

THE THEOSOPHICAL PATH

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VOL. X

MAY, 1916

NO. 5

AND I conceive that the founders of the mysteries had a real meaning and were not mere triflers when they intimated in a figure long ago that he who passed unsanctified and uninitiated into the world below will live in a slough, but that he who arrives there after initiation and purification will dwell with the gods. For "many," as they say in the mysteries, "are the thyrsus-bearers, but few are the mystics,"—meaning, as I interpret the words, the true philosophers.

—PLATO, *The Phaedo*, 69. Trans. by Jowett

THOUGHTS ON DEATH: by H. T. Edge, M. A.



THE vast death-roll of the war has turned our minds with unwonted seriousness to thoughts of death, the meaning of life, and the question of immortality; and there are arguments between deists and agnostics as to the present status of religion and belief in God. We need not go over these arguments; it is sufficient to see what Theosophy can contribute.

The point is this: that Theosophy makes man's immortality a thing of the *here and now*. Conventional views represent immortality as something belonging to after-death, and try to tack eternity on to the end of time, and immortality on to the end of mortality. Theosophy declares that we are immortal *now*, and that the Soul "never was not, never shall cease to be."

Our nature is dual—part mortal, part immortal. In addition to consciousness, which the animals have, we have self-consciousness. This latter is not a product of the upward evolution from the lower kingdoms of nature; it is the special characteristic of man. It is the existence of this divine spark that causes the horror when we try to imagine ourselves as coming utterly to an end at death; for the Soul is aware of its own immortality. But our lower mind rebels against our intuition, because we have failed to distinguish sufficiently between the mortal and the immortal parts of our nature. That

which, in Theosophy, is called the "personality" consists of what has been put together during the years since birth — a mass of memories and habits. This did not exist before birth, and is not fitted to survive death. Nevertheless this statement must be qualified, because that personality is built up around a central kernel that is imperishable and that existed before birth.

The practical part of this question is that we must endeavor to reach to the immortal part of our nature here and now, and not wait till death. That is the road to knowledge. Our horror and affliction over death are the measure of our ignorance; but yet they are the measure of our knowledge; because, if we had not the intuition of immortality, we should be no more afflicted or puzzled over the question than the animals are.

The greater part of our make-up is subject to continual death and rebirth, throughout the years of our life; but there is a personal identity that survives throughout life. In the same way there is a still deeper Self — called in Theosophy the Individuality — that survives death. That Individuality is with us now, back of our mind; we are immortal now.

Mankind is *actually* one and united, as far as the Immortal part is concerned; and our *apparent* separateness lies in our external nature. Brotherhood and solidarity mean much more than an agreement of mutual toleration; they mean the recognition of the fact that we actually are one and united. Brotherhood can only be truly realized by people who rise to the level where they are aware of their non-separateness.

People are everywhere trying to plan schemes for social betterment after the war. But suppose a number of musicians were to pass a law that every instrumentalist should be allowed full freedom to play what he liked, so long as he did not interfere with the liberty of others to play what they liked. Would this constitute an orchestra? The illustration shows that more than legislation and agreements are required. Some agnostic educators hope they will be able to inculcate virtues in the young by argument; but this will not suffice, for we should then have the passions arrayed on one side against mere argument on the other. The virtues need a better sanction; they need to be based on a knowledge of the laws of nature.

The vital center of man's being is his *higher* nature; and this is the fact that has to be recognized by the true scientist of life. If we

make the personality the center of man's being, we pave the way for conflicting interests.

Man is immortal, and mankind is one; these are the two truths that Theosophy emphasizes as competent to shed light on the problems of life and death.

Death is the rest of the Soul — a greater sleep. The coming of death is as much more welcome than the coming of sleep as death is greater than sleep. There is no need to fear death. It is the most familiar event in life, and comes to all; it is a thing no one can deprive us of. Bereavement is hard to bear; but has to be borne, whatever theory we may hold. It is a fact, and the best we can do is to try and understand it. Our lost ones have passed through the initiation of death; and though they can frame no language that our mortal ears can hear, their true Love and their Spirit is with us, urging us on towards the Light wherein they dwell. We cannot drag them down to where we are; but we can aspire to where they dwell. The bereaved seek consolation in high resolve, and in achievement they find it; for thus do they enter into sacred interior communion with great Souls; thus do they honor the departed.

Theosophy has a great mission to prevent the decay of faith, hope, and charity from the world, amid a chaos of despair and cynical doubt; and deeply do Theosophists feel the urgency of the duty. Sceptics and materialists seize hold of the weaknesses and fallacies in religious ideas, and seem to make out a case for their own dark doubtings.

Listen to the song of life. Look for it and listen to it first in your own heart. At first you may say it is not there; when I search I find only discord. Look deeper. If again you are disappointed, pause and look deeper again. There is a natural melody, an obscure fount in every human heart. It may be hidden over and utterly concealed and silenced — but it is there. At the very base of your nature you will find faith, hope, and love. . . . Underneath all life is the strong current that cannot be checked; the great waters are there in reality. Find them, and you will perceive that none, not the most wretched of creatures, but is a part of it, however he blind himself to the fact and build up for himself a phantasmal outer form of horror.— *Light on the Path*

Theosophy means wisdom concerning the divine nature of man, and a way of life whereby knowledge of that divine nature may be attained. A nucleus of people believing this has been established, right in the heart of occidental materialism, and is helping to keep

faith alive in the human heart. 'To it men are turning, as wanderers towards a beacon. 'They feel something *real* that emanates from that body of people. 'These people believe that in duty and service lies the road to knowledge and peace; and that the meaning of life can be realized, and its mysteries solved thereby.

The great truth of *Reincarnation* calls for mention here; it tells us that we have lived before. Not the personal "I," for that is a thing that was built up during this life; it has no recollection of having lived before because it has not lived before. Nevertheless something in us has lived before—though it seems wrong to use such terms as "before" and "after" in this connexion. Who knows what would become of that which we call "time," if our personal consciousness were blotted out?

Reincarnation also means that the Self in us will live again. Life would seem absurd and useless if we really believed that this brief span of seventy years or less is the whole. 'True, humanity goes on existing in any case; that is not destroyed; but then why should I have my consciousness? For what purpose is that? It is impossible to think of a human Ego being created at a point in time and disappearing at another point. "Life is a dream," says an ancient adage; then who is the dreamer? 'The analogy is very useful, and indeed it is much more than a mere analogy. It is possible for man to reach a stage where death and life will be but alternating phases in his existence. This it is to conquer death.

In thinking about future life, we must not forget to think also about past life; the two are essentially connected. 'The fact that we cannot bring to recollection anything preceding this life helps to explain our ignorance about what follows death. It is as hard to imagine that you never existed in the past as that you will not exist in the future. In reading the account of events that happened in the middle of last century, it may suddenly occur to you: "When that happened, *I* did not exist!" A curious thought; and yet the world waggled as usual. It is inconceivable that the world can continue to wag, and you have nor part nor lot in it; the mind rebels from the thought, and the soul shudders. 'The mere ability to pose the question seems to imply an affirmative answer. If I have enough self-consciousness to ask such a question, then I must surely have enough self-consciousness to persist beyond the gates of death. Is not human consciousness *essentially* immortal — *necessarily* immortal? Does it

not contain, in addition to its temporal qualities, an eternal quality, such that, regarding it, we are entitled to say — nay, *must* say — “This is deathless”?

And about the one that is gone from us: had we been able, while he was with us, to recognize the deathless essence in him, perchance we should not miss it now that the presence which we knew is withdrawn. A difficult subject to touch on, because of the delusions of fantasy, leading to morbid self-deceptions in the minds of those so predisposed.

The state of the liberated Soul after death is one of unalloyed happiness, from which all recollection of the woes of earth is banished, and wherein all the unfulfilled ideals and hopes are realized. Pure love is a power that lives beyond the grave and can bless the living; and it can lead to reunion in other lives.

The horror of this war is with the living and not with the dead; *they* are at rest, theirs is the bliss of the liberated Soul. But the effect of the carnage on the world and those who still dwell therein is terrible.

A well-known philosopher has recently written a book in which he says that nothing enters so deeply into our souls as the sudden changes from life to death; daily long lists of dead confront us, and from thousands of tongues questions are asked about the value and meaning of human life, about eternity, about the immortality of the soul. This is true; but the conclusions he draws are quite absurd; the war, he says, has reduced the doctrine of providence to an absurdity. In view of the deaths of such masses of people, carried away by blind chance in open battle, in trenches, in airships, in submarines, the illusion that the destinies of men are in the care of an omnipotent intelligence with carefully arranged plans is an idea which cannot be entertained for a moment, he says. And he adds that the war proves the absurdity of the Christian principle of loving one's neighbor. Surely it proves the exact opposite, by showing what comes of disobeying the rule. As to what he says about God, it may perhaps stand as an argument against certain narrow views with which some people satisfy themselves in comparatively easy times; but we cannot explain away the facts about this terrible calamity, and must either find an explanation or leave them unexplained. Is it not impossible to entertain the idea of a universe that is ruled by reckless and purposeless powers, and that yet at the same time is peopled by

so intelligent and conscientious a being as Man; the said alleged reckless Powers being utterly indifferent to Man's welfare? To all well-balanced minds, the universe appears as ruled by intelligent and beneficent Powers. What we ought to do is to expand our ideas about the nature of deity and the meaning of life and the laws of the cosmos. And even this philosopher of ours worships a deity of his own, which he calls the religion of reason; he preaches the beauty and satisfying nature of resignation, recommending brave devotion to the unavoidable and the knowledge and recognition of the eternity and indestructibility of the cosmos and of the courses of nature, in which the individual unceasingly appears and disappears in order to make place for new forms and new modes of unending substance. Thus he gives with one hand what he takes away with the other. But there is a something in me that might be called "interest" or "love," which binds me indissolubly with the fate of that universe; I feel that I cannot be obliterated — my ultimate essence cannot be obliterated, whatever may become of my present outfit of personal prejudices and memories.

Man sometimes seems to forget that, in moments of pride, he claims the divine gift of free-will. His religions declare that he has been endowed with this gift. It follows that, if he is to use this gift, he must be left to his own guidance, and that he will make mistakes. How else can a free-will be governed and still remain free? We are calling upon God to save us from the consequences of our own wilfulness; and God's answer is, "Obey the eternal laws; choose right instead of wrong; study nature and learn its true laws." Is the attitude of pride consistent with the attitude of supplication? If we shrink horrified at the thought of machines dropping dynamite from the sky, and all the other horrors with which we are now so familiar, let us remember past years of arrogance. And let us think of the generations of smug commonplace well-to-do-ness, or foolish extravagance, or ruthless exploiting of our fellow man, that have preceded this volcanic outbreak. How much worse might it not have been if not for the protection of supernal powers?

However natural and merciful death may be, this carnage is an utter horror; and it is consolation, and not palliation of misdeeds, that we must see in the release of death. The fact that death, when it comes, comes with a welcome, does not excuse us for killing.

In regarding human history, we have to remember that this is the

Iron Age, whose entry was announced by the departure of the Gods, last among them the goddess of purity, daughter of justice. But the goddess is to return with a new golden age, when man has learned his lesson. How does this bear upon the present topic? Because part of the knowledge which man lost was concerned with death, and the darkness to which he was condemned by his own folly included the meaning of life and death. Fear of death was henceforth his lot, and bereavement and separation.

The unity and the eternity of life have to be learned over again; and over again has man to learn that justice and purity are essential conditions to knowledge and to happiness. He has to learn that the immortal part of his nature stands with him now, waiting for recognition and communion; and that, even while living, it is possible to pass for ever beyond the gates of death, and to enter a realm where partings are no more.

THE GERM-PLASM AND IMMORTALITY: by E.



HE doctrine of human immortality, as expressed in Theosophy, states that the Individuality of a man is permanent, but the personality (or, rather, the successive personalities which he acquires in successive reincarnations) are not permanent. We get a light on this doctrine from Weismann's theory of the "germ plasm."

He points out that one-celled organisms, such as the amoeba, multiply by division, the single cell becoming two, the two becoming four, and so on till there are a vast number of separate one-cell individuals. But no one of these individuals can be considered as the parent of the rest; they are all coeval, and there has been nothing corresponding to death. There is, he says, unlimited persistence of the individual, and consequent immortality. But in the case of many-celled organisms, Weismann holds that everything dies but that part which he calls the germ-plasm, and this is handed on from one generation to the next by a process like the multiplication of the amoeba. So here we have the Theosophical teaching suggested in a biological form. All the other cells of the body are so concerned with nutrition and other functions that they lose their immortality, and the perpetuating power becomes concentrated in the germ-plasm.

Some scientific critics, we understand, say that this “germ-plasm” of Weismann’s “runs perilously near a metaphysical concept.” To us, however, it seems much less like a metaphysical concept than many of the things which scientific men regard as physical entities. It seems, in fact, to come perilously near to a recognition of the existence of hyperphysical matter — to an admission that the permanent factor in organized beings may not be made of physical matter at all but of some finer grade of matter. It approaches very near to the Theosophical teaching about Monads — those immortal sparks or souls which, emanating from the universal life, become the central points of the organized beings.

It might be inferred from the above that the doctrine implies an immortality for the animals as well as for men; but the cases of the two orders of beings are different. In the kingdoms below Man, the monad has not yet become individualized. (See *The Secret Doctrine*, I, 178). So, although there is, even in the animals, vegetables and minerals, a permanent unit, yet so far there is nothing in them which could be considered as individual to each particular organism. But in man a further stage has taken place; not an additional upward stage of the ascending line of evolution from below, but a stage due to the entry of the Divine Monads whose arrival made Man from a “mindless” to a self-conscious and responsible being. It is owing to this that man has acquired an immortal Individuality, whereby his identity, though not his personality (for this is but temporary and illusive) is preserved. Such is the doctrine in outline; more can be learned from study of *The Secret Doctrine*, but obviously we cannot advance very far in knowledge of such mysteries until we have sounded the mysteries of our own nature more deeply.

The above is not intended as an exposition of the Theosophical teachings on the subject, nor yet as an entire endorsement of Weismannism, but as an occasional note showing how the researches of science must eventually lead to a confirmation of the ancient teachings, the latter being based on fact.



Good people shine from afar, like the snowy mountains; bad people are not seen, like arrows shot by night.

He who holds back rising anger like a rolling chariot, him I call a real driver; other people are but holding the reins.— *Dhammapada*

NATURE'S SILENCE: by R. Machell

HERE is a silence in Nature that impresses one as being all replete with sound, though there may be but the song of a bird to break the stillness. It is not so much sound that one feels, as the source of all sounds; and that is perhaps the essential characteristic of silence. The power of silence is greater than that of sound because of its potentiality. The strong man is the man of will rather than the man of muscle, for will controls muscle; and silence controls sound: though the latter fact is not so plain to all perhaps.

Those who are most keenly alive to the suggestion of Nature's moods, know that the stillness of the night is vastly different from the silence of noon, or of early morning, when the mists slowly melt into the haze as the Sun takes control of the day. Strange that we should be able to speak of the Sun controlling the day, or of a day being devoid of sunlight, when the Sun's presence is the day. And yet we do sometimes regard the day as self-ordained and the sun as its attendant.

But in the night, when the Sun holds court on the other side of the world, there is a stillness not comparable to that which fills the air, as the returning regent rises above the mountains, and dissolves the mists, before the wind wakes, while yet the wet leaves drip the dew-drops to the earth, and life goes pulsing silently from root to branch, from filaments invisible beneath the soil up to the flower that opens to anticipate the summons of the Sun, the celebration of the day.

And then the stillness of the noon, when the activity of day yields to an overwhelming sense of satisfaction, that pervades and permeates the whole conciliabulum of Nature's infinite administration. The climax of the day is the siesta; the multitudinous activities of life culminate in an intense desire for sleep.

But when the stillness of the night is most intense sleep vanishes, the senses strain to free themselves from their allegiance to the body, and to attune themselves to the vibrations of the infinite. The mind is clarified and rarified spontaneously, as if in answer to the appeal of some acknowledged overlord, some sovereign supreme, some hierarch, who calls his innumerable family to join in celebration of the sacred rites ordained of old to keep men mindful of their own divinity.

But whether at night or in the daytime silence is mysterious, and the brain-mind has little use for mysteries; it loves to babble endlessly, it dreads the silence, as a cat fears a pail of water, not unadvisedly.

