Views of an Agnostic

By

Ross E. Browne,

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This little book has no Table of Contents, and so we are providing one by linking to the various subject headings throughout the book.

Bank of Wisdom

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Emmett F. Fields

PREFACE.

At the age of 66 years I find myself possessed of certain articles of faith and philosophic views, which, however lacking in originality, have gradually become my own by virtue of the processes of absorption and assimilation. It is now quite impossible to trace each idea involved back to the particular authority from whom it was derived.

Although continuously engaged during many years in the practical business of engineering, there has somehow clung to me the natural interest of the younger student in such subjects, as the supremacy of the laws of nature, the existence of a personal God, the freedom of the will, and the immortality of the soul.

We are not qualified to determine conclusively the truth in these matters, yet we commonly entertain opinions concerning them. In early youth our imaginations were worked upon, we were influenced to adopt specific beliefs regarding the unknown, and we absorbed some ill-founded theories which are difficult to eradicate.

The student of science learns to discredit a theory which is not logically based on known facts. He finds that it is not justified simply because it seems desirable and no one can prove it to be false. He gradually comes to feel that, in the search for truth, the burden of affirmative proof should bear upon the advocate of a proposition, and this persuasion leads him to assume attitudes toward many prevailing beliefs which appear to others over-skeptical.

My sympathies are first with the devotees of the better-founded sciences, and then with that modern school of philosophers who base their views mainly upon the results of scientific research—the school so ably represented in the past generation by such men as Spencer, Darwin, Tyndall, Huxley, and others of like tendency.

Recently I read with much interest an able work on "The Churches and Modern Thought," by Philip Vivian. It presents quite fully the rationalistic doctrines of the

day. I noticed only one of these which appears to me distinctly detrimental to the cause which Mr. Vivian represents. It is to the effect that there is no such thing as free will. This denial means in plain language the upholding of fatalism, or what Huxley calls conscious automatism, the assumption that we are mere machines governed by invariable laws, and are unable to deviate from a line fixed in advance. As we are now constituted this doctrine is antipathetic to purpose and resolve. It is not an encouraging offer to the proposed convert to rationalism. How may we expect to arouse endeavor by preaching fore-ordainment? If we say "You cannot deviate from a fixed line ahead," the natural reply is "Then why bother myself with the effort to shape my future?" Any explanation we may offer will appear lame.

If, however, deemed to be true, the doctrine must be accepted, for to shirk the truth is against the most fundamental precept of the school. I am practically wedded to the school, but am not as yet persuaded that any positive conviction in the above matter is warranted. The doctrine, while exceedingly plausible, is based upon an hypothesis which has not been verified by competent test. My precept is "Hold to an instinct until clearly shown to be fallacious." I instinctively assume voluntary power and there appears no reason so conclusive as to induce me to abandon the assumption. In view of Mr. Vivian's attitude in this matter, his pleading seems inconsistent. The fatalist cannot plead with good grace.

Spencer points out the unwisdom of any sudden and radical disturbance of existing religious beliefs. The process of emancipation from such beliefs is perhaps already quite as rapid as may be beneficial to the masses. There are, however, many intelligent people who are well prepared to derive a material benefit from views which are more in accord with known facts. It is to these that works like that of Mr. Vivian are properly addressed. But the majority of believers are prone to ignore expressions of adverse opinion, and the real reform is being carried

on by the unostentatious scientists, who, by their work, are slowly but surely undermining the superstitions of the masses without directly attacking them. Before we shall be able to forecast the ultimate effect upon the race there are many questions to be answered. Among these is the one above referred to. What will become of the doctrine of fatalism toward which the present work of the scientist seems to be definitely tending? If the doctrine is finally to prevail, what will be its effect upon the aspirations of the people?

We are not now able to answer such questions satisfactorily. All we may do is to recognize their bearing upon the future welfare of the race, and to be guarded against too ready an acceptance of a doctrine so definitely opposed to our instinctive perceptions. It was this view which led me to write the following pages.

GENERAL PRINCIPLES.

There are a number of elementary articles of belief which I must adopt in entering upon any practical pursuit in life. Among these I now call to mind the following as being broadly applicable, and having impressed me most definitely.

I have complete faith in the reliability of the simple, logical processes of the normal mind in its wide-awake state. The most striking example is in our established system of mathematics. I cannot conceive of a sane mind seriously denying the correctness of the processes involved.

I believe in the existence of substance and the reality of the phenomena I witness. Bishop Berkeley was apparently in an unhealthy frame of mind when he reached his conclusion that these things have no existence outside of the imagination. Our inability to prove a proposition does not necessarily establish the contrary. This belief is instinctive and the burden of proof rests upon him who maintains a contrary theory.

I must accept the evidences of my senses, but the interpretations I place upon these are to some extent provisional or subject to verification by comparison of experiences, especially in cases of conflict with reason. I recognize the fact that my senses may and occasionally do deceive me, but I have nothing else to depend upon for the establishment of the facts which I must know in order to obtain any practical comprehension whatever of my surroundings, or even to maintain my existence.

In the same way I must provisionally rely upon my memory, imperfect though it may be.

SCIENTIFIC METHOD.

I have the highest respect for that method of investigation which takes for its basic data the carefully established evidences of our senses; looks for similarities and differences among the phenomena observed, leading to classifications and generalizations; calls into action the ingenuity of the mind in inventing hypotheses to account for the relations established; applies deductive methods of reasoning to determine necessary consequences; modifies such hypotheses, if necessary, to make their consequences conformable with all known facts; adopts these hypotheses provisionally and applies them to new problems with the view of discovering new facts, etc. The working hypotheses thus established are always subject to modification, rejection, or fuller acceptance, in the light of new experience.

This is known as the "scientific method." It involves many trial balances between the results of inductive and deductive reasoning. It teaches us the importance of being sure of the accuracy and sufficiency of our facts before we rely upon the results of logical reasoning based upon them.

The scientist is generally averse to mere speculation without good foundation in fact. He is opposed to waste of effort in fields hopelessly beyond the reach of scientific method. He devotes himself mainly to work on or near to the confines of established knowledge, rather than to the effort to comprehend subjects entirely unattached. He is not in sympathy with guesswork and analogy in fields wherein the results of speculation are evidently beyond his powers of practical test or verification. He guards against the biasing influences of sentiment and desire.

The value of the scientific method is exhibited in its results. It has been the means of establishing most of the useful knowledge we now possess concerning our bodies and the things which surround us, and the laws which govern them. It has furnished the knowledge

which enables the utilization of the forces of nature on a large scale for the benefit of man. It has been the most potent influence in modern progress.

