earth and could develop intelligence, most probably they would speculate about the possibilities of ordinary travel. But without knowing the laws involved in moving from place to place, their speculations would have no limit and would probably be full of paradoxes and unreal ideas. Studying these speculations one perhaps could learn that a tree which moves to the opposite hemisphere must die, because its roots would be pointed into the air while its leaves would be submerged in soil, that exceeding the speed of sound is impossible because this speed represents a limitative constant of nature, or that a tree which moves into a different location must simultaneously exist in two realities (i.e. the old and a new one). The same happens with our present ideas on time travel. Because we are not aware of the laws and restrictions that govern this means of travel, we tend to misuse our imagination and impose no limits on our speculations. In this way various enthusiastic science fiction creators introduced such inconsistent ideas as "grandparent paradox" or "parallel realities" which deviate and confuse our understanding of time travel. (The "grandparent paradox" considers the situation of a time traveller who kills his/her own grandparent. After coming back to his/her own time, this traveller could find himself/herself to be non-existent. The idea of "parallel realities" claims that every action taken during time travel initiates another reality whose course of events would differ from realities already in existence.) However, it should be emphasized here that the definition of time flow in the Concept of Dipolar Gravity (i.e. "time is motionless, but we move through it") and the technical restrictions imposed on time travel eliminate dilemmas and paradoxes such as those listed above. To understand these restrictions it is enough to apply to time travel the "analogy of shifting a program control" (i.e. to consider time travel as equivalent to the shift of execution control to a given label within a contemporary computer program). Similarly as the change of the execution control (jumping to a given label) in such a program is not able to change the operations (algorithm) constituting this program (although it can impact the data-type results yield by this program), also the time travel is unable to change the content of motionless time (although it can alter the fate/path of a given person moving through the time). The effect of these restrictions is that such motionless time eliminates the chance for parallel realities and for grandparent paradox. Moreover, this analogy indicates also that for "interactive travel in time" (i.e. for travel in which the traveller can take part in the events he/she observes) a significant limitation is imposed which allows to shift only between time points through which a given person already lived in his/her life. To explain this limitation, in order to instantly shift time backward or forward, an appropriate time "label" is needed (like a control label in contemporary computer programs). Therefore, to put such a "label" in place it is

necessary for someone to already live "normally" through the time points in which these labels are placed. This practically means that we are unable to shift someone's time beyond life-span of this person, and that all shifts can be achieved only between time points which we have already reached in our preceding life and labelled as time travel destination points for future use.

At this stage it is worth mentioning that the Concept of Dipolar Gravity reveals also means for another kind of time travel which could be called "the passive replay of timely distant events". This kind of time travel does not impose any restrictions regarding the time distance to which a given observer goes, but it limits the traveller to the role of an observer (witness) only. In the "analogy of shifting a program control" described above, this other means of time travel could be compared to the re-running a sequence of a given program by some other program. Thus this other program could show what results a given program would yield, but it is unable to actually identify itself (become) the program that is being run. To put this into another words, in this passive time travel the traveller can only observe the course of events that occurred (or are going to occur), but he/she is unable to take part in them or to impact their final outcome. Practically such "passive replay of timely distant events" would only allow one to observe his/her own grandparent in action, but it would not allow to kill the grandparent. Therefore also this kind of time travel eliminates the chance for grandparent paradox and for parallel realities.

The principles of time travel described previously apply to the situation when time remains motionless but an active traveller moves through it. However, an opposite way of travelling is also possible although technically more difficult. It depends on making time to "wave" while a traveller remains motionless. An example of this kind of time travel would be phenomena occurring during the explosion or starting time vehicles. One of the most frequently occurring of these type of phenomena is another manifestation of Time Vehicles called here the "**effect of time duplication**". This effect can most simply be explained by the example of a motorboat resting in a waveless lake (the surface of this lake represents time). If this motorboat rapidly begins to move, it induces waves on the lake. These waves would also toss about an outside observer that was floating in the water and watching the boat. To interpret the above analogy to Time Vehicles, if such a vehicle causes a rapid "deformation" of time, then an observer from the vicinity of this vehicle will be included into time waves so induced. For the observer these time waves will be perceived as multiple repetitions of the same sequence of events. For example, if the observer heard in a radio a specific song and simultaneously saw a specific car passing by his/her window, after a while he/she will hear again the same song and will see again the same car.