Yet even cats will sometimes go a-fishing, their natural dread of

water yielding to their passionate love of fish; and chatterers will make experiments in silence with similar motives, seeking to gratify their curiosity, and their love of small sensations; just as a cat will risk the wetting of its paws to catch a fish.

No doubt the ocean of silence must contain more strange things than the fish that cats may catch; but those that love the ocean truly know that the mysteries of the Great Deep are spiritual verities, beyond the comprehension of a cat, or of a chatterer, or even of a brain-mind seeker for occult phenomena.

It may seem strange to speak about the silence of the sea, and yet it is as surely there as solitude, that is so often painfully impressed upon one in a crowded city, when the sense of isolation may become quite as intense as that felt by a castaway upon the ocean. The silence of the sea seems stamped on its denizens, although the seals are noisily loquacious. They are not truly people of the sea, they love to "lie i' the sun" and chatter, just like the gossips of the earth. But the sea's silence is appalling in its potency. When the winds taunt the tranquil deep the waves arise and rage magnificently against the eternal rocks, which, catching the humor of the hour, join in the tumult of the breakers, grinding themselves to grains of sand, and chanting a murmurous undertone to the wild howling of the storm: then the tumultuous winds, superb in their magnificent impotence, pass, and the silence reasserts itself upon the surface of the deep. The wildest storm seems but a comic interlude in the eternal drama of the elements; the real tragedy is in the Silence. Noise and the fury of the storm are villains who commit imaginary crimes upon the stage, to entertain the populace, but behind the exoteric drama, that delights the crowd, there is the mystery, that hides the inner working of the tragedy, and veils the conflict of titanic forces struggling silently to maintain the balance of the manifested universe.

And the soul of man senses the great drama that the brain-mind cannot comprehend, feels strangely exultant or unreasonably depressed, thrills unaccountably with strangest sympathy for the unseen, unheard, unthinkable drama of the universe concealed from the brain-mind by Silence.

Sound is an active force, and speech and song most powerful; but Silence has a potency that awes. In it there is the infinite; and the soul of man alone can penetrate the mystery, being itself linked with infinity; while the mirror of the mind cannot reflect the silence that

is formless. That delicate mirror may indeed be shattered by excessive sound, it may be clouded by excess of speech, but silence stops its ceaseless oscillation, and the resulting revelation seems to the brain-mind as a dreadful void, more terrible than the fury of the storm. The brain-mind fears the silence that the Soul loves so wisely and so well. Therefore 'twas said of old "speech is of silver, silence is of gold."

Right speech is excellent, because its rightness is proportionate to its rarity, and merely serves to punctuate the silence of the reticence which wise ones exercise.

GOLDEN THREADS IN THE TAPESTRY OF HISTORY:

by Kenneth Morris

PART II CHAPTER VII — THE SUNSET GLORY OF THE SUNGS



THE Confusion that followed the fall of T'ang lasted about half a century; then, in 960, the army robed its general, Chao K'uang-yin, in the yellow; and he became the emperor T'ai Tsu, first of the dynasty of Sung. Forthwith began a dramatic and wonderful period; I do not know where you should look for a time more stirring. We are to read its history in the light of the Law of Cycles. In three hundred years the Cycle of Asia was to end; rather the Cycle of Art, Intuition and Imagination was to give place to that of Science and Intellect; and Asia was on trial, that it might be known whether she could go forward on the new order or not. Heaven and hell did battle for the soul of China: champions of light and of darkness were thick in the field. For three brilliant centuries the Chinese mind struggled after freedom; and had not quite lost hope when the Mongol hordes came down, and dealt it that blow from which only now, perhaps, is it beginning to recover. On the one hand, a radiant spirit was upwelling through the nation: a youthful and immortal gaiety, adventurous, advancing boldly to meet new things and ideas; on the other, inertia, conventionalism, dead formalities, old ritual and precedent. . . Death, cold and precise, alarmed to see his sovereignty threatened by a buoyant and joyous culture, came forth with his graveyard armies to combat for the future of the race. The battle was a draw; or at least, it was only the Mongol conquest that made it wholly a victory for death. But with what gay valor the young knight Sung Idealism fought! All that we read of Bushido, of plum-blossom and cherry-blossom codes: of human honor reflected back by flower or tree: was native in Sung. A courtly and a knightly period, in the higher aspects of it: when manners were superb, and based on a spiritual idea: one of extraordinary artistic illumination, extraordinary ferment of thought and the quick rush of progress. Of extraordinary misfortunes, too; and to culminate in the direst of all: the Mongol conquest.

There was never such imperial stability as had been in the great days of the Hans and T'angs. The lands north of the Wall were a perpetual volcano, throwing up menace forever, and periodical invasions which the empire had not, as a rule, the organized strength to meet. Strength it had: there was no lack of morale: the people were not

cowardly or degenerate, as they were to prove at that fatal last, when they turned on the all-conquering Mongol, and gave him more trouble than the whole world else together. But the very ferment of thought, the transition, kept that strength disorganized and useless; so that valor and high knightly codes availed little against barbarians inferior in every respect, but united; and the triumphs of Mangu and Kublai were prepared for by three centuries of Kins and Liaos, Hsias and Manchus, who preyed on a China rent by political and religious dissension. There you have the dark aspect of it: the one that all historians emphasize, so that we miss noting, generally, the sunset glory that, despite all, flooded the age. There never was a time more brilliant in art; the Sung artists, probably, saw deeper than any before or since into *God in Nature*: things visible were, for them, wholly luminous and translucent, and every earthly landscape revealed heaven. In poetry it was only exceeded by T'ang; in prose, it produced Ssuma Kuang, the greatest of Chinese historians, and the philosophers Chou Tun-i, Chang Tsai, Ch'êng Hiao and Ch'êng I, and above all Chu Hsi, who may take rank with the greatest uninitiated thinkers of the world. A new spirit, a wonderful expectancy was abroad, that would not be content with shadows of the dead past. It seemed as if China sensed the coming of a new cycle, unlike any she had known of old; and struggled to mount upon its arc. It was the modern cycle, that of science; Europe rose upon it, some two centuries later, from a past of dark barbarism; China, from a past of high culture in which spiritual elements were strong, failed to grasp it, and went down. Well, her night was at hand; she could not pass immediately from the glow of sunset to the glow of dawn. Perhaps. Or perhaps she might have won through, but that the good in her was not strong enough, the evil too strong. With high heart she put forth from port in that memorable year 960; her boat swam splendidly; "Youth at the prow" and so forth; but just three hundred years ahead was a Niagara: avoidable perhaps, but not easily. (We of Christendom cannot look one hundred years ahead; we do not know what is coming, nor recognize how swift and strong is the current that bears us on. "By using antiquity as a mirror, we may learn to foresee the rise and fall of empires," said wise T'ai Tsung.)

It was a period of aftermath: the seeds had been sown long before, and a first harvest had been reaped from them under T'ang. Now, all that remained living in the soil sprang up, blossomed gorgeously,

and died. Flowers and weeds, weeds and flowers. Teachers there were, of the secondary kind; influenced, one would say, as our own Carlyle, Voltaire and Emerson may have been, by the Mighty Gods: philosophers who understood the needs of the day, and strove hard to save the people; but not of the same rank with flaming champions of Heaven such as Bodhidharma and Chih-i: their standards were not dyed so deep with the old royal hues of esotericism. All things had been brought down and out on to exterior planes; where now uninitiated men and women, profiting or not by the labors of the great God-Messengers of old, must battle in politics and in the schools for the salvation of China.

All Asia had given seeds for the garden of T'ang; for this new Sung paradise, China herself furnished everything. There was no great impulse, spiritual or material, from without. The empire had been divided, and its light hidden under a score of little bushels: its genius scattered and impotent in a mort of discordant States. Now, with reunion and the prospect of strong government, its forces were refocused at K'ai-fêng Fu, the new capital, and the clash and contact of bright minds produced the wonderful result. Taoism came early to the front: Chêng Tsung, the third emperor (Chao Hêng), was a devout Taoist, as were many of his successors; by that you might know that imagination was stirring. New titles also were conferred upon Confucius: he was advanced, I think, to royal status; the imperial came later. But in neither Confucianism nor Taoism could the spiritual driving power of a great age be found; and Tientai Buddhism, which had been the inspiration of T'ang, had lost its hold on the race with the fall of Hsüan Tsung. It had become esoteric, and was not for this age: its gaze was wholly inward; whereas Sung was looking outward also, upon a world renewed and grown marvelous, and a future alive with possibilities. Taoism indeed spoke of the wonder running through creation; but the scientific spirit was very near incarnation in those days, and Taoism was unscientific: did not go far or deep enough to satisfy needs. Young China in the universities sought a religion that should interpret Nature: *Back to Nature!* was all the cry. It found what it sought in Zen.

Five centuries had passed since Bodhidharma came from India, and three since the death of the last of his successors; yet it was for the supreme struggle of this age of Sung that he and they had prepared. Out of their School came Tientai to win battles for the Gods

in T'ang, a time of more glorious results than this, but not so crucial. The moment had now come, when all things depended upon it; and Zen itself, the parent-School, took the field. *Back to Nature!* was the cry of the age; and Zen's text-book was Nature, its laboratory and materials, life. It would have nothing to do with traditional thought and learning. It was at once devotional, artistic and scientific; holding that between ego and cosmos there is a perfect sympathy, infinite and minute correspondence — that they are, indeed, outward signs of the same inward essence, not to be thought of apart. Its effect was to mold and foundation life, art and thought upon Truth: truth to Nature, to the soul of Nature, and to the divine soul in man. A sweet and sanative doctrine: a constant purification for him who understands and practises it. It held the door open, certainly, for the scientific spirit: but for a scientific spirit that never could have degenerated into the hollow materialism of Europe. It lay behind the whole colossal effort of Sung to save China from the lower forces within herself, and to set her feet on the path to a higher and continuous civilization, incomparably superior to anything of ours or her own. Had that effort succeeded, it is the whole world that would have been the gainer. Had China remained up, Europe would not have failed to rise: she would have risen, I think, under the tuition of the Orient, to heights of culture spiritual as well as material. The universal civilization will come only when the civilized half of the world shall pass its great testing point without failure, and then stretch hands to the races awaking from pralaya — as the East is now, perhaps, on the point of awaking — and say: *Come, join us brotherly upon the peaks!* Will our Christendom do this? Ah, hope, hope! We cannot say yet that the die is cast inevitably; we cannot say yet that strong spiritual effort may not win the day. But ah, Nations of the West, enlist yourselves while there is time under the bright banners! Uncrucify the Christ that is within you: purify yourselves: slough off the shame of your greeds and ambitions; that you may usher in the Golden Age: that there may be no more wars and horrors, but at last CIVILIZATION. . .

It was not for nothing that the Masters had worked of old in China: with the dawn of this Sung battle day, a strong army, eager and enthusiastic for the cause of Light, was ready to take the field. But there had been much evil, too, in the past centuries, to feed the hordes of darkness; which also were gathering. No grander system could be devised than a working harmony of the three religions of

China: Confucian staidness, stirred by Taoist imagination, and spiritualized and invigorated by the warriorlike Buddhism of the Mahâyâna. These three threads had been interwoven by the Lords of Destiny, and of the weaving came the glory of the Asiatic Cycle. But such a harmony can but endure while the Great Breath is blowing, while the inspiration of the Oversoul is present and active. The ascending arc of the cycle welded them together; the descent left them to drift apart. With such division came peril that one or another of them should be seized upon by the forces of evil, and become chief instrument in the hands of hell.

Already in the days of Hsüan Tsung, as we have seen, division had begun. When natural genius is exhausted by vice, and the spiritual imagination dead, there is no refuge left against the tigers of passion save in obscurantism of one kind or another. It may manifest as fanatical religiosity, as generally in Europe; or as a cold, precise formalism, as in China. Sin had skulked in the procession of T'ang triumphs during the seventh century, and had lifted its head grinning in the brilliant first half of the eighth; until, with the climax of the age, there was a strong obscurantist party. Alarmed at the flowering of genius, from whose Edens it had been self-expelled; shocked by the daring thought, the warrior mysticism of Tientai, whose flights it had clipped its own wings against sharing; it set its pale face resolutely against all brightness, hope, progress and freedom. It struck its talons into Confucianism, that being the State Religion (always a perilous office), and one that most of all had forgone and forgotten its esotericism. Growing revelations of loose living gave the obscurantists the weapon they needed. They fell into the fallacy of their kind, and banned all spiritual freedom under pretext of banning moral license. They attributed to the great ideals of the Mahâyâna, not the genius it fostered and they abhorred, but the laxity of life it sought in vain to combat. They stood for formalism, ossification of intellect, paralysis of the mind, death of the imagination: things, as we know, due directly or indirectly to abuse of the life-forces. The tide that free genius had striven in vain to stem, they opposed helplessly with a helpless puritanical *laissez faire*. They prescribed "virtue" and ritual as panacea for the ills of the State; but put an extinguisher on thought, inquiry, speculation. Human origins and destiny? — Fold your hands, practise virtue, and trouble only with the things that concern you! So when we were children, our questionings were answered

with: *Because God made it so; or, We may not inquire into the mysteries of Providence.* Virtue is the panacea; so it be a living force in the life, and not a mummy formula. And a formula it will always become, when in its name the spontaneity of the individual mind is checked or forbidden. For this lies at the base of all wholesome action. When the Tartar is thundering on your gates, it is a poor thing for the Son of Heaven, your emperor, to sit enthroned with hands folded according to the rites, and "practise virtue"; relying on the force of example to repel the foe. But in sooth the Confucian scholars had little else to prescribe; though their Master Confucius had been a very positive statesman in his day, with whom virtue and example had meant something.

Not that these people were all worn-out rips; there were many brilliant intellects among the Sung conservatives, else they never could have stood against the brilliant intellects that opposed them. But the force that they represented was the natural outcome of the lax morals of a section: China's Karma for the loose living of certain Chinese. And I think it is always worn-out-rippism, ultimately, that provides hell with her munitions of war. Consider how many a flame-eyed saint, eager with rack and firebrand, had been erstwhile a chief among sinners. The wholesome man who has lived cleanly is likely to be broadminded; why should he not? The lower fires, lighted and fanned, burn up first genius, then the natural kindliness of man to man: in a nation as well as in an individual. So, when young Sung culture, gay and brave with the delight of Zen ideals, took the field, intent to carry China on and up into the new cycle, it found the heirs of later T'ang obscurantism waiting to obstruct the way: a Confucian-conservative party that feared progress, distrusted new ideas, loathed the venturesome qualities of the mind, and — prepared the way for the Mongols, and for all stagnation and disaster since.

The political aspect of the struggle came to its acutest in the last quarter of the eleventh century, and centered about one of the strangest figures in the history of China: a nineteenth-century European translated, one would say, rather than a medieval Chinaman. This was Wang An-shih; liberally dubbed Socialist, charlatan and the like by orthodox historians since: terms that may be dismissed; as in this case they mean nothing. He was born in 1021: one of a group of years as rich in momentous births as were those about a century from our own time, that saw Lincoln, Gladstone, Darwin and Tennyson born.

His early writings — his pen, we are told, seemed to fly over the paper — attracted the attention of ●u-yang Hsiu, the Maecenas of the day, and a magistracy in Chehkiang was found for him; there he so signalized himself by energetic improvement of conditions, that the great Minister Wên Yen-po recommended him to the Son of Heaven: at that time Jen Tsung, himself a Taoist and liberal: and in 1060 he was given high office in the administration of justice. By this time he was looked on as the rising hope of the Individualists. Jen Tsung died three years later, and his successor Ying Tsung called Wang An-shih to court, but for some reason he did not proceed thither: internal troubles during this reign made progress one way or the other impossible. On the accession of Shên Tsung in 1068, Wang An-shih was made Prefect of Chiang-ning, then Expositor of the Han-lin College; and in the following year, State Counsellor. His great opportunity, and that of the whole liberal or individualist party, had come.