The philosophers, by their metaphysical work, have contributed relatively little toward the practical improvement of the condition of man. They began at the wrong end of the problem. They have been, as a rule, men of the most remarkable power in deductive reasoning, and intellectually among the ablest men of their times, and it was doubtless owing to the brilliancy of their minds that they were not satisfied to limit their foundations to the meager assemblage of established facts.

Some of these philosophers, however, aside from their speculative work, have rendered service of great practical value to mankind by advancing our knowledge of mathematics and kindred subjects, notably Decartes and Leibnitz. Mathematics is the simplest of all sciences. The data upon which it is based—the axioms—are so few in number, and so evident, that little of the plodding industry of the inductive method was required in establishing a basis, and the science, on account of the simplicity of its foundation, was the first to be developed. Generally speaking, deductive speculation is more fascinating than inductive work, as Mark Twain would say, "It yields a larger return of conjecture for a smaller outlay of fact," and formerly much time was wasted in attempting to develop sciences, other than mathematics, by deductive methods, before proper foundations were laid. It was after many signal failures that the great importance of the inductive method was recognized by such men as Roger Bacon, Galileo, Newton, and others. We owe the bulk of our knowledge of natural phenomena to the untiring industry of such men, and their followers, in the last three or four centuries.

The scientist, through his work in physiology and psychology, is slowly but surely invading the field that was formerly considered the exclusive property of the metaphysician. Some day the two may meet upon com-

mon ground and agree upon a few practical lines of demarkation between the known and the unknown—the knowable and the unknowable. The spreading of an authoritative statement defining the limitation of our knowledge, in simple commonplace language, might be an effective step in the direction of eliminating from the mind of the average layman much undue concern regarding the unknowable. Such concern is not, as a rule, conducive to mental health.

WORKING HYPOTHESES.

Of the working hypotheses which have been most convincingly established by the scientists, and are of most far-reaching importance, I shall cite a few in anticipation of future reference to them.

The "atomic theory" assumes that the bases of all ponderable matter, as we know it, consist of minute substantial elements with the attributes of mass and affinity.

The principle of "indestructibility of matter" indicates that the elements of substance are permanent. They are not subject to destruction, diminution or increase in number or mass. Inferentially they have always existed as they are, and will so continue for all time. The adoption of this hypothesis has had a great influence in the development of chemistry and other branches of science.

The principle of "conservation of energy" indicates that any given quantity of energy is permanent. It may be converted into different forms, but is not subject to destruction, diminution or increase. There is no creation of new energy. Energy is either kinetic or potential in form, and these forms are convertible, the one into the other. The sum total is permanent. Kinetic energy is the energy of mass in motion, straight-lined, curvilinear, continuous or vibratory. As examples may be cited that of a cannon ball in motion, heat, electricity, light, etc., all ultimately convertible, the one into the other, or into potential energy. Potential energy may be defined as the latent power to produce kinetic energy, and is measured by innate force and the distance through which it may act. Mass and energy are interdependent. The one cannot exist without the other. The adoption of this hypothesis has led to great progress in the physical sciences.

The so-called "law of gravity," as finally established by Newton, indicates that everybody attracts every other body in proportion to the product of their two masses and to the reciprocal of the square of the distance of separation between the centers of gravity of the two. The recognition of this law, or the invention and verification

of this hypothesis, enabled Newton to establish mathematical formulae for the calculation of the orbits of the planets.

The principle of "evolution," as established by Darwin, indicates that all organic beings are derived by processes of propagation, development and natural selection, from simpler forms, and primarily from one or more elementary forms. It points to the near relationship of many of the higher animals, notably of man to the anthropoid ape. It has furnished an important basic principle for guidance in the future development of the natural history sciences.

The principle of "cause and effect" will be presented in a separate chapter.

INTUITION.

Intuition is a term applied to all our direct or immediate perceptions. The word instinct was formerly confined to the natural impulses of animals other than man, it being assumed that such animals had no reasoning faculty. But since that assumption is known to be unsound, there remains no clear distinction between the two words. It seems best to employ the word intuition as a broad term including instinct, and to confine the meaning of instinct to inherited impulse.

Many of our intuitions are the result of the habitual entertainment of conceptions and ideas which were originally due to instruction, or observation and reasoning, or fancy. Such conceptions, by constant employment, have become more or less automatic. Whether or not these are transmitted to our offspring, even in a slight degree, is a matter of dispute. There appears to have been brought forward no undisputed evidence of such transmission to any appreciable extent. There is, of course, transmission of acquired physical disease of the body, including the brain, but that is a different matter. It seems plausible to assume that the persistent re-establishment of the same intuition in a sufficiently long line of generations may ultimately result in the intuition becoming instinctive. But let it be borne in mind that many beliefs which have persisted during all historic time have still left the youthful mind open to new conviction without prejudice.

For all practical purposes it may be assumed that the natural instincts of our race will not be perceptibly improved by education—at least not in reasonable time. Such improvement may only be brought about by some system of eugenics or a wise selection in breeding. In other words, we may by education and training improve the spontaneous tendencies of the individual, but such improvement is not cumulative, i. e., does not extend to the instinctive tendencies of his offspring. In the present European warfare, after nearly 2000 years of devo-

tion to Christian precepts, a slight provocation seems to have brought to the surface the same barbarous instincts which prevailed in early historic times.

There is a notable variation in the individual characteristics of the members of every family. A marked development of a given innate quality may doubtless be accomplished in a few generations by selecting for intermarriage those exhibiting most definitely the prescribed characteristic. The desirability of the result in a given case is, however, more or less problematical. There are some complex questions involved. We may, in effecting the result, cultivate some undesirable feature. For example, in attempting thus to destroy the belligerent quality in favor of sentiments of kindness and good will we might introduce a combination that would weaken ambition and lead to decadence. Notwithstanding the start which Darwin has given us, our knowledge is, I imagine, still too meager to warrant any very confident predictions regarding experiments we may now undertake, but the earnest study of the subject, inaugurated by Sir Francis Galton, will doubtless in time lead to the establishment of some governing principles.

It is apparent that our instincts are to a great extent based upon utility which is an important factor in natural selection or survival of the fittest. Under normal conditions, we may, as a rule, assume that an instinct serves some useful purpose, but it may nevertheless lead to a misconception of the underlying facts. Acquired intuitions are partly based upon recognitions of truth, partly upon erroneous theories. We have thus no offhand assurance that an intuition points to truth. To ascertain if it be reliable we must first go back to its source, or resort to analysis and test.

The following examples are cited to show that an instinctive conception may or may not be corroborated by reason, or may be entirely beyond the reach of rational method of analysis.

First—We intuitively assume the existence of substance and the axioms of mathematics. These assump-

tions are in full accord with all experience and cannot be successfully refuted by reason.