Because of the principles involved in the operation of Time Vehicles which execute their changes of time by a "deformation" of the environmental magnetic field, the use of these vehicles is manifested only within the space where the environmental field is excited by their magnetic circuits. (Thus, the diameter of such sphere of influence is around 2 physical diameters of these vehicles.) Therefore all side effects described in this subsection can be noticed by chance observers whose distance from a Time Vehicle is slightly smaller from this sphere of influence. For the case when used are personal Time Vehicles (i.e. those inserted surgically into users' body), the sphere of such influence will not exceed around 4 meters from the alien user. Thus a person who experiences one of the effects described earlier can be sure that a time travelling visitor is really close.

The completion of the Time Vehicle will conclude the development of the numerous Magnocraft-based spaceships. The characteristics of all these spacecraft presented here

show that our present knowledge of what we call the "magnetic field" can be likened to the touching in the darkness of the tip of a mountain of gold, and not realizing that within a hand's grasp there is immense wealth waiting to be discovered.

J3. Three generations of Magnocraft and their identification

To summarize this chapter, together with the Magnocraft of the first generation described in chapter G, our civilization will complete as many as three subsequent generations of the Magnocraft, employing in each of them increasingly advanced properties of magnetic fields. In the Magnocraft of the first generation, shown in Figures G1 to G37, only the repulsive and attractive interactions between magnetic fields are employed. These interactions are equivalent to the mechanical forces produced by car wheels, or to air pressure utilized in sails (see Table B1). The Magnocraft of the second generation (also called the Teleportation Vehicle), in addition to these force interactions, will also utilize the Telekinetic Effect (the magnetic inertia) triggered via acceleration or deceleration of magnetic field force lines which encircle the shell of the vehicle. Thus the flights of the Magnocraft of the second generation will employ exactly the same principles which are involved in telekinetic motion. In this way the operation of this vehicle will be symmetrical to all other propulsion systems whose operation is based on acceleration and inertia, e.g. to a hovercraft or flywheel-see Table B1. The Magnocraft of the third generation will employ as many as three different properties of magnetic fields, i.e.: (1) forces of magnetic interactions, (2) magnetic inertia (acceleration of magnetic fields), and (3) magnetic internal energy (the deformation of magnetic fields) which will allow the manipulation of time. Because the mastering of the magnetic equivalent to internal energy will allow for the manipulation of time, the Magnocraft of the third generation can also be called the Time Vehicle.

Each one of the three generations of the Magnocraft described above can be built in three versions, i.e. either as a discoidal vehicle, as a Four-Propulsor Spaceship, or as Personal Propulsion. For the first generation of the Magnocraft, Personal Propulsion will take the form of an appropriate costume worn by the user. But for the second and third generations of the Magnocraft Personal Propulsion will take the form of a miniaturized devices which will be surgically implanted into the user's body, and which will cooperate with user's system of nerves and muscles.

In archaeology there is a manner of classifying various civilizations by the technological level they achieved. In this manner we describe a given civilization that for example it was in the stone, bronze or iron age. Also the completion of subsequent propelling devices described here requires from a given cosmic civilization to reach appropriate level of technological advancement. Thus the type of propulsion systems that are in the disposal of a given civilization is also a best indicator of the level of technological advancement that this civilization achieved. Therefore it is possible to introduce a very objective classification of subsequent civilizations just based on the type of propelling devices that they have. If we classify in this manner the ages/periods in the development of subsequent civilizations, these ages will unfold as follows:

0. The age of propulsion systems based on the circulation of force and the circulation of matter (see Table B1). The civilizations, for example ours, which are still in this age, are practically limited to the operation within their own planet. Thus it can be also called the **planetary age**. It can be further subdivided into at least six developmental periods, in which

subsequent generations of propelling devices were introduced into the use, as this is illustrated in the six lowest rows of Table B1.