It is rather difficult to judge the man. His political measures seem, for the most part, sound, if daring; though his finance might be considered overbold, even shaky; as when he met a panic by doubling the value of cash. It is not within our purpose to go into these matters, since the issues were political and temporary; his greatest work was for education: in which respect he did, I think, show deep understanding of national needs. He determined to change the whole system, from primary schools to examinations for the *chin shih* degree. You might know your Confucian classics to the last hair line, yet be fool or knave at the government of your prefecture: the classics should no more circumscribe the life of the schools. Their light, he considered, was extinct, their force expended ages ago. A new interpretation was needed, and he supplied this one: their lessons should be, practical work to meet the practical needs of the age. Even if the Truth of truth lay buried in them, what did it avail? Neither teachers nor pupils, now, had any inkling of what that truth might be; they knew not how to look for it, nor even that it existed at all. Rhetoric had been a main subject of study, as in the decadence of Rome; Wang An-shih would have none of it. So, "even the pupils in the village schools threw away their textbooks of rhetoric, and began to study primers of history, geography and political economy." Such primers were provided by the great reformer himself: he wrote or caused to be written a whole series of them, embodying the "new

learning" of the time. Not a misunderstood Confucius, but Nature; not the classics, but life, should be teacher and curriculum. Distinctly we are to see Zen influence at work here; yet Wang An-shih himself is not to be held unaccountable for his failure. He would not give things time to grow; but rushed his measures through in desperate hurry: would win over no one, but over-ride all. His opponents called him the Obstinate Minister, apparently with some justice: there was something of your modern extremist-reformer's unfortunate infallibility about him; and they say that he neglected personal cleanliness: neither washed his face nor changed clothes as often as good taste demanded. That must be accepted with reservations, perhaps; history-writing has been in the hands of those to whom he was *the bête noire*; and we may remark that that was a fastidious age. Certainly he raised up a world of opposition: both what might be called legitimate, from the Confucian conservatives, and much that tact and balance would have avoided. Chang Tsai, the great philosopher, who stood Teacher to his age, if any man did, threw up office in disgust in 1076, because Wang would not listen to his advice; and it was Chang Tsai who began, with Chou Tun-i, that great Sung movement for capturing Confucianism for the Light by impregnating it with Zen.

Wang An-shih held office, with intervals of disfavor, until a year before his death in 1086, and wielded such power as might be, in the face of all the opposition of the official world. Ssuma Kuang, the great historian, was the leader of his opponents: a great mind, certainly, and known popularly as "the people's living Buddha"; Wang An-shih was never such a favorite with the masses. Wang lived to see Ssuma triumph, and his own work undone; they both died in 1086, as did the emperor also. Chê Tsung (1087-1100), sick of the quarrels of the conservatives during his minority, reverted, on assuming power, to many of the policies of Wang An-shih; Hui Tsung, Taoist and great artist, placed his tablet in the Confucian temple, as "the greatest thinker since Mencius"; but Hui Tsung's soul was in his painting, not in politics — of which the whole empire was heartily weary likewise. From that on there was a gradual sliding back into *laissez faire* and inertia. By long and slow degrees, however; a draught of freedom had been poured into the veins of China, and she was not quite to forget the delight of it until Ming times. Things were never quite the same until Sung and Mongols had passed, and

the successors of Yung Lo, the third Ming, found themselves fossils in a fossilized China, that strove only to retrogress.

They were wonderful days, those of the contests of Wang An-shih and Ssuma Kuang: great minds, both of them, brilliant leaders. Circling about them were galaxies of genius: painters and poets, historians and essayists; an empress who was among the first art critics of the day; an imperial prince who was one of its greatest artists and art teachers. It was he who, as the emperor Hui Tsung, founded the Imperial Sung Academy of painting; it is related that on one occasion he bade a pupil paint his branch of plum-blossom again, "so that its purity shall seem human." There you have the Zen idea: in all Nature there is nothing foreign to man; nor anything without a consciousness of its own in which man, too, has a certain share. You may understand the beauty of the snow, of the rising moon, the wave or the mist, because there is no hard line between your consciousness and theirs; you have it in you to feel their whole life and significance. Before you can paint a thing rightly, you must consciously *be* it; nor is that impossible, since there are deep, intimate channels of relationship between you and it, and your mind may flow out into its form and experience its life.

Wang An-shih, as we have seen, must be called an extremist: with energy and ideas that might have saved China, he failed through impatience of middle lines. There were others, however, who took up the task more sanely; and not in perilous politics, but in philosophy. Was it possible to save Confucianism itself? We imagine that the inspirers of Chou Tun-i and his school believed that it was; at least the attempt should be made. Chou Tun-i (1017-1073) figured as a Confucian teacher and commentator on the classics, but introduced interpretations of his own. Zen writers say that he had received enlightenment through the instruction of Hui Tang, a Zen Master,* and that he and his three great disciples practised meditation according to the Zen method. He was the first of the ontological philosophers of Sung; putting forward in his two first books, the *T'ai k'ih t'u* (*Picture of the First Principle*) and the *T'ung Shu* (*Deeper Treatise*) a system of metaphysics: a new thing in Confucianism, which had left metaphysics severely alone. His two chief disciples were the brothers Ch'êng Hao (1032-1085), called Ch'êng-tzū, Ch'êng

* *The Religion of the Samurai*, by Kaiten Nukariya, Professor at Kei-ō-gi-jiko University and at Sō-tō-shū Buddhist College, Tokyo. Luzac's Oriental Series, Vol. IV.

the Teacher, and Ch'êng I Chuen, Ch'êng I the Great, (1033-1107). Chang Tsai (1020-1076) also known as Chang-tzŭ and Chang Ming-tao — Chang of the Brilliant Intelligence — was an uncle of the two Ch'êngs; a public teacher of philosophy who had found Confucianism insufficient, and had turned to Buddhism and Taoism. In 1056, however, we learn that his nephews won him back to orthodoxy: read, that they induced him to join with them and Chou Tun-i in the effort to capture Confucianism from within. Though thus associated, all four, and particularly Chang Tsai, were original thinkers. Of their metaphysics we need say no more than is contained in this note by M. de Harlez, from Vol. XX of the *Annales du Musée Guimet*:

Lao-tse, le premier et seul jusque-là, avait recherché l'origine de l'être et l'avait trouvée dans le *Tao* ou l'Intelligence éternelle. . . . Tch'eng-tze [Ch'êng-Hao] introduisait le Premier Principe sans principe (T'ai K'ih wu k'ih), être absolu, sans personnalité, d'où émanent le principe actif, spontané et le principe réceptif, réactif dont l'action combiné produit toutes choses.

And of Chang Tsai, the same authority writes:

Il occupe une position isolée dans l'histoire de la philosophie chinoise et . . . il se rattache aux principes professés par Tchuang-tze et le *Tao-te-king*.

— Their business, then, was to harmonize the Religions; and we may add, especially in the case of Chang-tzŭ, to preach universal brotherhood.

No doubt one main cause of Confucianism's opposition to progress is the supreme and disproportionate position which the doctrine of filial piety occupies in it, or has come, or had then come, to occupy. You shall shun every idea and practice that your fathers knew not before you; you shall hold their memory higher than all the interests of the world. The Sung philosophers saw the danger in this. Even the national sense of humor is imperiled; as when Lao Lai-tzŭ is held up as an example, who "at seventy was still accustomed to divert his parents by dressing himself up and cutting capers before them." Mo Ti had taught of old (fourth century B. C.), that the duty of man was to love all men equally: an idea which Mencius opposed vigorously, on the ground that it cut at the roots of filial piety. Chang Tsai cautiously reintroduced this heresy as true Confucianism; explaining that it did not imply the loving of one's parents less, but the loving of one's fellows more. Of course the orthodox combatted such a preposterous notion with might and main; and there

were many attempts during the first half of the twelfth century to get his works proscribed. But surely we are to see in the work of these teachers, and of Wang An-shih — though the latter failed — an attempt inspired by the Gods — the attempt of the last quarter of the eleventh century — to save China.

The result of Wang An-shih's failure — for it certainly was that — came to pass in the year 1126, in the shape of the first great disaster of the age, called "the Crossing." K'ai-fêng Fu was taken by the Kin Tartars (the Manchus of later history), and with it the emperor, most of the royal family, and the whole of Northern China. The court passed south, crossed the Yang-tse, and set a new ruler on the throne at Nanking, whence the capital was removed to Hangchow in 1138. Hui Tsung, great artist and weak monarch, was left to survive many years among his captors; no doubt he did much to teach them civilization; they do not appear to have treated him too badly. Once more, as in the dawn cycle, an artistic Chinese South found itself opposed to a rude semi-Tartar North; the Great Age was to close as it had begun. There would have been no Crossing, in all likelihood, had Wang An-shih's reforms been advanced sanely and firmly persisted in.

Yet this outer *débâcle* did not altogether denote a national weakening — immediately, at any rate. Creative art did not stop, nor even suffer setback. No sooner was the court established in Hangchow, than the Great Age of that city began, to exceed even the Great Age of K'ai-fêng Fu in beauty and glory. Hangchow itself — what was there in the world to compare to it, or what is there now? City of cities it was, with its twelve thousand lofty bridges; its forty by ten miles of area — you could walk forty miles without turning in Hangchow, over streets as straight and broad as those of Chicago today; its innumerable islands and Venice-like canals; its exquisite villas and gardens; its peaceful and crimeless millions; above all, with its great philosophers, its artists who saw deeper into the secret, magical heart of Nature, probably, than any have done before or since in Greece or Italy or England. Heart of the native land of Chinese poetry and mysticism, the center of the loveliest region of lakes and mountains in China, it became at once the world-metropolis of a beauty of idea. Marco Polo's picture gives little but its vast size, industry and peaceableness; excellent order and arrangements; numberless guilds, public baths and libraries: its general air of greatness, cleanness and

well-being. Beyond all that, it was the city of a people on fire with love of Natural Beauty: possessed with an enthusiasm, almost a mania, for landscape art: gardening and painting. Even now, after Mongol vengeance wreaked upon it, and then centuries of declining importance, and then the ruin wrought by villainous T'ai-p'ings, there are gardens in Hangchow, they say, which be things to treasure and dream over. They made their city a matter of delicious landscape; they had the lake and its islands to help them; its hilly shores covered with trees. On those islands rose temples and pavilions, lovely with their tilted roofs; on those shores statesmen and poets, philosophers and courtiers and merchant princes — artists and connoisseurs all of them—built their villas: villas such as Li Long-mien and Ma Yüan and Kuo Hsi loved to paint: there where the gardens were, that were first created and then set on canvas by magician wielders of the brush, the poet-painters with most exquisite intuitional vision, perhaps, that the history of art remembers. Here, masters of the Caucasian, you might go to school: even you that made the great Italian gardens; that consecrated with human art the wonderful Alban and Apennine landscapes, and made little Edens about the villas of Florence or of Tivoli: here, to these forgotten glories of the Blackhaired People; to these days when men saw into the arcana of Nature, walked hand in hand with the Mighty Mother: learned art and beauty, not from her exterior self merely, but were inspired and quick with the vital, subtle, esoteric beauty of her. It was a race heart-given to natural magic, ensouled with an intense enthusiasm, a spiritual emotion for the inwardness of mountain-beauty, water-beauty, mist and cloud-beauty, flower-beauty. "Why do people love landscape?" asks Kuo Hsi, in the first words of his *Essay on Landscape Art* — according to Fenollosa, no second-rate critic, one of the most inspired pieces in all the literature of criticism—and answers: *Because it is the place where life springs eternally: — life, the magical, the secret and poetic thought of the Mighty Mother.* In another place he says, speaking as a Sung artist, thinker and gentleman: *It is the nature of all men to love that which is new— to discard the outworn and conventional, and drink daily the daedal inspiration of Nature.* — It was a period of high Theosophical illumination manifesting mainly through art, and of that, mainly through landscape art. The Imperial Sung Academy attended to the technical training of the artists, and the Zen priesthood to keeping open

the sacred sources of inspiration. These priests were all artists, it appears; or almost all. It was the last cultural harvest, in China, of the sowing of Bodhidharma. His figure dominates the great Asiatic Cycle. Through him the Gods had poured the light that made Eastern Asia splendid during the seven centuries of her last splendor.

They put forth one more effort, during this twelfth century, to save the people. Chu Hsi, also called Chu-tzŭ and Chu Fu-tzŭ, in Japanese Shushi, was born in 1130, and died in 1200. Like Chang-tzŭ, he found Confucianism insufficient, and studied Buddhism; probably, though it is not certain, he was at one time a Zen priest. In 1154, however, he determined to make his onslaught upon orthodoxy from within, as his predecessors the philosophers of Northern Sung had done in the previous century. Like them, also, he practised and enjoined meditation according to the Zen rules; but he carried the great work much further than they did. He showed that in the Analects themselves there are hints of an esoteric doctrine: a doctrine teaching the freedom of the human soul and its godlike potentialities; also that the more ancient Yi King, on which Confucius drew, taught evolution. The lost books of Confucius, he contended — and made a strong case for the contention — would have proved that sage the enemy of much that had been fathered on him, and the advocate of much that the Confucian orthodox banned in his name. He set out to harmonize the religions: to preach an eclectic Theosophy drawn from all three of them, and to show that the result was Confucianism. From Buddhism he took the eternal progress of the soul and of all things else — evolution. From Taoism he took the love of nature, the search for the simple and pure, antipathy against formalism. He gave a new motive to art: the great painters, supporting him, made pictures of the "Three Founders." In one of these, by Ma Yüan — we draw the description, as usual, from Fenollosa — the Buddha walks a little in front, as being the earliest and the great Avatar of the age; Lao-tzŭ and Confucius, walking together, follow him reverently, in friendly converse, at a little distance. To Lao-tzŭ, the Individualist, is given an expression brimming over with compassion; to Confucius, strength and intense individuality. — So we have, I think, the outer and inner sides of a Theosophical Movement manifested in Hangchow of the Southern Sung: the first in Chu Hsi's philosophy, the second in the doctrines and discipline of Zen.

Altogether, it is a great, free people at its flower that we see: an age of keen intellectuality, among women as well as men: there was no seclusion of women then, nor thought of their inferiority. An age of ferment, rapid progress, in thought and art; beyond all, an age in which a spiritual current was flowing; dominating its creative art, in some senses, as no *spiritual* current has dominated our own. If you turn to your history books, you shall gather that it was all effeminacy and inglorious wars: getting no inkling of its real brightness. The verdict has been passed on it by a China in which everything vigorous, spiritual and progressive had been stamped out by the Mongol Conquest, and only backward tendencies left to flourish. Weakness there was in Sung, undoubtedly; but its history will remain a barren study for us, unless we also recognize its splendid strength; and that it was, in fact, one of the most golden of the golden-thread times.

That was so still at the beginning of the thirteenth century: that fateful century in which the sun went down on Asia, and began to rise in our Europe. Two titanic figures arose, called by the Cycles to create a new world and destroy an old one. Frederick II, *Stupor Mundi*: ruthless, sensual, mighty-minded: typical in a thousand ways of the European civilization he undoubtedly founded: was one of them; and Genghiz Khan, the murderer of Asia, was the other. Frederick had hardly smashed down the gates of Europe so that culture might enter, when Genghiz had taken the war-path, and was beating out the brains and tearing out the heart of Asia. First the Saracens went down; then the Chinese. For fifty years the Sung withstood the Mongols. The Kins of the North, supposedly so much more virile, were subdued quickly enough; but the Sung poured from their studios and guild-houses to wage the most stubborn and heroic of wars. There was nothing effete, nothing effeminate about their fall. Venetian ordnance sealed their fate; Christian Europe was only too eager at all times to help the brute Mongol ruin Asia. In 1276 Hangchow fell; in 1279 nothing remained but sixteen beleaguered junks, lashed together and fortified, in a bay or inlet on the Kuangtung coast. The siege lasted a month; fresh water gave out; the days were all fierce fighting, the nights resisting fire-ships; then Lu Hsiu-fu, the hero of the resistance, took the baby emperor in his arms, and threw himself into the sea. The Great Age had gone out in tragedy.

CHAPTER VIII — THE NIGHT OF ASIA

ONE need not go much further with the history of poor China. Kublai, fortunately, was a good man: a Buddhist, and not unhumane: very different in type from his predecessors. But the night had fallen; the Mongols were Mongols; the leopard will not change his spots. Nothing spiritual could flourish under them; they were, of course, realists and materialists to the last mother's son. Art did not die at once; it lingered, and was clever enough in its way, but *realistic*. Those of us who worship at that shrine would do well to note the course of events, and how this realism was the precursor of utter decay. Of course. We first follow romance: by which we mean weaving a web of glamor about — the personal man. That web wears thin; our romance becomes futile or bombastic — obviously false. Then we go to nature, as we say, for truth and a new inspiration. *Nature!* — of which, however there are several aspects. There is Nature that Zen saw, infinitely suggestive of divinity; and there is the nature that some others see: brutal, lustful, crawling, dirty, murderous. That is the nature to which you shall react from the false romance, when wrong living has robbed you of the spiritual vision. Realism — the personal man again, but without even glamor: naked and unashamed, the animal man. We write books with the reek of animal humanity in them; and that reek and nastiness we are pleased to call *art*. But that too must pass; and where shall we find ourselves when it is gone? Whence then draw inspiration? *Nowhere!* The body dies, goes down into the grave, and there is nothing more to it; set up a tombstone thereover with the usual formal lies and lying formalities. The next step from our dear Realism will be just that: formalism, emptiness, falsity, wan rigor and decay.