Second—Our senses occasionally lead us to false assumptions. When we take a short stick in hand and rub it over a rough surface we are intuitively conscious of the sensation at the point of contact between the stick and the surface, yet we know it cannot be outside of the human body, and is, in fact, in the brain. Again, when we look at a material object, we are intuitively conscious of the picture being coincident with the object, whereas by investigation we find it to be in the retina of the eye. These hallucinations are doubtless the result of habitual association of the sensations with the objects, and they perform such useful service that we cannot well imagine how we could get along without them. They serve to locate the object, to furnish us with appreciation of distance, etc.

Third—We all assume instinctively that we possess some original power in initiating our actions. Most people believe the assumption to be true. Others believe it to be false. Still others have no rational conviction in the matter.

The wonders of instinct appear to us entirely mysterious, just as do the causes of all fundamental qualities. How the new-born animal came to possess control of its muscular system, and the tendency to develop qualities and powers so nearly identical with those of its parents, often without instruction or example, is simply a matter of wonderment. In explanation we have nothing to offer but bald assumptions.

CAUSE AND EFFECT.

The so-called "law of cause and effect" I have reserved for a special chapter, on account of a feeling of reserve concerning its full acceptance. According to this hypothesis—it is preferable to designate it as such,—every occurrence is the effect of some antecedent cause. It follows that every cause must have a prior cause back of it, and this points to an infinite series of causes, indicating that there is no possibility of a first cause.

There is a modification of this hypothesis to the effect that only those occurrences which have a beginning must have a cause. This admits of the possibility of first or original causes which have always existed. For example, many materialists assume that the elements of substance with their properties of affinity, or attraction and repulsion, have always existed and are the fundamental causes of all the phenomena we witness.

We know nothing of the nature of causes. In our efforts to form conceptions we encounter unfathomable mystery in all things great and small, common and uncommon. All things become equally wonderful.

There is some difference of opinion concerning the origin of our belief in cause. Some metaphysicians consider it primarily intuitive or fundamentally necessary to the mind, and say it inevitably applies to every occurrence conceivable. Others regard it as the natural inference of experience. In our early childhood we witness again and again the same sequence of events under the same conditions. This is so often repeated that we soon begin to realize that these events are connected, that the one calls for the other. We are constantly instructed by our preceptors, and gradually come to anticipate results, to look forward for effects and backward for causes. The idea of necessary sequence grows with increasing experience, and especially with the exercise of reason. The more observing and thoughtful among us are led to formulate the hypothesis that every phenomenon must have its cause. We naturally interpret this to mean govern-

ment by laws or by mysterious powers. The uninstructed are apt to look upon the powers as arbitrary or changeable in their purposes, while the more enlightened regard the laws as constant or invariable.

The scientist, by dint of careful investigation, has established, in a variety of cases, accurate correspondences of the effects of many given causes repeatedly tested under the same conditions. He has added to the hypothesis an additional element. It has gradually become **"The hypothesis of complete government by invariable law,"** and with this we are herein especially concerned. A vast accumulation of evidence has led to its general adoption and by habitual entertainment it has become more or less intuitive. It is the foundation of the scientific method of investigation. The scientist assumes complete government by invariable law. By the inductive method he endeavors to establish the terms of the law. By the deductive method he seeks new facts as necessary consequences of the law. The great successes of the method have produced the utmost confidence in the hypothesis.

There have been recognized a great number of apparent exceptions; but, from time to time, upon closer investigation, so many of these have been found to come under the rule that we are now prone to assume that there are no real exceptions. Our failures to find causes we attribute solely to the difficulties encountered. In our enthusiastic pursuit of knowledge we have come to adopt the hypothesis as applicable to all phenomena without exception. We even apply it by analogy to cases concerning which we have but faint conceptions.

The precise and accurate work of the scientist, which has led to conviction in this matter, has so far been mainly confined to the field of the simpler physical phenomena which are not governed by animal intelligence. The hypothesis applied to this field is not out of harmony with our natural instincts, and we have so much definite and corroborative evidence, without valid contradiction, in so many branches of physical science, that we

may claim justification for its application to all natural phenomena excepting the mental.

But do not let us lose sight of the empiric origin of the hypothesis, and the dangers of analogy in comparatively unexplored fields of a radically different type. Experience has already taught us that, while the methods of analogy are valuable for the suggestions they offer, they cannot legitimately be used as bases of conclusions. We have acquired a somewhat extensive knowledge of the superficial phenomena of inorganic substance, and, in fact, of organic substance as well, in so far as it is acted upon by external forces; and we have some considerable understanding of those activities of organisms which appear to us plainly automatic; but beyond this we are surrounded with mysteries.

When we pass into the field of mental phenomena we recognize some fundamental distinctions and encounter some new difficulties. Our thoughts are relatively variable and often elusive and intangible. They are not subject to inspection and test in the same sense. We know of no parallel to consciousness in the forms of mechanical energy dealt with in our physical problems. We are in the habit of regarding a subject of analysis as an object, but we should not reach far if we studied only the minds of others. We must resort to subjective analysis, and the subject can never completely regard itself as an object.

Our knowledge of existing relations is limited and does not form a very reliable basis for broad generalization. We have no means of verifying our hypothesis of complete control by law. We readily recognize the effects of many influences, but cannot convince ourselves of complete control. It is safe to say that no series of tests, even approximately comprehensive and conclusive, has ever been made to show the applicability of our hypothesis to mental phenomena involving what we call voluntary power. In view of our ignorance, the application may only be made by analogy, and, as already indicated, the warrant for such application is questionable. We

possess a very stubborn intuition concerning voluntary power, which is in violent opposition to the hypothesis. This subject will be further dealt with in the chapter on free will.

ULTIMATE CAUSE.

In our search for truth, sooner or later, we come to recognize the limitation of our capacity. We realize that in whichever direction the mind may penetrate, it finally encounters a point beyond which there appears a realm of mystery, in which the imagination may wander, but reason is balked. We may, from time to time, extend our knowledge a little further, but there is then exposed to view further mystery, and we can see no prospect of ever being able to penetrate to the bottom of things.

It is a common assumption that the mysteries encountered in the progress of analysis indicate one all-pervading, infinite cause; but we have sought knowledge in many directions, and have encountered many mysteries, indicating primarily many causes, and there appears no sufficient foundation in fact for the claim that these many causes originate from one cause. Spencer, in his "First Principles," concludes, after an elaborate argument, that there exists behind all things one "Inscrutable Power." The greater part of his argument is manifestly sound, and I was predisposed to accept the conclusion of his masterful mind; but I have somehow failed to follow his final step. It seems to me like a compromise with a view opposed to the strong point of his argument. The latter point is clearly to the effect that it is absolutely impossible to know anything whatever of the origin or nature of the causes of the phenomena we witness. A very considerable knowledge of the origin is implied in the conclusion that every phenomenon is traceable back to one and the same cause. This may be offered as a plausible surmise, but I do not see how it can be justified as a conclusion of reason. It may have been the intuitive belief of both Spencer and his opponents in argument, and therefore a proper article of faith upon which to compromise, but it does not constitute a necessary belief. Personally, I do not seem to have any intuitive opinion in the matter, one way or the other.