1. The **age of the magnocraft** of the first generation, utilizing the square oscillatory chamber. Because after reaching this age a given civilization achieves the capability to operate in interstellar dimensions, it can be also called the **first interstellar age**. In this age following further developmental periods can be distinguished (for more details see also subsections F3.1, F6.1, F6.2):

- 1A. Discoidal Magnocraft utilizing spider configuration.
- 1B. Discoidal Magnocraft utilizing twin-chamber capsule.
- 1C. Four-Propulsor Magnocraft.
- 1D. Magnetic Personal Propulsion (in the form of a suit).

2. The **age of teleportative propulsion** systems (magnocraft of the second generation) utilizing the octagonal Oscillatory Chamber. It can be further subdivided into the following periods:

- 2A. Discoidal Teleportative Vehicles.
- 2B. Four-Propulsor Teleportative Vehicles.
- 2C. Personal Teleportative Propulsion inserted surgically into bodies of users and unnoticeable for outside observer.
- 2D. Teleportative beaming-up devices.

3. The **age of time vehicles** (Magnocraft of the third generation) utilizing the "sextogonal" Oscillatory Chamber (i.e. the chamber with sixteen side walls). It can be further subdivided into:

- 3A. Discoidal Time Vehicles.
- 3B. Four-Propulsor Time Vehicles
- 3C. Personal Time Vehicles inserted surgically into bodies of their users and unnoticeable to an outside observer.
- 3D. The time-beam carrying the ability to alter at a distance the elapse of time.

It should be stressed that a civilization which in a given time is at, let's say, 3A period of its development (for example as this is the case with the civilization which abducted Miss Nosbocaj - see Appendix Z), has already in its disposal all the propelling devices the completion of which occurred in the earlier periods, e.g. telekinetic transporting beam (period 2C), Telekinetic Personal Propulsion (period 2C), etc. However, it does not have propelling devices from the developmental periods higher than the period actually achieved, e.g. Four-Propulsor Time Vehicles (period 3B) or Personal Time Vehicles (period 3C).

So-far our civilization has not developed any of the Magnocraft described here. But there is vast evidence accumulated which indicates that since ancient times our planet is visited by a number of civilizations having different levels of development, which already have operational Magnocraft (see chapters K to O to follow). For this reason it is extremely important for our researchers and observers to be able to distinguish with which generation of the propulsion systems they have to deal in a given situation. If this generation is identified than on one hand this allows to foresee the type of phenomena with which they can be confronted with, on the other hand it allows to estimate the level of development achieved by a civilization under consideration. There are several keys to identify the generation of propulsion systems with which we deal in a given situation. Let us list here and summarize the two most important of them:

(a) The phenomena induced during the operation of each of the propelling devices described here. In order to give examples of some of them: forming a cloud of air plasma and

causing electromagnetic phenomena for the Magnocraft of the first generation; the walking through walls and furniture, flying through buildings, and penetrating other solid objects by beings or vehicles which surface was radiating with a powerful white ("supernatural") "extraction glow" for the propelling devices of the second generation; and rapid disappearances, "states of suspended animation, "effects of duplicating the time", and many other phenomena that must accompany a nearby pass of Time Vehicles.

(b) The shape of the Oscillatory Chamber. For the vehicles of the first generation this chamber will have a square cross-section, for the vehicles of the second generation it will have octagonal cross-section, whereas the Time Vehicles will utilize the "sexto-gonal" Oscillatory Chambers (it should be noted that these chambers with sixteen side walls, during not very careful observation can be perceived as almost circular rods made of crystal).

At this point the author proposes readers to complete an interesting experiment. The next time they digest an article or a book describing someone's abduction or an extraordinary experience, they try to analyse the attributes of phenomena being described, and then try to determine the generation and period to which most probably belonged the propelling devices which induced the events described there.