The spiritual impulse was not quite dead in China yet. The Mongol power lasted a hundred years; then fell before victorious Hung-Wu the Ming. Here at least was a native dynasty once more; Hung-Wu himself had been a Zen monk in his day, before he turned soldier and overthrew the Mongols. Now, hoped China, we shall revive our old native glories of Sung. But no; the spirit of Sung had passed; we had gone too far with our realism and formalism. If Zen remained, there remained no longer the living Teachers of Zen. It was a powerful China for a while, and one that strove desperately hard

to bring back the living inspiration of pre-Mongol times; but the Night of Asia had fallen for the Black-haired People, and the vanguard of the Host of Souls had gone elsewhere. Strange how the ideas that set one age alight, so that it shone and will shine forever a beacon on the crest of time, may have no spark left in them for the age that follows. Ideas are powerful in so far as they have men behind them; and not men in the ordinary sense, but those Men made perfect whom we call the Gods. So now, Ming would resuscitate the splendors of Sung: went to it collecting the old masterpieces of art, and did its utmost to get a thrill of life out of them. But no; there was no thrill to get. This was night, and you could not call back the sun into the sky; the Gods had all their work cut out for them, trying to make something of unpromising, turbulent Europe. For about twenty years at Nanking, the first Ming capital, there was this reaching out for the Sung inspiration: for freedom and the intense life of the soul. Then, finding it not, they turned back to the old formulae: Confucianism, formalism, conventional virtue. Nanking became too far south, too near the spring-heads of the old poetry, romance, mysticism: too redolent of Lao-tzŭ and of Zen. In 1421 Yung Lo will go north, and make his capital — where? At K'ai-fêng Fu of the Northern Sung; Lo-yang of the T'angs; at Hsi-an Fu in Shensi, home of Ts'in Shih Huang-ti and the great Hans? — To none of these ancient seats of the triumphs of the Black-haired People. No; but to a certain Xanadu, where Kublai Khan his stately pleasure-dome decreed: to Peking of the Mongols, where thought nor art nor poetry nor national life ever flourished: an arid soil, suited only to growth of the worser side of Confucianism; and of sundry -isms more dangerous still, imported long after, under the Manchus, from a Europe that remained barbarous: -isms antinational to the Chinese, and from which they could expect only harm.

Remains only to note the Manchu conquest in the seventeenth century; the outward splendor of the reigns of the two great Manchus, K'ang Hsi and Ch'ien Lung; the activity of the Jesuits under the former, who welcomed and protected them (not for their religion, but for their European knowledge); and the apparent promise of good things that their influence brought. But it was all Dead Sea fruit; there was nothing for China in it; it was an indigestible and unwholesome Europeanism, and gave place by natural reaction to the extreme anti-Europeanism of the nineteenth century. Then the great

event of a few years ago: the re-establishment of a national — shall we say *dynasty*? — by Yüan Shih-k'ai; and perhaps, *perhaps*, the hope of the dawn of a new day. Since China has been so great, so beautiful, who would not wish that she may be great again?

And of Japan, remains to be noted this: after two centuries of feudal rudeness, the star of culture rose again under the Ashikaga Shoguns; Ashikaga Yoshimitsu overthrew the Hōjō family, and Hung Wu the Mongols, in the same year, 1368. There was friendship between China and Japan in those days: both hated the Mongol and his ally the European; both were inclined to look to Sung for their inspiration. The Mings, as we have seen, could get nothing therefrom; but with the Ashikaga it was different. The Sung motifs were new to Japan, and the very stuff that the great Yoshimitsu needed. While Sung flourished on the continent, feudalism and fighting had kept the islands too busy to heed its glories; now that a moment of peace had come, Yoshimitsu, like Shōtōku and Kwammu of old, be-thought himself of the continental fountains of culture and inspiration. For the first twenty years of Ming, Sung ideas, pictures, books and thought were all the rage at Nanking; and it was precisely in those twenty years that the emissaries of the Shogun came to Nanking for light. In China, the revival was but a little candle flaring up before extinction: an artificial enthusiasm, born of nationalist reaction from Mongol foreignism. But it proved the light of lights for Japan. Zen came to her, with all its profound and vital inspiration for art: consecrating and making beautiful her soul — beautiful, pliant, valorous. Thus through all the night-time of Asia, Japan was as a lantern in which a light was burning. The seeds of Asian glory remained with her; she maintained a living art; and but for the fact that she preserved the memories and records of them, we should guess little of the high achievements of Chinese Sung.

As the Eastern Pralaya drew on, she withdrew within herself. When K'ang Hsi flung wide the doors of China to European learning and its Jesuit importers, Japan but sought a more hermetic seclusion; bolted the gates of her house behind her, and would have no truck nor dealings with the foreigner. She waited until the cycle should turn; until the pioneers of the Chosen People should be knocking at the doors of Asia again, and there should be faint signs in the heavens of a new Oriental Dawn. Then, we know, she sprang forth armed, the Knight of Asia: the first blossom amid her snows; the first

sweet swallow of her spring. Be it hers now to stand on guard over the future. To quicken China, for the sake of all that China has done for her; to quicken Corea, for the sake of Buddha-like Shōtōku and of Asa, his Corean friend and teacher. For not yet have time and incarnation civilized us; not yet has experience performed its function. We are a coarse lot yet, we human beings; we have much to learn. We must go to school again, incarnating into a heredity more artistic, more spiritual, less bloody-minded than that of Christendom. World-civilization would be a lob-sided affair, without that which both East and West can give it: like Mercury's staff lacking one of its wings or serpents. We must not fear, but may hope fervently, that life will center again at its noon and fullest in those supreme eastern regions whose old story has been so lit with wonder, with sublimity, with magnificent achievement. *Yellow Peril!* — Let us say rather, *Golden Promise!*



THE Dragon, now considered a mythical monster, is perpetuated in the West only on seals, etc., as a heraldic griffin, and the devil slain by St. George, etc. It is in fact an extinct antediluvian monster. In Babylonian antiquities it is referred to as the "scaly one," and is connected on many gems with Tiamat, the sea. In Egypt, when a star of the Dragon was the northern pole-star, this was the origin of the connexion of almost all the gods with the Dragon. Bel and the Dragon, Apollo and Python, Osiris and Typhon, Sigurd and Fafnir, and finally St. George and the Dragon, are the same. They were all solar gods; and wherever we find the Sun, there also is the Dragon, the symbol of Wisdom—Thoth-Hermes. The hierophants of Egypt and of Babylon styled themselves "Sons of the Serpent-God" and "Sons of the Dragon." "I am a Serpent, I am a Druid," said the Druid of the Celto-Britannic regions, for the Serpent and the Dragon were both types of Wisdom, Immortality, and Rebirth. As the serpent casts its old skin only to reappear in a new one, so does the immortal Ego cast off one personality but to assume another.—*H. P. Blavatsky*

SAINT-SAËNS, THE GREATEST LIVING COMPOSER



LOUIS LOMBARD of New York City and Trevano Castle, Switzerland, before conducting a program of Saint-Saëns' works, recently said:

Apparently sixty-five, though over eighty, below the average height, strong, rosy-cheeked, with large nose, very brilliant eyes, nervous, enthusiastic, bluntly outspoken, sincere, fearless, a deep thinker, with an encyclopaedic memory, as nimble as a cat on his physical and mental feet, endowed with unusual common sense — that most uncommon of all senses — this is Saint-Saëns as I left him at the San Francisco Bohemian Club, last summer.

In Switzerland, a few years ago, I heard this octogenarian conduct a symphony orchestra, and play with the fire of youth one of his concertos upon the organ and another upon the piano.

In Cairo, in 1903, a committee consisting of Lord Cromer and the other diplomatic representatives requested him to participate at a symphony concert I was to conduct for charity at the Khedival Opera House. The program was exclusively of his works. He eagerly agreed to appear gratis upon one condition, and came to my hotel to tell me: "If you don't place on that program some composition of yours, I refuse to play."

"It would be presumptuous for me to do such a thing," I answered.

As he insisted, I asked him to select from two or three manuscripts. After a careful reading, he picked out a symphonic poem, saying: "Will you not conduct that? I like it."

"Very well, but is there not something in this score you dislike?"

"No. However, since you really want to know: why did you write that difficult passage for the 'celli?"

"To fill up my orchestration upon the return of the leading motive."

"Why say anything unless needed?" he retorted. That has not been forgotten. Now I avoid introducing passages as padding or intended only to arrest attention to polyphony or to instrumental technique: in a word, Saint-Saëns taught me not to water my stock. It would take more than a polite suggestion to teach that to some of our financial acquaintances: even the fear of jail does not seem to deter them.

I also got a free lesson in practical instrumentation. If a composer write beyond the skill of the average orchestral player, he can expect a satisfactory interpretation only from first-class interpreters, and these are to be found in but few orchestras, even in Europe. After examining another manuscript he asked: "Why those octaves for the violas who often are bad violinists turned into viola players? They will be played out of tune in most orchestras." These hints given in a sweet, yet firm manner, instead of making one lose heart, inspired with faith in self, with courage and hope.

Late one afternoon, a young Austrian violinist urged me to attend a concert he was giving that same evening, and requested me to mention it to my friends. "My boy," I said, "you are a bad business man. It is too late to inform the public, but I shall come and bring one other auditor."

When I told Saint-Saëns how this unknown artist would value his presence he at once agreed to attend. If one can imagine how most concerts bore, when they do not anger him, this additional evidence of his goodness may be appreciated. That evening, in the big dining-room of Sheppard's Hotel, the public consisted exclusively of a venerable gentleman and your humble servant. Yet, the young artist told us he was more pleased than he had ever been with any other audience. After playing the famous *Rondo Capriccioso*, he was overjoyed by an honest, and therefore, helpful criticism from its composer, who, as critic, is different from most composers. These invariably speak kindly and even flatteringly of the interpretation, however grotesque, of their works; may be to encourage performers, but more probably, in order not to lose any medium with the public, though that medium be bad. In art matters, this artist never considers anything, save art; here he ever is judicial, uncompromising.

Once he offered to rehearse and conduct one of his operas at the opera house of Trevano Castle, giving his entire services free. I had told him that, should it be possible to arrange my dates to suit his, I would engage any interpreters he desired. He felt that an ideal interpretation of his work might be given with his ideal cast. At public opera houses composers seldom have such an opportunity. After telling him that, beyond the artistic satisfaction a famous man might, or might not get in producing a work at a private opera house, I failed to see what advantage he could derive from his generosity to me, he replied: "An extraordinary interpretation of an opera at a private opera house will make more lasting impression than could be made even by an extraordinary performance at the Paris Opera, because extraordinary happenings at the leading opera houses occur frequently and, in consequence, two days after, the world has already forgotten them." Unhappily for me, the work of another composer was booked for the dates when Saint-Saëns could have come to Trevano Castle.

Being a representative Frenchman, it is not remarkable he should be the quintessence of courteousness. When irritated, however, and that he never is without a reason, then . . . look out! One evening, as he was about to play one of his works with the orchestra, our quiet, urbane, dignified pianist suddenly noticed that the particular chair he had asked for was not at the piano. Fortunately, the orchestra was on the stage during that rehearsal, for, with lightning rapidity, he kicked the inappropriate stool into the orchestra pit, shrieking: "I give my services gladly, having asked only for a suitable chair, and you have not enough consideration . . . !" At that instant, the suave and tactful impresario rushed forward with abject and profuse apologies, and, what was far more essential to the proceeding of the rehearsal, I brought forth the chair.

This aged philosopher enjoys humor with the boisterousness of a boy. To illustrate how unsatisfied with his own score a composer may be, how perplexing it is to jot down an effect as one conceives it, I related that, in the silence of his little room, a composer had just written a crescendo in his own score which lay upon the desk. Seized with the hallucination that his crescendo grew loud too suddenly, he now covered his left ear, and then the right, step by step backing away from his manuscript with eyes, all the while, fixed upon the offending

crescendo marks. "Too loud yet, too loud!" he exclaimed, then listened an instant. Still that vexing thing sounded too loud. 'Twas only after walking out of his room far into the hallway that the effect began to appear just about right to the finicky ear of his imagination. As I finished, you should have heard Saint-Saëns roar: he was so convulsed with laughter that he almost slipped out of his seat.

At a rehearsal of the opera *Proserpine* I remarked how thorough he was in the minutest details of orchestration, adding that much of that dainty filigree writing would be wasted upon opera audiences. "I cannot help it," he replied. "When composing, I always try to write music."

His spurs were won with real music only. He never stoops to conquer. This may explain why he has not been a very popular operatic composer. He will not write bad music even though unmusical effects be sometimes called for by the dramatic action: a kind of noise often heard in modern operas.

Apropos of this, Illica, the world's greatest and most successful librettist — collaborator of Puccini, Mascagni, Giordano, Montemezzi, Franchetti, Catalani — and with whom I had the pleasure of composing the opera *Errisimola*, in order to induce me to destroy the score of a scene just finished with intense care, but which seemed to him more musical than theatrical, said to me Verdi had told him operatic composers "must know how to write bad music when needed."

I have met Saint-Saëns in three continents. He has traveled repeatedly through North and South America, Europe, Africa, and parts of Asia. Frequently he wanders into outlandish places. I recall asking why he went away from the civilized centers during the musical season, venturing to remark he might like to know what is being done by other composers, he answered: "That's just what I do not want to do! I do not wish to be influenced by the music of others." And he is right also for another reason: 'tis best to go direct to Nature for the truth. His journeys away from cities, away from the "hum and shock of men," have borne delicious fruit. Faithfully has he reproduced the strange and picturesque local colors he beheld in far-off lands.

When our musicians think they can write exotic music without having traveled beyond their own shores they delude themselves, and must appear ridiculous to those whose art they intend to copy. At best, such compositions can only be representations of what the western mind has been educated to call exotic; and as the models for this popular training were factitious, and oftentimes absurdly false, so are these imitations. To write the music of other nations, the composer should study it at its fountain-head, among the peoples themselves: eating their food, admiring their art, reading their poets — in brief, he ought to live as they do. Then might the root of a national art be extracted.

It is absurd to look for the metaphysical manifestation of a foreign race in a musical score. How could the multi-colored states of consciousness be sketched in black and white! Our system of notation is too limited to enable us to copy in its completeness what we may hear in distant regions. We cannot even represent the notes of some peoples' scale. If we try to record their musical alphabet we are at once confounded, not possessing equivalents for the pitch of

several of their tones. How much further then must we be from the truth when endeavoring to bring out the delicate shades of timbre, accents, and dynamics upon instruments totally unlike theirs! And can we ever grasp the daintier and more subtle details; the subjective moods, ethereal soul-nuances of other races?

The greatest musician France ever produced twice failed to get the Prix de Rome, the prize most coveted by young French composers; and Verdi, the greatest Italian operatic composer, was refused admittance to the Milan Conservatory. It takes a wise professor to recognize a wise pupil, and teachers are not always overburdened with wisdom. It is doubtful whether in their youth Socrates, Napoleon, Wagner or Edison could have pleased the entire faculty of any school. Many instructors are merely mnemonic acrobats: they come so seldom in touch with genius that when they meet that rare bird they are befuddled. What can they know of the potentiality of his soul? The genius has a new idea; the professor has but recollections. It is difficult to tell invention from imitation. A strong, original individual is often unsympathetic just because he is original and strong. The human herd suspects the new shepherd. It has always been hard to distinguish the true leader from the poetaster, the sensationalist, the demagogue.

Post-hypnotic suggestion from press and school daily makes the instructed sheep relish the anarchistic and cacophonous music of today. It is so easy and safe to accept as fine that which, justly or unjustly, is labeled "fine."

As judge at international contests and expositions, I have learned how difficult it is, even for experts, to agree about the worth of art-works that are, or seem to be, out of the beaten path.