It is true that we recognize a certain order in the sequences of natural phenomena which suggests design, and design implies one Dominant Intelligent Power. Many experiences may be interpreted in a vague way to support the implication. For example, the convertibility of different forms of energy leads to the idea that all existing forms of energy may originate from one primary form. Again, the tendency of many modern chemists and physicists is to believe in ultimate subdivisions of matter of uniform character, and that these are differently grouped to constitute the various atoms of substance which we have heretofore regarded as composed of entirely distinct materials. The study of evolution leads us to believe that all living organisms, however complex and widely divergent, are derived from elementary cells of the same nature. There are many principles which were formerly conceived to be distinct laws, but are now recognized as special cases of more general laws. There appear, in many ways, marked tendencies toward simplification or unification of causes.

On the other hand, there appear many tendencies toward complication. Assuming one original form of energy, and one primary element of substance, there are apparently many causes involved in producing the variety of forms and various elements as they now appear. In the progress of investigation we often recognize an apparently simple cause of an effect, but upon closer scrutiny we find the effects of many minor influences, and the longer we study the occurrence the more complex it becomes—the greater the number of causes we recognize as being involved.

We can know nothing about the origin of what appear to us as various causes. Whenever in the progress of analysis we reach a point where sheer mystery prevails, the rational attitude toward the condition of affairs beyond is that of simple ignorance. Our foundation for theorizing in the matter is entirely unstable.

All that we may legitimately claim to recognize is the existence, within the limits of our experience, of many

persistent causes which produce invariable effects so far as we are able to determine, and we call these the laws of nature. They appear to be supreme. All we know concerning them is derived empirically from the results they produce. We have acquired some knowledge of the terms of these laws, but have no clew to the underlying principles. We are, for example, familiar with the approximate terms of the law of gravity, in so far as this law concerns the changes of weight of bodies under observed conditions, but the immediate cause of weight is quite as mysterious to us as it ever was, and if in future we learn something of this cause there will doubtless remain quite as great a mystery beyond. There is no end to the difficulty in the way of complete understanding, and there is no satisfaction in the speculation. All we need assume for our practical guidance is that the laws of nature, together with all present matter and energy, have existed and will persist as they now are through all time that may concern us. Even this assumption we are only justified in making as a convenient working hypothesis.

The prevailing belief in a Designer of all things, in the form of a Supernatural Personal God with infinite intelligence and power and some of the higher attributes of man, such as the feeling of love and sense of justice, is evidently not based upon verifiable facts. The conception is in some respects inconsistent with the facts as we know them. How could a just and loving Father deliberately plan the innumerable cruelties we witness in animal life? In view of the prevailing habits of torturing, slaying and feeding upon the carcasses of one another, how may we justify the assumption of the above attributes of the Designer. Besides, a controlling design, implying an all-powerful intelligent Ruler, is but one of several conceptions that may as readily be formed. There may be a designer of limited power and his inability to overcome existing laws may account for the injustices of which we complain. Or there may be various independent causes, which, in combination, without design, produce the great variety of occurrences we witness, including the

many apparent incongruities and the many things which appear to us frivolous and without rational purpose.

Those among us who have no intuitive conviction in the matter naturally discredit any definite theory, or any attribute assigned to the Unknown. The beauties and wonders of nature excite our ardent admiration and our profound respect for the powers which produce them. We acquire many vague impressions which we are not able to interpret. They lead us to no tangible conception of the origin of things. The foundations are hopelessly out of reach, and man's futile attempts at explanation, when we regard them seriously, all appear more or less childish.

Whatever be our conjecture, it is plain that we know nothing about fundamental causes, and the candid recognition of this ignorance is what Huxley called "agnosticism." Its profession is a mere matter of intellectual integrity.

RATIONALIZATION OF MAN.

As compared with the next lower animal, we have reached a higher stage in the process of evolution by the development of far greater rationality. At the same time our elementary instincts have become less keen. In early youth we are relatively helpless and dependent. We have discarded some of our instincts and have substituted the precepts of our mentors, the convictions of reason, and the persuasions of fancy. We are engaged in eliminating those precepts and pictures of fancy, which, with growing knowledge, are shown to be in conflict with reason, and the convictions of reason, by habitual employment, are gradually becoming more and more intuitive. We are thus slowly undergoing the process of rationalization.

But do not let us forget that we are animals still, and are not yet emancipated from dependence upon instinct in the many fields as yet unconquered by reason. We have not yet reached that stage where rational conviction is uniformly reliable. We are still subject to error, both in selecting our data and in forming our conclusions. We are still prone to jump to conclusions based upon insufficient data. Intuition is still, as a rule, a safer guide than an untested theory.

However, if we propose to promote government by reason, we cannot well avoid taking some chances. We should be cautious in drawing our conclusions, but reasonably liberal in investigation and test. Conservatism in reaching a conviction is a good balance wheel for a venturesome and enterprising intelligence. If we wish to help along the process of rationalization we should, above all things, render due respect to the truth. We should not jump to conclusions because they are attractive, nor shirk them because they appear undesirable. It is quite evident that the primary demand of progress is the recognition of truth. Furthermore, we cannot rest upon intuition, but must resort to rational analysis and test.

Huxley says of civilized man that, having conquered his most powerful antagonists in the animal world, and

having provided the ready means of acquiring the actual necessities of life, his troubles have changed somewhat in character. What was formerly a struggle for existence has now become a struggle for happiness.

Metchnikoff in his work on "The Nature of Man" points out various physical disharmonies to which we have become subject as the result of change of habit without due time for corresponding change of organism. We have many organs which are rudimentary, and, therefore, points of weakness, and many others, such as the distended stomach and lower intestine, which, through improper use, have become hotbeds of disease. Our earliest historic ancestors led a simpler life and were apparently stronger and more vigorous than we are, and, when spared from accident, they were longer lived. We are not properly adapted to our artifical mode of living, and our hope of improvement lies partly in modification of this mode, and partly in discovery of artifical methods of overcoming its pernicious effects.

It now seems probable that, hundreds of thousands of years ago, some of our ape-like ancestors, acquiring in an unusual degree the power of articulate speech, were stimulated, by exchange of ideas, to unprecedented mental activity, and there resulted a relatively rapid development of brain and intellectual power. There was no time for safe adjustment by the slow processes of nature, and the race became the prey of its own lively imagination and the ambition of its more gifted members. We are in consequence subject to many disharmonies between reason and sentiment, between desire and various demands of physical, mental and moral well being. Under the process of rationalization these may be eliminated or adjusted in time, but there are many setbacks and the process is painfully slow.