After four score years of precious productivity, Saint-Saëns is yet creating great works. In musical history his name will shine with equal brilliancy among the names of the greatest musicians of all epochs.

I trust this pen-picture may have helped visualize the greatest living composer and the most eclectic of any period, one whose treatment of all form: concert for violin, 'cello, piano or organ, symphony, quartet, sonata, opera, oratorio, mass, ballet or ballad is as near perfect as any human effort can be.

It would require volumes to record his illustrious career as phenomenal improviser, as piano and organ virtuoso, as pedagogue and critic, and still more volumes to faintly evoke the many beautiful and immortal children of his fancy: his polished characteristic, exquisite compositions.

His gifts and attainments outside of music prove this man indeed a universal genius, for he also is playwright, astronomer, archaeologist, diplomat, mathematician, *littérateur*, poet. He gave me a book of poems from which I would like to read here some of his remarkable verses. Unfortunately, that book is in the library at Trevano, whence I fear to have any rare belongings cross the ocean.

May Saint-Saëns, the discoverer of the fount of perpetual youth, give mankind a new lyric drama upon his hundredth birthday: that is my hope and prayer!

VITTORIA COLONNA: by Lilian Whiting



THE life of Vittoria Colonna dawned in the *vita nuova* of the period initiating modern civilization. Two years after her birth Columbus discovered America. Inventions followed, other discoveries were made, and the apathy that enshrouded ten centuries was broken. The entire known world of that time was revitalized, recharged with divine magnetism, as it always is at intervals, when the time demands new resources.

Vittoria Colonna, the most beautiful and gifted woman of that period, remains today the most gifted woman that Italy has ever produced. Her place in Italian literature is not less distinctive than that of Dante. Not that her poetic work makes any such universal appeal as his; but her genius and her personality, united, stand out for all time in that same vivid and unapproached manner. She was born in 1490, and died in 1547. Fabrizio Colonna, her father, married Donna Agnesina di Montefeltro, a daughter of the Duke of Urbino, and they set up their household gods in the Castello Marino (some twelve miles from Rome, on the Lago d'Albano), a magnificent palace which is still standing and which is filled with memorials and relics of great historic interest. It is one of the favorite points to which to make an easy afternoon's excursion from Rome, motoring out over the Campagna Mystica; and the town of Urbino, which was the ancestral seat of the Montefeltro family, is also, as is well known, the birthplace of Raphael.

The Colonna were a very ancient and distinguished family, dating back to the eleventh century, and they had given to Italy princes and cardinals of renown. The close of the thirteenth century found them arrayed against Boniface VIII, then on the Papal throne, who accused them of crimes in retaliation for their disputing the validity of his election to the Papal See. As the Pope held the balance of power he excommunicated the entire family, denouncing them as heretics, and anathemizing the Colonna and all their works with ecclesiastical vigor. But whatever were the virtues of the Colonna, apparently meekness was not among the qualities, and they commanded three hundred horsemen and fared forth to fall upon the Papal palace, tooth and nail, making the Pope their prisoner — an incident that is even referred to by Dante in the *Inferno*. The Colonna appear to have been rather a belligerent set, and they had a hereditary feud with the Orsini, whom they more or less despoiled through several generations.

The visitors of latter years in Rome, who have made their gay excursions in twentieth-century limousines to the lovely towns of the Alban hills, often have looked down from Castel Gondolfo on the gloomy and almost unchanged mediaeval town of Marino, halfway up the slope of a steep hillside, on whose precipitous cliffs it seems struggling to keep a foothold, the summit crowned by the castle once belonging to the Colonna, in which Vittoria passed her childhood. William Wetmore Story, the American sculptor whose life in Rome covered more than forty years, those transcendent years in the old Barberini palace, and among whose books his *Roba di Roma* holds a high place, has in these pages wonderful picturings of the Campagna. "Nothing," he says, "can be more rich and varied than this magnificent amphitheater of the Campagna of Rome; . . . sometimes drear, mysterious, and melancholy in desolate stretches; sometimes rolling like an inland sea whose waves have suddenly become green with grass, golden with grain, and gracious with myriads of flowers; where scarlet poppies blaze, and pink daisies cover vast meadows; and vines shroud the picturesque ruins of antique villas, aqueducts and tombs, or drop from mediaeval towers and fortresses."

Flying in the swift motor car, which is the twentieth-century chariot, to the Alban hills, Marino may be easily reached in less than an hour from the Porta San Giovanni — the gateway near the wonderful basilica adorned with sculptured figures of the apostles in colossal size; in the near distance across the Campagna rises the cone of Monte Cavo, while on the lower slopes gleam the white walls of villages—Albano, Marino, Castel Gondolfo, and Frascati, with fortress-like ruins, the campanile of a cathedral, and with gardens and olive orchards clambering up the heights. The Papal town of Rocca di Papa crowns one summit where once Tarquin's temple to Jupiter stood, and on whose ruins now gleam afar in the Italian sunshine the glittering white walls of the Passionist convent of Monte Cavo, built by Cardinal York. It was from this height that the goddess Juno gazed over the great conflict of contending armies, if the topography of Vergil be entitled to credence. And here, through a defile in the hills, one may look toward Naples, and see a wonderful picture. For, "rising abruptly with sheer limestone cliffs and crevasses, where transparent purple shadows sleep all day long, towers the grand range of the Sabine mountains, whose lofty peaks surround the Campagna to the east and north like a curved amphitheater." At intervals, through this opening, one sees the towns of Tivoli and Palestrina, and the

Anio tumbling down in foam, with other little hamlets and towns clinging to the cliffs, or nestled in airy hollows. Perched on their respective hills are three ruined towns, Colonna, Gallicano, and Zagarda. The castle of the Colonna that commands this marvelous outlook is now restored and modernized to a habitable degree, and is not infrequently the summer abode of Americans who love to linger in Italy all the season through. No temperature the world over can be found more delightful in summer than is that of these mountain resorts in Italy.

It was in these scenes of incomparable loveliness that Vittoria Colonna passed her infancy, until, at the age of five years, she was transplanted to fairy Ischia. In all this chain of Alban towns the great Colonna owned extensive estates, each crowning some height, while the deep, dark defiles between were filled then, as now, with the riotous growth of bloom and blossom and trailing greenery. Vittoria was born under the Star of Destiny. One may read this in the air, in the fascinations of wonderful picturings, even though he may have no privileged access to the sibylline leaves of the Cumaean soothsayer who still flies the plain, to the eye of the romancer and the poet. The horoscope of Vittoria Colonna is inextricably entwined with that of Italy, and the events which determined and controlled the conditions of her life, and which produced its panorama of circumstances, were the events of Italy and of Europe as well; events that affected political aspects, general progress, and left their influence and their impress upon succeeding centuries, so forcefully were they dominated by strong and brilliant individualities whose gifts, whose genius, whose power, controlled the movements of the day. In the war of 1494 between France and Spain, the Colonna transferred their allegiance from the French to the Spanish side, and this political change became a marked and a determining element in the life of Vittoria. For it was this that brought them to live in Ischia; and Vittoria's subsequent marriage into the d'Avalos was due to this espousal of a new political faith on the part of Prince Fabrizio Colonna. To the fact that the war again broke out in 1525 was due the loss of her husband, Francesco, Marchese di Pescara, and the subsequent consecration of her life to Poetry. The memorable friendship that established itself as one of peculiarly close sympathies between Vittoria Colonna and Michelangelo, grew out of the circumstances that determined the devotion of her life to letters and learning; and thus all the significant condi-

tions of her life offer a commentary on the influence of far-reaching events, directly connected with state and political issues, to become yet vital factors in individual life.

At all events it was this political change of faith on the part of Prince Colonna that initiated a new and undreamed-of destiny for Donna Vittoria, the first act of which was the command of the King of Naples that she should be betrothed to Francesco d'Avalos, the son of Alfonso, Marchese di Pescara, of Ischia, one of the nobles who stood nearest to the king in those troubled days. Francesco was one year older than Vittoria, who was now transferred from her father's palace in Naples (for which he had exchanged his castle at Marino) to the d'Avalos' castle in Ischia, where she was placed under the immediate care of the Duchessa di Francavilla, an aunt of Francesco, who was left in sole charge of the d'Avalos estates. The Duchessa had been made the Castellana of the island by Emperor Charles V. for her courage in refusing to capitulate to the French troops, and the Emperor soon elevated her rank to that of Principessa. One of the most remarkable women of the day, a thorough classical scholar, a writer, a great lady in the social régime, the Principessa brought to bear all these brilliant gifts on the supervision of Donna Vittoria's education.

The d'Avalos ranked among the highest nobility belonging to the court of Naples, and the Principessa reigned as queen of letters and of society. The two betrothed children, Francesco and Vittoria, pursued their studies together under the care of this accomplished lady. Donna Vittoria was surrounded with every grace of scholarship and charm of social life. The Principessa drew around her the most cultivated and delightful order of people. From Sicily, and from Naples, from Rome, even from Venice, they came, "and the life in Castel Ischia," records Visconti, "was synonymous with everything glorious and elegant, and its fame has been immortalized." The d'Avalos were of Spanish ancestry and traditions. The musical Castilian was the language of the household. The race ideals of Spain — the poetic, the impassioned, the joy in color and movement — pervaded the atmosphere of Castel d'Ischia. In her earliest girlhood Vittoria developed under these stimulating influences into that exceptional beauty and charm whose traditions have persisted through five centuries, and which have served to reveal new and lofty standards of womanhood. The gods loved her, and dowered her with genius and grace.

The literature of biography presents no chapters that can surpass in beauty the record of Donna Vittoria's opening life. The romantic island in the violet sea was the center of the life of learning and the arts as well as of the most distinguished society of the time. Although conflicts still raged in both Rome and Naples, few echoes of these disturbed the sunshine that enfolded the orange blossoms and myrtle flowers of Ischia. But in 1497 Frederick of Naples and his queen sought shelter there as royal exiles; in 1502 the new king and queen were welcomed at Naples with royal honors; a pier was thrown out a hundred feet into the sea; on this was erected a tent of gold, and all the nobility thronged to greet the royal guests. The guns thundered in military salute. The Principessa d'Avalos, with her young charge, Donna Vittoria, were marked figures, and when Vittoria made a deep reverence and kissed the hand of the king, the multitude broke into applause. Many princes and nobles, charmed by her beauty, sued for her hand, but were refused by her father, who kept faith with her early betrothal to Francesco. Three years later, when Vittoria was nineteen and Francesco twenty, their marriage was celebrated at Ischia with the richest state and most elaborate ceremonial beauty. For a short time previously to her marriage, the young girl had made a retreat to Marino, accompanied by her parents, and when the time appointed for her bridal came she was escorted to Ischia by a suite of dukes, princes and ladies of honor. Her marriage gifts included a chain of rubies, sapphires and diamonds; a writing desk of solid gold; wonderful bracelets and other magnificent gems, and brocades and velvets and rich embroideries, with a marriage portion of fourteen thousand ducats.

"The noted pair had not their equals in Italy at that time," writes a later historian; "their life in Naples was all magnificence and festivity, and their guests included the flower of chivalry and the men most noted in letters. They listened in their palace to the poets Sanazzaro, il Rota, and Bernardo Tasso; they heard noted discourses by Musefco, il Govoio, and il Minauro. Thus passed, in great happiness and splendor, the first three years of their married life."

To the young Marchesa di Pescara, Ischia had naturally become an enchanted island. The scene of her happy childhood, of her studies, of her stately and resplendent bridal; the chosen home, also, of her early married life, it is little wonder that in after years she drew inspiration for her song from its scenic charm and from the thoughts

and visions it had inspired. But again a war came on; the King of Naples appointed the Marchese di Pescara as his representative, and the young Marchesa personally superintended her husband's outfit, attendants, armor, and other details belonging to his rank. In the fierce battle at Ravenna (April 11, 1512) Pescara was wounded and taken prisoner; he was carried to the fortress of Porta Gobbia, and a messenger dispatched to Ischia to inform the Marchesa, who found her on the shore with her books, under the orange trees. But all that day she had been conscious of a premonition of ill. "I, in the body, my mind always with thee," she writes to her husband, and continues that the day had seemed to her "like a cavern of black fog," and that she seemed to hear the marine gods saying to Ischia: "To-day, Vittoria, thou shalt hear of disgrace from the confines; thou, now in health and honor, shalt be turned to grief." This premonition she had related to the Principessa before the arrival of the messenger from her husband. Writing to him she said: "A wife ought always to follow her husband at home and abroad; if he suffers, she suffers; if he is happy, she is; if he dies, she dies. His fate is her fate."

The Marchese recovered however, and returned, she having passed the time in Naples that she might be the more swiftly in touch with him; and his return made the day "brilliant with joy" to her. She devoted herself anew to classic studies and poetry; the age was swept by a general revival and enthusiasm for letters. Royalty, the pope, the nobility, were all giving themselves with ardor to the higher culture. The Italian language had assumed new perfection under Dante. The Marchese and the Marchesa returned to Ischia, the entire island *en fête* for the event, and the Marchesa "wore a robe of brocaded crimson velvet, with large branches of beaten gold wrought on it, and a girdle of gold about her waist." At the papal court of Pope Leo the Marchesa di Pescara shone as a resplended figure. "She was at the height of her beauty," says Visconti, "and her charms were sung by the poets of the day." This happy period had its termination. Pope Leo X died, and was succeeded by the wily Adrian. The war again broke out, and the Marchese di Pescara was killed near Milan on November 25, 1525. Vittoria was overcome with grief and she retired to the cloistered silence of the convent of San Silvestre, at the foot of Monte Cavallo, near Rome. The Marchese had been raised to the rank of general, and after funeral ceremonies of great pomp in Milan his body was brought to the famous church of Santa Domenica

Maggiore, in Naples, and entombed in the sacristy among the princes of his house, that of Aragon. The casket may be seen today, a large wooden sarcophagus, whose scarlet velvet cover has faded into rags and tatters, with an inscription by Ariosto that can still be traced, and his portrait, with a banner, is suspended above the casket.

In her grief the impulse of the widowed Marchesa was to take the vows of a nun. The pope himself intervened to dissuade her, and a year later she returned to Ischia. Vittoria Colonna was now thirty years of age. She was alone and had the freedom of wealth and leisure. She established herself in the massive palace at Ischia, which is built on a foundation of solid rock, so colossal that the legends assert that the giant Tifeo lived in the volcanic regions underneath, and this castle, including the palace, the church and other buildings, is joined to the mainland of the island by a causeway.

And now Vittoria Colonna gave herself absolutely to poetic art. For three years she wrote and published incessantly. She was the recipient of acclamations from all the great writers of her time. She was held to be the most famous of contemporary women. Her beauty, her genius, her noble majesty of character impressed the contemporary world. Her days were invaded by correspondence with Ariosto, Castiglione, Ludovico Dolce, Cardinal Bembo, Cardinal Contarini, Paolo Giovio, and others of the greatest men of the day. In the year 1523 Clement VII had come to the papal throne. He extended a full pardon to all the Colonna, restoring to them their castles and estates. Vittoria, revisiting Rome, pronounced the times full of grandeur, and she was everywhere received with the highest honors. She made a *bel giro*, as the Italians call it (beautiful tour), visiting Bagni di Lucca, Bologna and Ferrara, where she was the guest of the Duca and Duchessa Ercole. The Duchessa, the daughter of Louis XI, was known as the Princess Renée before her marriage, and she was an ardent friend of Calvin. The Duchessa invited the most distinguished people in Venice to meet Vittoria, the Marchesa di Pescara. Bishop Ghiberto of Verona besought her to be his guest in that city, an invitation she accepted, and she took great interest in his historic palace. The group of artists whose fame has invested Venice — Titian, Tintoretto, Giorgione, and others, were then in their creative period, and she met and mingled with them. Verona had a medal struck in her honor.

From this triumphant tour she returned to Rome in 1538. She

was received with almost royal honors. Michelangelo was then painting the "Last Judgment" in the Sistine Chapel. Whether they met because of her interest in this immortal work is not on record; but it is apparent that their friendship was formed about this time. All Rome, from the pope and the nobility to the humblest citizen, thronged to watch the progress of this work. Whether it was at this time (it could not have been far from it) that Michelangelo painted the portrait of Vittoria that is now in the Casa Buonarroti, in Florence, is not sure; but they came into acquaintance, and her influence is said to have greatly changed his religious views. Condivi, writing of their friendship, said: "In particular he was most deeply attached to the Marchesa di Pescara, of whose divine spirit he was enamored, and he was beloved by her in return with much affection."

For some years Vittoria Colonna now passed her time between Rome and Orvieto, that picturesque town with the magnificent cathedral so rich in medieval art. In this city she lived in the convent of San Paolo d'Orvieto, and in Rome she occupied the Palazza Cesarini, which was among the possessions of the Colonna. A daily correspondence between herself and Michelangelo established itself, and these letters are among the literary treasures of the sixteenth century. In a letter dated from Rome, in 1545, the great artist thus writes to the Marchesa:

. . . I desired, Lady, before I accepted the things which your ladyship has often expressed the will to give me—I desired to produce something for you with my own hand in order to be as little as possible unworthy of your kindness. I have now come to recognize that the grace of God is not to be bought, and that to keep it waiting is a grievous sin. Therefore I acknowledge my error and willingly accept your favors. When I possess them, not, indeed, because I shall have them in my house, but for that I, myself, shall dwell in them—the place will seem to encircle me with paradise. For which felicity I shall remain even more obliged to your ladyship than I am already, if that were possible.

The bearer of this letter will be Urbino, who lives in my service. Your ladyship may inform him when you would like me to come and see the head you promised to show me.

Accompanying this letter Michelangelo sent also a sonnet that he had written to Vittoria, which, in the fine translation made by John Addington Symonds, thus runs:

Seeking at last, to be not all unfit
 For thy sublime and boundless courtesy,
 My lowly thoughts at first were fain to try

What they could yield for grace so infinite.
 But now I know my unassisted wit
 Is all too weak to make me soar so high.
 For pardon, Lady, for this fault I cry
 And wiser still I grow remembering it.
 Yea, will I see what folly 'twere to think
 That largess dropped from thee like dews from heaven,
 Could e'er be paid by work so frail as mine!
 To nothingness my art and talent sink;
 He fails who from his mental stores hath given
 A thousandfold to match one gift divine.

Condivi relates that about this time Michelangelo designed as a gift for Vittoria a cross, bearing a representation of an episode from the life of the Christ, and that he sent it to her with the following letter :

Donna Marchesa, being myself in Rome, I thought it hardly fitting to give the Crucified Christ to Messer Tommaso, and to make him an intermediary between your ladyship and me, especially because it has been my earnest desire to perform for you more than for any one I ever knew in the world. Moreover knowing that you know love needs no task-master, and that he who loves does not go to sleep, I thought the less of using go-betweens. And though I seemed to have forgotten, I was doing what I did not talk about, . . . He sins who faith like this so soon forgets.

In reply Vittoria Colonna wrote :

Unique Master Angelo and my friend: I have received your letter and the crucifix, which truly hath crucified in my memory every other picture I ever saw. Nowhere could one find another figure of our Lord so well executed, so living and so exquisitely finished. I cannot express in words how marvelously it is designed. . . . I had the greatest faith in God that He would bestow upon you supernatural grace for the making of this Christ. . . . Meanwhile I do not know how else to serve you save by making orisons to this sweet Christ, and praying you to hold me yours to command, as yours in all.

Vittoria Colonna died in Rome in February of 1547. Rota, her Italian biographer, records that her body, "enclosed in a casket of cypress wood, lined with velvet," was committed to the chapel of Santa Anna, an ancient church that has long since been destroyed. Visconti declares that her tomb is unknown; but apparently it is true that the body was conveyed to Naples and is now entombed in the sacristy of Santa Domenica Maggiore, the casket placed near that of her husband, the Marchese d'Avalos, where all the princes of the House of Aragon lie. In December of 1906 the writer of this paper passed some time in Naples searching for the authenticity of the state-

ment of priests and of the sacristan that this casket actually contained the body of Vittoria. The Archbishop of Naples personally assured me of this; and one morning, when the flower-filled streets of Napoli suggested June rather than December, the archbishop even had the kindness to meet me in the sacristy, and point out the d'Avalos memorials, of portrait, faded banner, and other relics. Later I had the opportunity of asking the opinion of Professor Lanciani (*Commendatore della corona d'Italia*) and he assured me of his own belief that this casket contains the body of the Marchesa.

Visconti, writing of Vittoria Colonna as a poet, states that she was the first to make religion a subject for the sonnet, and the first to introduce into poetry nature's ministry to man. Her last prayer is one of the things treasured in Italian literature, and the last lines of this are thus translated:

Grant, I entreat, O Most Holy Father, that Thy living flame may so urge me forward that, not being hindered by mortal imperfections, I may happily and safely return unto Thee.

The most beautiful portrait of Vittoria Colonna (the work of Michelangelo) is in the Galleria Buonarroti, in Florence; a bust of her (the gift of the *Académie des Arcades* of Rome) was placed in one of the galleries of the Capitoline in Rome as recently as in May, of 1865, the gift of the Duca and Duchesa Torlonia. The occasion was honored with the official recognition of the Government of Italy.

The fame of Vittoria Colonna, Marchesa d'Avalos, only deepens with every succeeding century. Her nobility of character, her lofty spirituality of life, fitly crowned and perfected her brilliant intellectual power and her exquisite poetic gift. Her sympathies were always identified with the greater activities and more important movements, and her grace and rank conferred honor upon the most exalted orders of social life. She was, indeed, one of the lofty spirits who incarnate here for beneficent purposes; she was truly a messenger of the heavenly life, and her place as a brilliant and distinguished figure in the world of her time was one peculiarly marked by Destiny. She was characterized by an exquisite courtesy and graciousness of manner, by a simple dignity and unaffected sincerity, by great delicacy of divination, by an incalculable degree of tender sympathy with all suffering, by a liberal comprehension that made her the ideal companion, friend and counsellor of the noblest men and women of the day.

Between Vittoria Colonna and Elizabeth Barrett Browning there are the most marked and striking resemblances of character and quality of life. There is the same innate nobility; the same responsiveness and liberal sympathy; and one very noticeable resemblance is in the attitude of each poet, the one of Italy, whose work was done in the mid-sixteenth century, and the one of England, whose work was done in the mid-nineteenth — their attitude of entire consecration to their art. To each woman Poetry was a divine calling, and it was the province of the priestess to keep the living coal aflame upon the altar.

It has remained for an American poet, Margaret J. Preston, to touch exquisitely, in poetic phrasing, the friendship between Vittoria Colonna and Michelangelo. In a dramatic poem she depicts the sculptor as saying:

We twain — one lingering on the violet verge,
And one with eyes raised to the twilight peaks,
Shall meet in the morn again.

And Vittoria replies:

Supremest truth I gave;
Quick comprehension of thine unsaid thought;
Reverence, whose crystal sheen was never blurred
By faintest film of over-breathing doubt; helpfulness,
Such as thou hadst not known, of womanly hands;
And sympathies so urgent, they made bold
To press their way where never mortal yet
Entrance had gained — even to thy soul!

And how could any study of Vittoria Colonna be more fittingly closed than with these words —

God's blessing on her, since she was the friend
Of Michelangelo!



THEOSOPHY divides man into seven principles, considering him under the three aspects of the *divine*, the *thinking* or the *rational*, and the *animal* man — the lower *quaternary* or the purely astro-physical being; while by *Individuality* is meant the Higher Triad, considered as a Unity. Thus the *Personality* embraces all the characteristics and memories of one physical life, while the *Individuality* is the imperishable *Ego* which reincarnates and clothes itself in one personality after another.— *H. P. Blavatsky*

SCIENCE NOTES: by the Busy Bee

TRANSMISSION OF ACQUIRED CHARACTERISTICS



AN animals and plants transmit to their offspring such modifications in form as they may have acquired through the influence of a change in their external circumstances? This question has taken a new turn, to judge from a recent article on the subject by Prince Kropotkin in the *Nineteenth Century*. He affirms that recent experimental results justify us in answering the above query in the affirmative: modifications produced by change of environment *can* be transmitted by heredity.

This view contradicts that associated with the name of Weismann. Before his time, biologists had assumed that characters acquired by the individual are transmitted to offspring. This Weismann denied, and, while biologists speculated as to how such transmissions were effected, he challenged them to prove that they were effected at all. He asked: "How can a single cell contain within itself all the hereditary tendencies of the whole organism?" According to him, the reproductive cells only are immortal, while all the other cells, being concerned with other functions have lost their reproductive power, which thereby becomes concentrated in the reproductive cells. These reproductive cells are not derived from the whole body, but from the reproductive cells of the parent. This is the doctrine of the "continuity of the germ-plasm." Only variations of the germ-plasm are inherited, and it is upon these variations that natural selection operates. Variations are not due to the influence of environment, nor to disuse of organs, but to sexual conjugation.

Weismann thought the germ-plasm lived an isolated life within the body, and was not affected by the changes produced by environment in the other cells. Kropotkin holds the contrary view: he regards the germ-cells as being intimately connected with the rest of the body and sharing its changes. He cites experiments, such as the transmission of color to offspring by caterpillars feed on colored wool; and claims experimental support for similar conclusions in the case of butterflies and beetles and some divisions of the vertebrates.

Both sides of the controversy relied partly on theoretical considerations and partly on evidence. The evidence afforded by Nature is so ample and varied that it furnishes material which can be used in illustration of diverse theories. It is remarkable that Weismann and Kropotkin should have come to such opposite conclusions regard-

ing the relation between the germ-cells and the other cells. While Weismann regarded the germ-cells as insusceptible of influence from the other cells, Kropotkin says that the real difficulty is to imagine the germ-cells *not* being so influenced. We know now that the cells of the body are closely connected with each other by means of inter-cellular protoplasmic threads and wandering cells. Weismann, holding the one view, sought and seemed to find support for it in the facts; and now Kropotkin, holding the opposite view, claims a like support on his side.

He does not, however, hold that new species can arise by the mere accumulation of successive small differences; continuance of the changed external conditions is necessary to secure permanence in the internal changes.

Modifications are always small at the outset, and have not in such case a life-saving value in the struggle for life; while the considerable modifications are few as a rule, and would be swamped by crossing; and so long as there is not some exterior cause, such as climate, food, etc., which acts during a number of generations for producing variation in a certain definite direction, there is no reason why the change should go on increasing.

In commenting on the above controversy, we would suggest that there will always be confusion and uncertainty so long as one neglects to regard the animal or the plant as primarily a living creature, endowed with the particular form of intelligence and consciousness appropriate to its place among the kingdoms of Nature, and engaged in the business of life, which is that of expressing in action the purposes and ideas which spring originally from the Universal Intelligence. It may be claimed on behalf of the experimenters and theorists that their sphere of study can be limited to that which lies within the reach of the physical senses, and that they have no concern with such a view of the plant or animal as we have just suggested. But, while it may be possible thus to limit the sphere of study, we should say that the controversialists have not succeeded in doing so, but that, on the contrary, they have considerably overstepped that sphere by entering upon the discussion of purposes and designs — a discussion which we may claim as pertaining to the sphere of mind and will — to the sphere wherein conscious powers, and not mere physical forces, act. In short, they have propounded questions which cannot be answered within the limits which they might be disposed to assign to

their own sphere of study; and for answer we can but refer them to the study of animals and plants as living beings.

They have regarded the successive generations as a number of detached units, bound together only by the process of reproduction; and they have sought to reduce that link to such dimensions as can be comprised within the scope of anatomical and physiological research. The result is that they have lost sight of the *unity* of organic life; and while common experience tells them that changed circumstances do cause modifications in the forms and habits of the creatures, they find a difficulty in defining the way such modifications are supposed to be conveyed from one generation to the next across the gap which they find. In short, an effect which is readily comprehensible when we view organic life in the mass, becomes obscure when we try to analyse the details; which is exactly what happens to physicists when they try to express familiar natural phenomena in terms of atomic units.

We suggest, therefore, that the biologist should try to regard the individual organisms as stages in a continuous and unbroken stream of life; and to consider this underlying stream as being that which is affected by the variations in environment. The coming generation is affected by the environment of the parents, because the parents carry the elements out of which the offspring is to be physically formed. It is easy to understand that fish, kept in an underground lake, will be born blinder and blinder each generation until they are quite blind; but when we try to formulate the matter in terms of a cellular or molecular physics, we seem to enter on an unnecessary controversy. After all, is there a *significant* difference between Weismann's view and Kropotkin's? In either case we know that species are modified considerably to suit changed conditions, both in the wild state and artificially by man; and we also know that these modifications do not accumulate to such an extent as to cause a progressive transformation of one species into another. The ancient teaching is that the standard forms found on earth during a given evolutionary period were modeled *before* those forms became physicalized; and that the changes produced in them subsequently are of a minor degree. Thus the main evolution of the Monads (that is, the living souls inhabiting the various forms) is accomplished during the process of incarnation into a succession of forms of gradually ascending type.

CIVILIZED AND SAVAGE

DR. A. G. MAYER, of the Carnegie Institution, in the *Popular Science Monthly*, says:

The Fijians of today are more orderly and sober than, and quite as contented as are any peoples of European ancestry, and illiteracy is rarer in Fiji than in Massachusetts. You were safer even fifteen years ago in any part of Fiji, although your host knew how you tasted, than you could be in the streets of any civilized city. It is clear that in disposition the Fijians are not unlike ourselves, and only in their time-honored customs were they barbarous. Indeed the lowest human beings are not in the far-off wilds of Africa, Australia, or New Guinea, but among the degenerates of our own great cities. . . .

Yet in one important respect the savage of today appears to differ from civilized man. Civilized races are progressive and their systems of thought and life are changing, but the savage prefers to remain fixed in the culture of a long-past age, which, conserved by the inertia of custom and sanctified by religion, holds him helpless in its inexorable grasp. . . .

The savage may know nothing of our classics, and little of that which we call science, yet go with him into the deep woods and his knowledge of the uses of every plant and tree and rock around him and his acquaintance with the habits of the animals are a subject for constant wonder to his civilized companion. In other words, his knowledge differs from ours in kind rather than in breadth and depth. . . .

It seems advisable to revise our estimate of the words "civilized" and "savage." On the one hand they apply to stages in the history of races; on the other, to levels of behavior; and these two meanings are confused. People who can command the vast resources of scientific invention may be civilized in the one sense, as contrasted with the simple tribesmen. But when the said resources are used to their full capacity in the work of mutual destruction, the application of the two words becomes reversed, and the savage is the more civilized.

Though far from advocating a return (supposing it possible) to primitive modes of life, we do suggest a return to certain primitive virtues. Thus we may learn much from the savage. Perhaps he is better balanced than we because he is not under such a strain; and perhaps he would break down if subjected to it. But our task is to learn how to maintain the integrity and poise of simple peoples, while we are living in complex conditions.

In the above extract, too, the fact is recognized that the savage is a survival, with his future behind him (so to say). But we must distinguish between the race and the individual; for though the race

grow old, the individual Souls pass out into other races to continue their evolution. Unprogressed Souls may find in one of these old races the conditions suitable for them; and thus we should find Souls on their upward way incarnated in a race that is dying out. The result would be a combination of simplicity and ancient memories. And may not this be one clue to the psychology of such races?

ARABIAN ARITHMETICIANS

WITH regard to the factorizing of numbers expressed by a row of 1's, we note the following, contributed to the *English Mechanic* (Feb. 26, 1909), by Henry E. Dudeney, a well-known writer on puzzles.

The earliest known record is an arithmetical treatise called the "Talkhys," by Ibn Albanna, an Arabian mathematician and astronomer who flourished in the first half of the thirteenth century. In the Paris National Library there are several manuscripts dealing with the Talkhys, and a commentary by Alkalaçadi, who died in 1846. For this information I am indebted to the late E. Lucas's *L'Arithmétique Amusante*. . . . The amazing thing is that in the Talkhys we are given all the factors for numbers of this form up to that containing seventeen 1's. How these Arabians decomposed such a number as 11,111,111, 111,111,111 into its factors 2,071,723 and 5,363,222,357 it is not possible even to conjecture.

Another mathematician, commenting on this, opines that the problem might be solved by the application of certain principles, which he names, and by the exercise of considerable patience. But the theory of numbers is always open to new discoveries; and we find no difficulty in imagining that these Arabians knew of properties which we do not know of. This latter writer says that in those days magical value was attached to numerical mysteries; and his meaning, in saying this, seems to us a trifle vague. It was this belief, he thinks, that induced them to spend much time in arithmetical research. But the mysteries of numbers, and of their expression in the numerical scale of ten and in other scales, are fascinating enough of themselves to entice the most serious minds to labor. The writer perhaps regards magical properties as being alleged properties which the numbers do not possess, but which the Arabians thought the numbers did possess. We prefer to use the term magical to denote properties actually possessed by numbers, but known only to a few. What can be more fundamental than the properties of numbers? Rightly did the sages think that the mysteries of the universe were to be sought in number.