To sum up what has already been said in the foregoing pages, our tendency is to dislodge many of the blind instincts of our animal progenitors; to substitute conceptions due to reason and fancy; to eliminate those conceptions of fancy which are found to be in conflict with

reason, and thus ultimately to place ourselves under the control of intuitions based upon rational conviction. This means rationalism, involving necessarily due regard for truth, and recognition of ignorance regarding the unknown, or agnosticism. The effect upon social organization will depend very much upon the interval of time for suitable adjustment.

FREE WILL.

By "freedom of the will" is meant freedom of the individual in the act of willing. In the popular mind it implies that we are capable of choosing without regard to external influence, and that we have the original power to initiate our own actions. Reference is had to our so-called voluntary acts only. Our involuntary acts we naturally regard as automatic.

It is an old and hackneyed theme which in times gone by was productive of much disputation and literary effort. Practical people now commonly avoid discussion of the subject, relying implicitly upon their consciousness of power, and seeing no benefit to be derived from the inquiry.

The subject has been treated by many philosophers. Hume, the skeptic, in his terse way made his meaning clear in a short argument. He said we have the liberty to act in accordance with our choice; but choice follows fixed laws as a matter of necessity, and therefore we have no freedom in choosing. Jonathan Edwards, in his remarkable "Inquiry," handled the question with keen logical skill, and reached a similar conclusion. He was a minister of the gospel and a defender of the Calvanistic doctrine of predestination. Kant said if we understood the subject well enough we could predict the act of man with the same certainty as an eclipse, though he elsewhere indicated a different view from a different standpoint. Spencer, in his argument, left no room for an element of freedom of choice. Huxley, whose broad interest in science led him to give considerable attention to metaphysical questions, and who was always clear and unequivocal, said we are "conscious automata." Haeckel said: "Freedom of the will . . . is a pure dogma, based on an illusion, and has no real existence." There are a number of philosophers who have expressed views very different from these. I am not familiar enough with their works to comment intelligently upon their theories. Some of those whose essays I have glanced over appear to base

their views upon, or co-ordinate them with fanciful conceptions of the functions of a Divine Providence, or to make truth dependent upon desirability.

The argument sustaining the more skeptical view is about as follows: In our actions we are necessarily restricted within the limits of our physical and mental capacities. Within such limits we may act as we choose. This is what we call freedom; but it is freedom in a very narrow sense. Our choice is directed by our motives. Our motives are partly inherited and partly the effects of experience. We do not originate them. They are handed over to us and we simply follow them automatically in forming our choice.

This conclusion is dependent upon assuming either the arbitrary control of a "Divine Providence," or the hypothesis that "all phenomena, including the mental, are governed by invariable law." The latter is a very "plausible" hypothesis, and I shall so designate it in the following pages.

This theory denies us all originality. It prescribes that all our thoughts and actions are predetermined; and that we are unable to deviate by a hair's breadth from exact lines fixed for us in advance. It makes no difference whether the governing laws are "natural" or "supernatural" so long as they are controlling. If we adopt the theory we must accept the doctrine of fatalism in its most rigid sense, as applicable to every sensation, thought and action in extreme detail. Once accept the "plausible hypothesis," and there is no escape from the conclusion that we are mere puppets—it is the inevitable logical sequence.

The theory is in violent opposition to one of our most persistent intuitive assumptions, that of original power. Our present attitude in the matter is about as follows: We are conscious of the possession of some power, exclusively our own, which enables us to shape the future events of our lives to a very considerable extent. We assume that there is an element of originality in our choice and determination to act. This assumption is an

essential element in all ambition, resolve, and voluntary endeavor. It influences every step which deliberately contemplates a future accomplishment. It is a salient feature in the motives which instigate our more pretentious acts, and accompanies innumerable daily acts of a trivial character. If this be doubted, let us stop and consider what we do in contemplating an act of importance. We marshal before us all known facts and search our memories for suggestions. We weigh reasons pro and con. We subject ourselves to uneasiness or worry lest some important consideration should be overlooked, or our conclusion should be wrongly drawn. We exert ourselves in the effort to invent methods of promoting desirable ends, or of avoiding unpleasant consequences. We have an innate feeling of personal responsibility. Is not this feeling, as we experience it, incompatible with the assumption that the outcome was predetermined before we were born? Argue as we may, our efforts and worries are due in great part to an innate assumption of an element of originality in our power, and it is not presumed that there exists an intelligent human being who is free from it. I venture to say that this natural assumption has been largely, if not mainly, instrumental in raising our intellectual and moral standards from the lower level of our prehistoric ancestors.

What would be the effect of relinquishing this and substituting in its stead an intuitive conviction of fatalism? Should we not lose one of our principal incentives to high endeavor? As we are now constituted it is quite certain that vanity and pride are essential elements of our ambitions, and the introduction of intuitive fatalism would sadly impair our motives. If the skeptical philosopher says his motive has not been so impaired, the inference is that his newly-formed opinion has signally failed to evict his intuitive assumption and take its place as a matter of substitution. I dare say the intuition remained active in every one of our skeptical authorities in spite of his logical deduction.

There appears, however, some danger of such substitution in the distant future when so many of the ablest representatives of profound and accurate thought have come to believe in fatalism. If, in process of time, rational men generally become so convinced, the doctrine may gradually enter our code of precepts for the instruction of youth, and by habitual entertainment become intuitive.

It is true that fate might do better for us than we ourselves would with partial control. It is not fatality per se, but the prospective consciousness of it which appears threatening. There may be some way of directing the effect of such consciousness into a harmless channel, but I must say I cannot now imagine the influence to be other than demoralizing.

To be sure, the danger indicated has no bearing whatever upon the question of truth, but it suggests the propriety of a closer scrutiny of the argument.

In the following pages I shall attempt to show that we cannot substantiate originality by reason; that the suggestions of reason all seem to favor the "plausible hypothesis"; that this hypothesis, however, insofar as it concerns so-called "voluntary power," is mainly based on analogy without scientific verification; that such verification is now impossible, and we can foresee no probability of its becoming possible; that in our present state of ignorance there appears no way of establishing the truth in the matter conclusively by process of reason, and we are left to our instinctive assumption of original power as our natural guide.