VITAMINES AND NUTRITION

IT is said that food used to be regarded as made up of three things called fats, carbohydrates, and proteids; and that these were enough for health. Now it is said they will not suffice to feed the body: another thing is needed, spoken of as "animo-acids" and also as "vitamines." It seems, according to one authority, that the body contains certain mysterious internal secretions known as "hormones," "enzymes," etc., which, though small in quantity, are of immense influence in the interior economy. The vitamins in the food, as we gather, keep up the supply of these internal secretions. Rickets, pellagra, beri-beri, and scurvy — diseases caused by the body feeding upon itself — may supervene if there are no vitamins in our food. It is considered that polishing rice deprives it of vitamins, thereby causing beri-beri among Malays and Filipinos; and pellagra and scurvy are attributed to similar causes. Heating milk destroys the vitamin and starves the babe! Experiments on chicks and rats with and without vitamins bear out the suggestion.

This is calculated to make one suspicious of theories concerning diet and nutrition. It makes one doubt whether extracts, supposed to contain the essence without the superfluities, really do contain the essence, or whether the essence has been thrown away and the superfluities retained. It is an argument for natural food and raw milk.

It seems that an older doctrine, which regarded nutrition as a question of bulk, is passing away; and a newer doctrine, a doctrine of ferments perhaps, is replacing it. It is not the bread only, but the minute speck of something in the bread that counts.

One thing we must be devoutly thankful for: there seems here a possible way out of serum-therapy. If in future we are to treat diseases with vitamins instead of antitoxins, it will be a welcome change. Biology and chemistry, those twin magicians of the future, as H. P. Blavatsky calls them, here hold out hands to one another, as we study the co-operation of the laboratory within the fruit with the laboratory within the body.

A certain fallacy crops up in these matters of diet: that elements taken separately are the same as when combined. In arithmetic, twice one is two; but in geometry two points may make a line; and in chemistry, iron sulphide is not a mixture of iron and sulphur. If we could identify all the constituents in the bread or milk, vitamins and all, and administer them separately, the effect would not necessarily

be that of the original viand. To try to correct the effect of a food devoid of vitamins by administering vitamins separately — say as medicine—might (or might not) be as injudicious as the separate administration of the blue and white packets of a seidlitz powder.

In addition to all this, it must be remembered that nutrition is greatly affected by the state of the eater's mind; so that what is his food at one time may prove his poison at another. Again, the cook's state of mind is important; though biology and chemistry may not so far have detected the nature of the influence thus brought to bear.

DERIVATIONS — CHURCHES — EARWIGS

THE word "church" has been derived from the Greek τὸ κυριακόν (*Tò Kuriakon*), "the Lord's House"; or from κυρίου οἶκος (*Kuriou oikos*), meaning the same. Nothing could seem more unlikely and far-fetched; the derivation must have been made in the interests of doctrine. In Brewer's *Dictionary of Phrase and Fable* we find the following:

The word existed in all the Celtic dialects long before the introduction of Greek. No doubt the word means "a circle." The places of worship among the German and Celtic nations were always circular: witness the cromlechs of Stonehenge, Avebury, Silbury Hill, Stanton Drew, etc., the dolmens of Brittany, and the relic shrines of India. (Welsh, *cyrch*; French, *cirque*; Scotch, *kirk*; Greek, *kirk-os*; etc.)

Webster, while adhering to the other derivation, gives the following forms:

Old English, *chirche*, *chireche*, *cherche*; Anglo-Saxon, *circe*, *cyrice*; Dutch, *kerk*; Icelandic, *kirkja*; Swedish *kyrka*; Danish, *kirke*; German, *kirche*; Old High German *chirihha*.

Recollections of childhood remind the present writer that the native Warwickshire pronunciation of the word is "cheerch"; and these rustics, sublimely unconscious of classical orthography, undoubtedly derived their pronunciation phonetically from very ancient times. The vowel in the above examples is mostly *i* or *y*, pronounced of course like our modern *ee* or a modified *u*. The Greek *κίρκος* or *κρίκος* (*kirkos* or *krikos*) and the Latin *circus*, actually mean a circle; but it is probable that both these words and the Teutonic and Celtic ones are cognate — derived from a single in an earlier parent-language. The Red Indian underground rooms, where secret councils are held, are circular and have a circular divan running around them. This is the correct arrangement corresponding to the desired unity. A church is properly a circle of human souls, designed to evoke the

Divine by affording the requisite conditions of unity. A Teacher would establish such a circle among his disciples, and they would gain wisdom and guidance as long as the right conditions were observed. But when disunion set in, the circle would break up, and then the word "church" might come to be applied to something quite different.

A similar far-fetched derivation is that which derives the inn-sign, "The Goat and Compasses," from "God encompasseth us." It is much more likely to have been derived by a business amalgamation of two inns named respectively "The Goat" and "The Compasses"; the latter being a well-known Masonic symbol. An inn near Cambridge, England, has the sign, "The Man Loaded with Mischief," and bears a picture of a man with a scolding woman on his shoulders.

The name "earwig" is another cause of speculation. The books say that this insect was so called because of a popular error, the belief that these insects creep into the ear of the unwary sleeper. If this is an error, it seems incredible that it could ever have arisen. The error is supposed to have arisen from the fact that these insects have a fondness for secreting themselves in small cavities, and in rare cases *may* have selected the ear as a suitable place. But other insects have fondnesses for secreting themselves in small cavities, and yet they are not called earwigs. Why? Echo answers, "Goodness knows!" Judging from experience, we should say an ant is much more likely to creep into our ear, or even a small spider. Then again, why does not the insect creep into our nose, for that might surely be called a small cavity. The names "hairwig," "nosewig," and "mouthwig" would seem more appropriate, especially the first.

It seems hard to belabor a theory when it is down, yet we must even do so in the interests of orthography. Whence arose the Latin name for this insect, *auricularia*, from *auricula* (the ear-lap)? Or why have the French called it *perce-oreille*, the Germans *Ohrwurm*, the Spaniards *gusano del oído*? Or whence the names *worblazer*, *ör-mask*, *oerentvist*, whose nationalities we shall not offend the reader by naming? Another derivation, "earwing," is quite upset by the above foreign names; for the pun will certainly not stretch over all those languages. Besides, how many persons know that an earwig has wings? The word *wig* is Anglo-Saxon for worm. The mystery, however, remains unsolved, and we can only suggest that the earwig has changed his habits since the days when "Adam" christened him!

PREHISTORIC ARTISTS: by H. Travers, M. A.



SOMEbody has drawn pictures of animals in red ochre and other paints on the walls of caverns in the Pyrenees. These drawings are remarkably good, considering their badness; and the artists were wonderfully cultured, considering their barbarism. This sounds paradoxical, but it is what we gather from the criticisms on these drawings. We infer that people used these caves at one time, and passed some of their leisure in studying art. Likely enough there are people doing this at the present time, perhaps among the Red Indians, perhaps in Australia or Africa. There are cave-dwellers in Asia Minor, and gypsies all over the world.

Some scientific men have an idea that there was a time when the earth was peopled exclusively by savages. And they suppose that civilization arrived on earth at a subsequent date, though they do not say where it came from. This, we imagine, is a variant of the old theological idea that the first man was created six thousand years ago and gave birth to all other men. At least, these scientific men talk of "our primitive ancestor"; only instead of living in the Garden of Eden and being only one man, he lived in caves and was several men. As these drawings are known to be ancient, the only hypothesis for these theorists is that "our primitive ancestor" must have painted them. But the theory requires that this ancestor must have been a savage, so the puzzle is how he came to be able to draw so well. We offer an alternative theory: perhaps he wasn't a savage. He may have been a man who had been all through civilization and grown tired of it and decided to live in a cave.

It is said that these drawings represent suppressed action as well as any artist has ever been able to do so, as in the picture of a bison about to charge, for instance, where the muscles are all tense. Man has not improved in drawing since then, is the comment; and it is supposed to be somewhere between 10,000 and 100,000 years ago (an odd cipher or two does not much matter, apparently).

As regards this great skill in observing animals, visualizing their forms and their movements, picking out the essentials from the accessories, discerning the underlying *principle* of the form or of the movement, and finally making a picture which shall bring the whole effect back to the eye of the spectator — as regards all these supreme faculties, which, according to the criticism, the draughtsman must have possessed — it would seem that we have erred in connecting this culture with our own habit of living in upholstered houses and sleep-

ing in featherbeds. And so we argue that a man who did not live in such houses and sleep in such beds ought not to have been able to draw so well. We lack perspective. Ten or a hundred thousand years ago is a long time, and it is probable that totally different combinations of circumstances and of ideas prevailed then. It may be that people could be cultured and yet never dream of living elsewhere than in a cave! It is even possible that the cave-life did not at all imply the use of clubs for mutual slaughter or the killing of dinotheriums with flint axes. Or again, perhaps the men did kill gigantic beasts with flint axes, and yet were intellectual; things may have been differently combined in those days; we cannot say.

Why should a cave-man be in any great hurry to get to the kind of life which we are living today? It is conceivable that the cave-man may have solved some of the great mysteries which we seek in vain—may have found out what makes life a joy—may have discovered what life really is. So greatly is our mental life, our literature, religion, science, and what not, dependent on the conditions engendered by an existence within four papered walls, a whitewashed ceiling, and a carpeted floor, that we are in a sort of illusion as to the mental life of other peoples. For have not our literature, our religion, our social and political ideas, and our science, grown up in equal steps with the development of indoor luxury? Hence we imagine that no one can draw unless he can say his prayers, brush his teeth, and fold the top sheet down over the coverlet.

We have certain facts as to these cave-men to go on; and from the facts various conclusions can be suggested, according to what assumptions we care to make. Thus anthropologists, assuming their theory of man's history, will say: "What wonderful artists these savages were!" And we can say, on the assumption that the men were not savages: "How came these artists to dwell in caves."

There is bound before long to be a strong reaction against the fanciful ideas of ancient history, based on a minimum of fact and a maximum of speculation. Learned disquisitions are written about the "Neanderthals" and the "Crô-Magnons," as if these were the names of two well-known and definitely ascertained races. There never was a time in human history when highly cultured men did not occupy the earth; for the special intelligence which ensouls man is something that exists from all eternity, and man was already a complete being when he first appeared in physical form on this earth.

PAPERS OF THE SCHOOL OF ANTIQUITY

THE SCHOOL OF ANTIQUITY shall be an Institution where the laws of universal nature and equity governing the physical, mental, moral and spiritual education will be taught on the broadest lines. Through this teaching the material and intellectual life of the age will be spiritualized and raised to its true dignity; thought will be liberated from the slavery of the senses; the waning energy in every heart will be reanimated in the search for truth; and the fast dying hope in the promise of life will be renewed to all peoples. — *From the School of Antiquity Constitution, New York, 1897.*

STUDIES IN EVOLUTION: by H. T. Edge, M. A.



EVOLUTION is a subject which has been frequently treated in Theosophical writings, but which cannot be treated too often, since it is a topic of perpetual public interest, and the occasion is made for us by those scientific writers who make so much of it and who hang so many things upon it. Mixed with facts and correct inferences there are many assumptions and speculations; and the public do not always distinguish between what is reliable and what is not. Since an acceptance of fiction for fact constitutes a new dogmatism, and the tendency of this dogmatism is materialistic and opposed to progress, we shall be rendering a service to science by a critical examination of the situation.

The subject being a large one, it is necessary to adopt some convenient scheme under which to treat it; and on the present occasion it has been thought well to take the the three main headings of:

- (1) The meaning of the word "evolution."
- (2) Modern theories of organic evolution.
- (3) The evolution of man.

These headings, however, will not be allowed to become unduly restrictive and to exclude any remarks that may seem timely even if digressive. They are intended as a skeleton to the argument. Moreover it is of the greatest importance to make known the existence of those wonderful ancient teachings which H. P. Blavatsky has explained in her book, *The Secret Doctrine*, as these are the best antidote to the speculations of theorists. From a study of these teachings, it will become at once apparent that the *real* doctrine of evolution, when contrasted with these speculations, is like the noonday sun contrasted with a flickering torch; and that, while most researchers are toying with a few fragments, ancient knowledge has elaborated and

preserved the whole vast fabric. To one accustomed to studying in these fields, an examination of the writings of some of the modern evolutionists seems like sitting in a close room amid the unreal phantasms of the midnight oil — so far do the speculations carry one from the realities of life. We find man spoken of as though he were a mere conception or a quantity in an algebraic formula; and the animals too are little more than so many lifeless pawns in some chess problem. Truly, after a period of enforced contemplation of physical humanity as being nothing more than one of several branches from the root of organic life, it is a relief to return once more to teachings which explain the evolution of *mind* and *soul*, which bid us regard the mighty works of long past human races and see in man's past greatness the sure promise of his future greatness — of his present greatness if he will but recognize it.

It will be our aim, then, in these papers, to present the ancient teachings in vivid contrast with the modern speculations, and to contrast what may well be dubbed "evolutionism" with the sublime and and far-reaching doctrine of evolution itself.

Claiming an unprejudiced attitude towards the whole field of doctrines, ancient and modern, we appeal to a like attitude on the part of readers. If anyone should be disposed to champion the orthodox scientific view, we may well ask, What is that view? For, while there are many popular summaries, which represent the evolutionary theories as being firmly established, we find that the leaders themselves are not so confident. And why? Is it not because the latter are working at the front, among the facts, where their speculations receive wholesome check at the hands of Nature? These workers are the first to realize that the theories have been too narrow, and that, as Professor Bateson says, *the time for speculation is not yet*. This remark and many others, some of which we shall quote, justify us in regarding the matter as quite open, whatever the popular summaries and school-books may assert.

THE MEANING OF THE WORD

The word "evolution" is used in several senses, which must be kept distinct if confusion is to be avoided. For illustration we may take the following sentence, in which the word is used in three senses:

"Evolution is the theory that evolution is brought about by evolution."

Here we see that the word can have the following meanings:

(1) An effect or state of affairs that has been produced, we say not how. Everywhere we see evolution, but whether brought about by some natural process or by God, we do not say.

(2) A process by which the said effect is presumed to have been caused. For example: "Beings attain to perfection by means of evolution."

(3) A theory held by thinkers with regard to the above causes and effects; the doctrine of evolution.

Huxley uses the word in sense number three in his article in the ninth edition of the *Encyclopaedia Britannica*, where he says:

Evolution, or development, is, in fact, at present employed in biology as a general name for the history of the steps by which any living being has acquired the morphological and the physiological characters which distinguish it.

He says nothing here about any agency, which may have caused this evolution, and he uses the word "development" as a synonym; probably one might also thus use the word "growth."

Considering evolution as an effect, without regard to its cause or method, we find that the doctrine is as old as human thought. We see multifarious forms, and we see growth and change; the inference is natural that forms pass and change one into another. Considering evolution as the name for a method or process, we find ourselves concerned with modern biological theories, connected chiefly with the names of Lamarck, Darwin, Weismann, etc.

But it will be advisable at this point to say something from a philosophical point of view about the meaning of the word. Evolution, growth, and development alike mean the coming into visible form of something which has been invisible, or the coming into manifestation of that which was latent. Taking the illustration of a house that is being built, we see that three principal factors are necessary to the fulfilment of the work: the plan, the materials, and the builders. Each of these is essential. Now we hold that this illustration is applicable to the case of evolution in general, and that no evolution can take place, or even be imagined as taking place, without there being a pre-existent plan, materials with which to build, and agencies by which the building is wrought in accordance with the plan. The thing which is produced by evolution is an organism or structure, and the thing from which this originates is a plan, or in other words, an idea. Thus, an acorn produces an oak, but it is essential that the

idea of an oak should have been present beforehand somewhere. Science of course admits this, and, as we shall see later, there are various theories as to whether that plan or idea or potency exists within the atoms of the acorn, or whether it comes from some external source; whether the power is intrinsic or extrinsic.

In all evolution, then, there is a double process: a form is expanding, and something invisible and intangible is incarnating (as it were) in that form, and expressing itself physically therein. It is essential to keep this fact of the duality of evolution in mind in order to avoid the logical confusion which comes from trying to ignore one half of the question and to imagine that forms can evolve themselves into shapes which have never existed until they become visible. But we find that most biological writers on evolution are so engrossed with their study of the visible effects of evolution that they virtually disregard the cause, and that they seem to be of the opinion that the cause can safely be disregarded on the ground that it is not within their province. Unfortunately, however, they are not consistent in this, for they seem desirous of "having it both ways," and, while asserting at one time that the question of causes does not concern them, at another time they will proceed to dogmatize on that very question and to dictate to other people who *do* consider the question of causes.

To speak plainly, we cannot get along unless we make the customary distinction between spirit and matter, or mind and matter, or force and form. Nor can we reason logically about the matter unless we predicate *mind* as being the fundamental fact in the universe. All argument must necessarily start with our own mind, and it would be folly for a reasoning mind to expect to construct a philosophy of the universe in which matter would be the fundamental fact, and mind would be regarded as a product of matter. This, however, accounts for the confusion of the theorists.

In *Science History of the Universe: Biology*, by Caroline E. Stackpole, we find the following:

It will clarify some later considerations if it is emphasized that there is a great distinction to be drawn between the fact of evolution and the manner of it, or between the evidence of evolution as having taken place somehow, and the evidence of the causes which have been concerned in the process.

In the same work, the late Professor Cope of Philadelphia is quoted as defining evolution broadly to be the teaching which holds —

That creation has been and is accomplished by the agency of the energies which are intrinsic in the evolving matter, and without the interference of agencies which are external to it.

The value of this definition depends upon the meaning to be assigned to the word "intrinsic"; but evidently the definition is intended to exclude the direct action of a divine Creator and thus to distinguish the evolutionary hypothesis from that of special creation—the older theological idea. We do not feel disposed to split hairs over the meaning of intrinsic and extrinsic, but prefer to deal with the causes of evolution regardless of the question as to which of these words is applicable to them; we may, however, remark that the definition becomes tautological if we define extrinsic forces as those which do not affect evolution, and intrinsic forces as those which do. This writer then states that, in accordance with his definition, these intrinsic energies are a "property of the physical basis of tridimensional matter," a remark which does not err on the side of lucidity and which involves more than one dogma, as, for instance, that tridimensional matter has a physical basis. As to the respective meaning of the words "physical" and "tridimensional," and the distinctions they imply, and as to the difference between a property of matter and a property of the physical basis of matter, we cannot stop to argue; we only mention the matter to show that there is plenty of metaphysics in science. He then says that these energies accomplish evolution whether they be —

Forms of radiant or other energy only, acting inversely as the square of the distance, and without consciousness, or whether they be energies whose direction is affected by the presence of consciousness.

So that we are confronted with other undefined distinctions, like that between conscious and unconscious action; and with the highly abstract terms, "energy" and "consciousness"; and we are left wondering whether either or both of these are intrinsic or extrinsic.

Professor Jordan, in *Footnotes to Evolution*, is quoted in *Science History* as saying that evolution is simply orderly change. This at all events is safe, and is no basis for dogmatizing; we wish the theorists would always remember their own definitions.

We have one thing in common with the Darwinian school: it is the law of gradual and extremely slow evolution, embracing many million years.—*The Secret Doctrine*, II, 669.

This is from the pen of the great Theosophist, H. P. Blavatsky.

Now for some more definitions of evolution. James Sully, in the ninth edition of the *Encyclopaedia Britannica*, writing on evolution in philosophy, gives the following as the most general meaning:

Evolution includes all theories respecting the origin and order of the world which regard the higher or more complex forms of existence as following and depending on the lower and simple forms, which represent the course of the world as a gradual transition from the indeterminate to the determinate, from the uniform to the varied, and which assume the cause of this process to be immanent in the world itself that is thus transformed.

This is too long for a definition, and it involves a definition of the words simple, complex, lower, higher, etc. If we consider the word "simple" to apply to the physical structure of a form of existence, then the atom and the one-celled organism are simple, and the crystal and the mammal are complex; and evolution in this case applies only to the history of the outward form. But if we regard the simple form as containing the total potentiality of that which is afterwards unfolded, then it may be a mistake to apply the word "simple" to it. The same writer continues, with reference to a point we have touched on above:

Evolution has no doubt often been conceived as an unfolding of something already contained in the original, and this view is still commonly applied to organic evolution. . . . Certain metaphysical systems of evolution imply this idea of an unfolding of something existing in germ or at least potentially in the antecedent. On the other hand, the modern doctrine of evolution, with its ideas of elements which combine, and of causation as transformation of energy, does not necessarily imply this notion. It may be remarked that some of the arguments brought against the modern doctrine rest on the fallacious assumption that the word is still used in its etymological sense, and that consequently that which evolves must contain in some shape what is evolved (e. g., inorganic matter must contain life and consciousness).

It is best to say here that we do intend to accept evolution in this etymological sense. We are debarred by the definitions quoted from assuming that the cause of evolution is extraneous, and are indeed expressly told that it is intrinsic. This last writer seems to offer us still another alternative: the cause of evolution, though intrinsic, is not necessarily the potentiality of all that subsequently unfolds. Science, it seems, has given us a new explanation, hinted at in the words, "elements which combine" and "causation as transformation of energy." It seems to us that this is the notion that something can

evolve without having previously existed in potentiality, that there can be a creation without any pre-existing idea, that the world is evolving towards an unknown goal, feeling its way in the dark; that the rungs of the ladder up which we climb are building themselves up before our advancing feet. This notion we reject as being much too highly metaphysical and speculative for satisfactory treatment here.

We could go on quoting definitions, but it would be tedious. The general effect is that evolution is defined as an effect, the question of its causes being left open. This parries our objections, but does not prevent some men of science from dogmatizing about those causes. We thus find ourselves playing a game of dodging. At any rate the question is sufficiently open and unsettled to entitle us to our own opinion.

Many able thinkers have pointed out the weakness of certain scientific writers in logic, one of them being the late Judge Stallo, whose *Concepts of Modern Physics* is quoted by H. P. Blavatsky in her section on modern science in Volume I of *The Secret Doctrine*. He points out how these writers fail to perceive the distinction between entities and concepts, or between the concrete and the abstract. Many of their terms, used by them to denote realities, are concepts. For illustration take a red cow: the cow is the reality, and redness is a concept. Many of the scientific terms, such as "motion," "force," "energy," are found, on examination by Stallo, to be concepts in the same sense as redness is a concept. They stand for no realities. Force and inertia, regarded as components of matter, are really abstractions from matter, as incapable of independent existence as are the two ends of a stick. The same error pervades many of the speculations on evolution. Thus we are offered by the author last quoted, "the combinations of elements" and the "transformation of energy" as substitutes for a living intelligent being within the form. To our thinking, energy, force, affinity, tendency, etc. are nothing unless they are attributes of some being, and the only reality in the universe (in the last analysis) is *Self*.

We therefore propose herein to regard evolution as the process by which the Universal Life manifests itself in organized forms, and to view its cause as the *Monads* or souls which inform all the forms in nature, from the smallest atom up to the most elaborate animal. No one will expect that we should put down as a formula on paper the whole purpose and plan of existence or even a faint

epitome of it; but we can state general principles. Mind and consciousness are the most final facts which our analysis can reach, and the universe itself (so far as any science or philosophy is concerned) is comprised in the Knower and the Thing Known. It is essential, therefore, to study the Knower as well as the Thing Known; and our study of evolution must be primarily a study of mind and consciousness in their various forms and degrees, and secondarily a study of the gradations of forms wherein mind expresses itself.

II. MODERN BIOLOGICAL THEORIES OF EVOLUTION

IN this study we have to consider modern evolutionary theories as applied to animals and plants, leaving the case of Man for a future occasion; and side by side with these theories to place the teachings of the Secret Doctrine. These latter are not offered as dogmas, but as explanations submitted to the judgment of the inquirer. The principle of evolution itself being true, and the study of organic life having revealed such marvelous facts, the theories of evolutionists have gained a credit which belongs to the truth only. Thus far they have met with no competent opponents; a denial of evolution will not do; nor have theologians anything better to offer in place of the theories. The real way of meeting the speculations is to show that evolution is something much greater and that modern science has only gotten hold of a small fragment of it, and is dogmatizing unduly on the basis of this fragment.

Modern science at best gives us a mechanical world; for, even if its theories be true, they leave us in the dark as to ends and purposes. They purport to describe the activities of universal life, but give us no idea of what that life is. The observations of science reveal the universe as full of indefinite design and power; and all these wonders are loaded upon the atom or the nucleus within the cell.

To us the drama of evolution must be the drama of a universal Mind seeking self-expression in countless forms of life, the aim being the production of perfected Man, the highest manifestation of universal Mind that we know. The animals are living souls engaged in learning the lessons of life in their own sphere; while in the plants, and even in the mineral kingdom, the vital spark is ever striving to manifest its latent powers in forms of greater and greater perfection.

Is it possible to confine the study of nature to a study of the

outward effects only, and to say that nought beyond this concerns the student? This is what we shall find said in many books on science. Yes, doubtless it is possible, provided the student will keep faithful to his own prescribed limitation. Thus he would be a naturalist, engaged in the observation and recording of natural phenomena. But the evolutionists go further; they speculate freely; and one is bound to confess, as the result of reading many of their writings, that a double game is played, by which at one time all concern with causes is denied, while at another time dogmatic statements inconsistent with this denial are made. Again, when we are asked to accept any teachings, we must needs know what it is we are asked to accept; and here comes confusion, for the authorities are not agreed. One says that the theories are now so far confirmed as to have received general acceptance; another says that we must scrap most of our ideas and start again in all humility on a basis of patient observation.

The doctrine of special creation (if such a doctrine there be) may be said to state that all species, genera, and orders were originally created as such, and have remained the same ever since. The doctrine of evolution holds that multiplicity has sprung from unity, many forms from few, complex types from simple; but does not necessarily deny that the divine creator may have been responsible for the original act of creation, and that, after stamping on the universe his will and thought, he has since left it to run on along the lines marked out and without further interference. Darwin is held responsible for the doctrine that "natural selection" is the method by which evolution is effected in the animal and plant worlds. He inherited from Lamarck and others the idea that species were modified by response to their environment; and by "natural selection" he meant that, of the varieties thus produced, some died out and others were perpetuated. Those that were perpetuated were said to be the "fittest," and this part of the doctrine is known as the "survival of the fittest." Further, it was held that the variations produced by these means were propagated by heredity, and that the small variations gradually accumulated until large variations were produced. In this way it was hoped to prove that all varieties, even the most widely sundered, have diverged by the gradual accumulation of small modifications throughout long ages, from a few simple original forms. Darwin is remarkable for his diligence in accumulating facts from observation. In the light of some facts he devised provisional hypotheses, and then sought

confirmation in further study. It is a rich subject for debate whether his further studies confirmed, disproved, or amplified his theories, or to what extent they may have done each of these things. He has been saddled with many views which he did not hold, and to some extent discredited by followers. He was much more modest and broad than is often thought.

Science has given up the idea of representing the scale of evolution as a single line proceeding from the simple to the complex forms, and now pictures it as a tree with many branches. A dog will never become a cat, nor a horse an ox, but to find the common root we must go far back down the branches to the remote main trunk. According to this idea it would seem rather difficult to explain development at all, for the scheme represents continual divergence and diversification, and the loss rather than the gain of new qualities (as Professor Bateson points out).

Heredity is of course a crucial feature in our considerations; for this is the only link recognized by biologists as possible between one organism and another. And, as we shall see, a faithful study of actual facts about heredity has not confirmed pre-existing theories but merely opened up new grounds for speculation.

III. HEREDITY — WEISMANNISM

As to heredity, the name of Weismann at once occurs to the mind. He considered the one-cell organisms, such as the amoeba. These propagate themselves by a splitting of the one cell into two, and then each of the two splits into other two, and so on indefinitely. Weismann held that there was no succession of generations here, for the original cell never dies, but passes on its individuality indefinitely; it is immortal, in fact. But in many-cell organisms, most of the cells die without reproducing themselves in this way. They are concerned with nutrition and other vital functions. It is only the reproductive cells that perpetuate themselves; and Weismann held that the reproductive function had become monopolized by these few cells in the many-celled organisms, the other cells of the body having given up that function in order to fulfil their own special functions. He asks, therefore, how characteristics acquired by these other cells can be transmitted by heredity, since these cells die, and it is only the reproductive cells (which have not acquired the new characteristics) that are perpetuated. And he challenges the other biologists to prove

that acquired characters *are* transmitted; he says they are not transmitted.*

And so we have this curious position: while some evolutionists are trying to find out the method by which acquired characters are hereditarily transmitted, another evolutionist challenges them to prove that they *are* transmitted. It would seem from this that the former theorists had theorized too far ahead of the facts. The question therefore became one to be settled by further study of nature. Other men have gone elaborately into this question of heredity, notably Mendel and de Vries, whose names are proverbial. Weismann, as we see, rejected environment, but he did not reject natural selection. Only variations in the germ-plasm itself are inherited, he says, and it is upon these variations that natural selection operates. Variations are not due to the influence of environment nor yet to the disuse of organs, but to sexual conjugation; and the differences thus produced increase in geometrical ratio.

It is not our present purpose to go into the studies and conclusions of Mendel and de Vries. The many interesting and important facts they have discovered have, as is the wont of facts, not clinched the preformed theories, but have opened out new vistas, so that those who are qualified to review the situation find themselves rejecting old theories rather than making new ones, and insisting on a greater devotion to research and on a postponement of speculation. This is well illustrated in Professor Bateson's British Association address, from which we shall have occasion to quote.

IV. CAN SMALL VARIATIONS ACCUMULATE? — MUTATION THEORY

The salient point is whether it can be shown that small variations accumulate in such a way as to cause transformations from one form to another across the dividing lines between species, genera, and larger divisions. On this Bateson said in his Presidential address in 1914:

We have done with the notion that Darwin came latterly to favor, that large differences can arise from the accumulation of small differences.

* Prince Kropotkin has recently announced his conviction that acquired characters *are* transmitted. Like Weismann, he bases his conviction (1) on the evidence from experiments, (2) on theoretical considerations. Whereas Weismann cannot see how the germ-cells can be affected by the behavior of the other cells in the organism, Kropotkin cannot see how the germ-cells can *escape* such influence. Thus two men have come to contradictory conclusions, each claiming both inductive and deductive evidence.

See article on another page, under the head "Science Notes."

This is definite and authoritative enough at any rate. He continues :

Such small differences are often mere ephemeral effects of conditions of life, and as such are not transmissible; but small differences, even when truly genetic, are factorial like the larger ones, and there is not the smallest reason for supposing that they are capable of summation.

This seems to destroy the theory as stated by the earlier evolutionists. But, granted that there is a sequence of forms, we have still the alternative theory that the major changes may have come about suddenly. And this latter hypothesis would also have the advantage of lessening the enormous amount of time required for the whole process of evolution. De Vries was led by his experiments in plant heredity to the conclusion that changes might in fact take place much more suddenly than had been supposed. This is known as the "Mutation Theory." To quote from another authority:

The immediate followers of Darwin had generally thought of the variations between individuals of a species as being very slight in degree, so that the cumulative effect of many slight variations, extending over multitudes of generations, would be necessary to produce a radically new type of animal or plant. . . . A possible solution of the controversy has recently been found in a modification of the Darwinian theory suggested by Professor Hugo de Vries, of Amsterdam. The studies of this far-sighted experimental botanist convinced him that the "spontaneous variations" on which evolution works are often much more pronounced deviations from "type" than had usually been assumed. From seed-pods of the same plant may come individual plants that differ among themselves not only slightly, but sometimes very radically. In exceptional cases . . . the deviation may be so marked that one of the plants may fairly be regarded as constituting a new race or "elementary" species. Such a departure from type, developed suddenly in a single generation, Professor de Vries spoke of as a "mutation." . . .

Thus the necessity for assuming that evolution has proceeded only through the natural selection of *minute* variations was done away with. It was made clear that Nature might supply by mutation widely divergent types through which natural selection could operate to produce new species. . . . Although the evening primrose is the only plant in which such marked mutations have been observed, it is reasonable to suppose that other plants, and animals as well, may show similar tendency to marked variations under exceptional circumstances (for example through changed environment).

— *Miracles of Science*, H. S. Williams, 1913

We might perhaps suggest an alternative to his last argument as follows: "Because the evening primrose is the only plant in which such marked mutations have been observed, it is reasonable to suppose that it may be an exception." Further study of the facts must decide.