An external occurrence does not **directly** affect our motive or choice. If it arouses in us a sensation, the latter, as a part of us, constitutes the direct influence. Recurrence of the sensation, due to memory, continues to influence us, and ultimately becomes a more or less significant element in our stock of habitual motives. An external phenomenon which does not produce in us a sensation does not affect our motive. It is apparent then that choice is **directly** governed only by internal influences. Each such influence constitutes an elementary

motive. Every deliberate choice is governed by a motive which is the resultant of various elementary motives. This resultant is often exceedingly complex in its origin. It is mainly due to the impress of innumerable experiences, in the form of memories mysteriously aroused, and to many variable sensations and natural tendencies derived by the inexplicable processes of inheritance from a vast line of complex ancestors.

As an illustration of this complexity, it is safe to say of the 1,600,000,000 human inhabitants of the earth at the present time that no two will always think and act exactly alike under the same external conditions. Mental phenomena are far more variable even than this illustration indicates. This complexity is not cited to prove originality, though it is entirely compatible with it, but to indicate the extreme difficulty, perhaps the impossibility, of a practical and comprehensive test.

In active life we are concerned with the essence rather than the origin of things. We only remember the source of a motive when it has made an unusual impression or is of recent origin. It is plain that a large portion of our motives are derived from sources long since forgotten, and these, together with our inherited tendencies, we are, in a loose way, wrongly inclined to regard as original.

We are ordinarily more concerned with the present and future than with the past. We are always making a fresh start, and there is ever present the feeling that the mainspring which generates our power is our own. At the moment of acting, our motives are wholly our own, no matter how derived. Consciousness of this fact gives rise to a feeling of independence in choosing. Independence implies freedom from dependence upon external influence, or, we may say, it implies ownership of all upon which we really depend. Originality implies first cause and is not necessarily involved in independence; but it has already been shown that our assumption is not confined to independence, but involves originality as well. Our independence, thus defined, is verifiable, and our belief in it is not a mistake. But our originality is not verifiable by any

feasible test and our assumption of it is wholly intuitive, without proof, and may be erroneous. That we are at present committed to this assumption has already been shown. Whether it be sound or hallucinatory is another question.

We are entirely ignorant of the origin and character of many of the essential elements of our power. Being thus ignorant and at the same time possessed with the feeling of independence, we should doubtless intuitively assume originality whether we really possessed it or not, whether the "plausible hypothesis" be untrue or true. Hence our assumption does not constitute valid evidence. At the same time the fact that it may be fallacious must not be taken as a proof that it is so.

When we consider the subject from a rational standpoint, we make assumptions which appear to us in accord with reliable experience. We may thus argue that intelligence is mainly based on experience, and experience cannot produce originality. Therefore, an intelligent motive cannot be wholly, or even mainly, original. Our elementary motives are derived from inheritance and experience. Inheritance means experience of our forefathers, plus their inheritance. The further back we go the more dominating appears the factor of experience in our motive, and in this retrospection the residue of inheritance which may still contain an element of originality seems to approach a vanishing point. If we go back to the original monad—if, indeed, there ever was such—we find what does not appear to be a very promising source of originality.

But this reasoning is unsatisfactory in various ways. There may be omitted some essential consideration of which we are wholly ignorant. It may be suggested that if there is an element of originality in us, logically it must have always existed, and must either have been transmitted with the spark of life, or have been absorbed by us at an early stage in our individual existence, choosing our brain, so to speak, as a temporary habitat. But such suggestions lead us into the domain of unfathomable

mystery, where, as already asserted, the rational attitude is that of profound ignorance.

Let us consider the foundation of the "plausible hypothesis." It has already been indicated in a previous chapter that the principle of "complete government by invariable law" is acceptably established in the field of natural phenomena other than the mental; but that in connection with mental processes we should not be justified in applying it by mere analogy. Definite verification is required, for there are mysteries connected with the mind to which we should not glibly apply our knowledge of inanimate substance or even of the activities of unintelligent life. However, upon reflection we may claim to recognize certain relations which have some bearing on the question. We realize that, in the strictly logical processes of sane minds, the same premises always lead to the same conclusions, as, for example, in mathematical reasoning. We infer that this means government by invariable law. We realize further that certain physical occurrences produce certain sensations which are always followed by very similar thoughts and impulses. There are many sequences of ideas which occur so persistently as to indicate close relationship and suggest complete interdependence. We are not, as a rule, able to trace these sequences with the same accuracy and precision observed in connection with the physical tests upon which we relied in establishing the original hypothesis, but they are suggestive and the apparent inaccuracies may be due to complications unaccounted for. We also realize that the intensity and the very existence of mental activity, so far as exhibited to us, are dependent upon known physical phenomena—upon the effects of stimulating food, etc.—which we have excellent reason for believing to be controlled by invariable law. So far the inference by analogy seems to be justified and we are prone to jump to the conclusion that we ought to extend the hypothesis to all mental phenomena without reserve. Gradually the inference has become more and more

plausible, until we feel strongly impelled to adopt it as a broad rule unlimited in its application.

But the relations above cited are only suggestive and do not prove the contention. The sequences in many of the logical processes are determined with precision, but in these processes the mental faculties involving motive and will power are not concerned. Intensity of mental activity is not directly involved in the issue. There is no proof in **approximate** correspondence under **similar** conditions.

No one will doubt that many, or even the great majority of the factors in man's thought and action are governed as claimed; but, in order to verify the assumption that every factor is so governed, we should have to be able to predict man's exact thought and action under precisely established conditions in a variety of cases involving separately each, or jointly all of his faculties. The problems encountered would be so complex and would incorporate so many variables, demanding so many equations, that we could not possibly handle them, even if theoretically determinate, and indetermination in connection with a single element would leave the assumption of complete government by law without verification.

Suppose we could, by leaving out one group of elements, make a provisional solution of the problem, and suppose this group was ordinarily overshadowed, and only occasionally of material importance. We should then, by applying our formulae, be able to hit close to the mark in a great majority of cases, and should only exceptionally be subject to material error in our forecasts, and this is far more than we may now claim to do. In our present state we have only the uncertain results of a few equations. These enable us to make many good guesses, but often lead us astray—occasionally far astray. Such unreliability our skeptical authorities attribute wholly to ignorance, and say if we understood the subject well enough we could always make accurate predictions. This excuse suggests a weak point in their argument. The "plausible hypothesis" is empirical in origin, or based on experience

and test. It cannot be so based in a field in which we are professedly too ignorant to make the test. The natural inference is that the hypothesis is borrowed from another field and applied here by analogy, and its adoption may be premature. Judging by my own limitations, it appears to me improbable that our authorities could have legitimately deduced the hypothesis of complete government from what they know of mental phenomena alone. It may be claimed that whatever rational knowledge we have is in conformity with it, and that no one can prove an exception, etc.; but these claims are not conclusive. To establish the hypothesis, there appears to be required either a more definite knowledge, or some comprehensive verification by practical test. There is something lacking in the present basis to make it satisfactory.

The philosopher's apparent prepossession in favor of his hypothesis may be due to his method of reasoning. The scientific method certainly assumes complete government by invariable law, which means absence of arbitrary power in the subject investigated. How then may the scientist expect to deal with the question of originality by process of reason? He may only infer it from the failures of reason, and such inference could only be convincing after showing that every law he could possibly assume fails to govern—and this is manifestly unfeasible.

What has been said in substance in the last few pages may bear repetition in a slightly different form. Our search for rational knowledge is a search for underlying principles, which means practically a search for the terms of laws which are presumed to govern. We assume complete government in order to find the terms. Originality means absence of complete government. We thus assume the absence of originality in the subject to be investigated. In case of mental phenomena we have found various occurrences which correspond accurately with the assumption, but do not involve all our faculties; others which correspond more or less approximately, and still others which we are unable to put to the test. Let us not imagine that we have established the truth of our

premise. In making the assumption we are doubtless satisfied of its truth beforehand, and are prone to adopt a limited corroboration and jump to a premature conclusion. The latter is quite as intuitive in character as the original assumption.

By a circuitous route we have once more arrived at a starting point. We are face to face with a plain conflict of intuitions. We have on the one hand the layman's assumption of an element of originality, on the other hand the philosopher's assumption of complete government. These are directly opposed. Which shall prevail? There is no assurance that either is right. Intuitive assumptions are often wrong, as indicated in a former chapter. Comparing the two, that of originality is the more primitive and the more widely spread. It is the natural assumption of every man. On the other hand, the belief in complete government is the result of philosophical deliberation.

In conclusion, I must admit that, so far as I can see, every rational argument of a positive character favors "conscious automatism," and it is only the recognition of uncertainties which may be rationally urged against its adoption. It seems quite impossible to reach any other conclusion by the scientific method as we now conceive and define it. The method, however, is of man's invention, and the question arises: Does it cover the whole ground? It is very serviceable in tracing relations within prescribed limits, but it does not explain anything really fundamental. I cannot say with confidence that my intuitive assumption of so-called free will is not the result of the habitual entertainment of an illusion, but I can say with conviction that, as I am now constituted, the assumption is an essential element of my motive power in every so-called voluntary action.

Let us once more call to mind the fact that we are animals still, and are still dependent to a great extent upon instinct, especially in a field as yet only superficially explored by reason. Do not let us be too hasty in assuming that we know the underlying principles before we

have even discovered a satisfactory method of investigation.

I clearly recognize the ordinarily preponderating influences of inherited tendency, experience and instruction, and consideration of these elements has from time to time cast many shadows of doubt upon my assumption of original power, but there is something missing in the arguments they lead to, which prevent the latter from being conclusive to my mind. Pending further rationalization, I must adhere to my animal instinct in the matter. Paradoxically, I automatically assume that I am no automaton, and my presumption of free will persists willy nilly.

IMMORTALITY.

Concerning the mortal and immortal parts of man, the following ideas result quite naturally from the most commonplace understanding of the sciences.

All forms assumed by aggregates of matter are unstable or subject to change and complete extinction, while the elements themselves are permanent. Thus the material elements composing our physical bodies are indestructible, but the combinations upon which our bodies depend are subject to disintegration and the body is merely a temporary aggregate.

Man utilizes energies, supplied from without through the medium of food, to sustain his life both physical and mental. The actual cause of this life is a mystery to us, but, so far as we know, it is dependent upon this supply of energy, and apparently ceases altogether when the supply is cut off for a sufficient time. The energy utilized is persistent, or not subject to extinction, but this application of it is ephemeral.

No one questions physical death, but there is a widely prevailing belief in the persistence of the individual soul or mind for all time.

Some physiologist has propounded a theory to the effect that the phenomena of consciousness, variously designated as sensation, desire, thought, etc., are the exhibitions or attributes of a special form of energy occurring in the grey matter of the brain, and derived by some process of conversion from the energy contained in our food supply; that after the exhibition of the phenomena, the special form is reconverted and the energy goes back to mingle with the external supply, just as heat is converted, through mechanical work, into electrical energy, and the latter back again into heat. Huxley ventured to predict that some day there will be established the mechanical equivalent of consciousness, just as there has already been established the mechanical equivalent of heat.

If the above theory is correct, the phenomena of mind naturally cease as soon as the body loses its power of appropriating and converting the outer energy, as it certainly does at the time of physical death. But this theory, so far, is purely speculative. While it has doubtless been shown that the utilization of outer energy is essential in the process, the idea of consciousness as a form, or an attribute of a form of mechanical energy is somewhat obscure. We know of no attribute comparable. There may enter some element of which we have at present no conception whatever.

What experience teaches us is that the capacity and the intelligence of the mind grow and decline with the body and fluctuate with certain mechanical activities of the brain which are dependent upon food-supply.

If individual consciousness is inevitably dependent upon a certain kind of mechanical activity of the brain, then such consciousness ceases when the activity ceases. We need not know the nature of consciousness to reach this conclusion. The question seems to be: Are we sure that this dependence is absolute? We may only judge by inferences drawn from the established facts. If these inferences are contradictory they lead to no definite opinion; if insufficient they lead to no positive conviction; if they all point one way, even though not entirely sufficient to establish an absolute conclusion, the rational and **unprejudiced** mind naturally assumes that way to be the right one, pending further enlightenment. A mind with a strong intuitive conviction in the matter is not "unprejudiced," and to such the argument will naturally fail to appeal.

Complete unconsciousness for a limited period of time is a common experience. Before undergoing an operation, I once determined to fasten my attention upon the sequence of sensations I should pass through. I asked how long a time would be required for the anaesthetic to overcome my consciousness, and was told a few deep inhalations would do the work. I was facing a large wall-clock and noted the time just before the gas-hood was placed

over my mouth and nostrils. I counted my slow inhalations: one, two,—there was the sound of gently splashing waves on the sea-shore—three, four,—I was leaving the earth in an air-ship,—five, six,—I realized that I was wide-awake, and called to the nurse: "The gas is not strong enough!" She answered promptly: "It is all over, sir!" I opened my eyes and glanced quickly at the clock. Forty minutes had elapsed, of which I had taken absolutely no account, and I was distinctly under the impression that consciousness had been continuous. Considering the effect of the anaesthetic, as explained to me, in reducing the physical activity of the brain, I naturally inferred that consciousness is dependent upon such activity. There are many other evidences which indicate dependence. I have no valid evidence whatever of independence. The only excuse for the bald assumption of an ultimate independence would be a genuine instinctive conviction. I certainly have nothing of the sort, and cannot realize that anyone has an instinct concerning the distant future.

The above is subjective evidence. The objective is perhaps less persuasive. The mind of another is not a thing which we directly perceive by means of our senses. We infer its existence from positive evidence, but we can only have negative evidence of its non-existence, and the latter, however persuasive, is not conclusive. If we had complete knowledge of the source or character of mental phenomena, we might deal with the subject more directly; but we must judge by inference. If I should assume that the souls of the dead separate themselves from their bodies and maintain an independent existence, I should have to rely upon the valid testimony of the departed souls to sustain the assumption. No such testimony has ever come to me. On the other hand, if the souls of the dead have ceased to exist, the cessation accounts for this absence of testimony. Dead souls cannot testify to their non-existence.

Man's claim of immortality for his soul appears somewhat surprising when we consider the enormity of the

claim and the smallness of the foundation for it. All men of the past ages have suffered physical death, and no one of the present age has survived physically much longer than a century. Man's conscious experience, so far as we know, is limited to his period of physical life. A century is but a small fraction of historic time, which is a much smaller fraction of the estimated age of the earth, which again is but a small interval of time reckoned on a still broader basis. We thus know the individual man here on earth only for an infinitesimal interval,—an instant, so to speak—as compared with all time. When we stop to consider the relative minuteness of this period, we cannot avoid being impressed with a certain inadequacy or weakness of all our evidence for application to all time. But we are bound to speculate, so let us make the best use we can of the very limited material at our command. During this minute period we recognize the apparent birth, the growth, the maturity, and the decline of the mental faculties. In many cases where the individual reached what we call extreme old age, and died a natural death, the history of the rise and fall of his intellect forms what certainly appears to be a pretty complete story. He could not well have been a distinct individual, conscious and intelligent, before he was generated. He was imbecile as an infant. His intelligence grew persistently with increasing vitality throughout childhood and early manhood, was strongly maintained during the period of middle age, weakened in old age, and the old man became a child again, approaching imbecility once more. He was unconscious perhaps for a time before final physical death. We have never heard from him since.

Upon the basis of such a record for the individual mind, a history of generation, development and decay, an apparently complete round during a relatively infinitesimal interval of time, how can we justify the claim of a uniform persistence through infinite time?

From all this what am I to infer? Am I to base my inference upon the knowledge I possess? Or am I to cast reason to the winds and be governed by fairy tales and

sentimental inclinations? The valid evidence, so far as I know it, is entirely against the assumption of a future life, and the doctrine of "immortality of the soul" appears to me unwarranted.

There is some disagreement among authorities in defining "soul," but those who are concerned for its future will doubtless agree that their definition involves the attributes of individual consciousness and identity,—else why the concern?—and it is particularly the ephemeral character of consciousness which furnishes the most persuasive indication of mortality.

It may be argued that man's soul, as well as the spark of life, is derived from his ancestors indefinitely backward, and that since we know of no beginning we must not assume an end. But our lives have been derived by propagation, and the inference is only that we may similarly extend them in our offspring. We are not individually conscious of life in our offspring, and in the absence of offspring the inference fails altogether. Neither are we conscious of existence in the past, and without such individual identification, the argument, even if there were any weight attachable to it, would not point to individual identification in the future.

Any one believing that he has a genuine intuitive conviction of future life, will naturally be guided by it. He may rest assured that if he dies with it there cannot come to him the disappointment of contradiction.

The question may be asked: "Is not your skeptical view in this case inconsistent with your attitude in the matter of free will? You adhere to your assumption of voluntary power, notwithstanding the preponderance of the adverse arguments of reason. At the same time you reject the beliefs in a Personal God and a life hereafter, on the basis of rational arguments which are no whit stronger than those against free-will."

My answer is: The assumption of voluntary power, involving the notion of socalled free-will, is a real instinct, while the beliefs in a Personal God and a future life are based upon theories of man's invention which demand

justification by reason. There may be many cases where these theories have become more or less intuitive through habitual entertainment from childhood up, but I do not regard them as truly instinctive. If we go to the next lower animal, we shall doubtless find the assumption of voluntary power, but not of Divine guidance, nor of a future life. As indicated in a previous chapter, while undergoing the process of rationalization the sensible thing is to adhere to an instinct until proven fallacious, and to be cautious about adopting a picture of fancy which is not upheld by reason. The burden of proof must rest upon the theory suggested by the imagination. My skeptical attitude is in the one case toward the theory of "automatism," in the other cases toward the theories of "Personal Providence" and "Immortality."

RESPONSIBILITY.

The feeling of responsibility is the main source of our worries and our efforts at self-control. We are generally, to some extent, conscious of having to answer in some way for our actions. We must render account to some power and accept the consequences. The powers variously considered are individual and public opinion, courts of law, the laws of nature, and a "Personal God." We are governed in our actions partly by our natural tastes, partly by our consciences or ideas of justice, and largely by expediency or policy.

All civilized communities have codes of justice wherein the cardinal features are very similar. These are, as Spencer shows, the outgrowth of the requirements of social organization by processes of evolution. These processes have been going on ever since man first emerged from his barbaric and isolated state. Our code is apparently prescribed by the laws of nature applied to a special set of conditions, but was not originally inherent in our savage ancestors. In fact it is doubtful if it is now inherent to the extent commonly assumed. It is still mainly the result of early training and association.

Our code includes one principle in particular which nature does not appear to recognize. This is exemption from blame or punishment on account of ignorance or innocence of intention. But nature's discipline for transgression of its laws is, as Huxley says, "a blow without a word, it being left to you to find out why your ears are boxed" . . . "Ignorance is visited as sharply as wilful disobedience."

A widely prevailing idea in our Christian communities is that man must render his account to God, and that God's judgment will be in accord with each individual man's innermost idea of justice. This is not exactly in conformity with the doctrine of the churches, but is what the conscience of the believer is most apt to dictate. The feeling is based partly upon an essential element of nobility of character, partly upon an apparent fallacy. The

assumption of a personal Creator in Heaven who watches us with a fatherly interest, takes cognizance of all our individual actions, and finally decrees that we shall be punished or rewarded in another world, is an unverified picture of the imagination. It involves the idea that we are made of His own material and by His own design. It is not in accordance with our idea of justice that He should hold us responsible for shortcomings which are the result of His making.

Disregarding this faith, we know of nothing which could have entered into our composition excepting that which we inherited and that which has come to us through the medium of our environment, for neither of which are we justly responsible according to the prevailing notion of justice. The whole theory of **just** responsibility either to a personal Creator or to nature is inconsistent. The man of the future will require either a new idea of justice or a different motive for guidance. Even to-day the above motive is to a considerable extent overshadowed by the wish to be a desirable specimen in the eyes of our fellow-man, and the purpose to fit ourselves for a fuller enjoyment of life. Still we have an element of inner satisfaction in doing what we deem to be right, even when unappreciated by others, and it is this element which may be endangered by the relinquishment of the theory of **just** responsibility. It is one of the noblest elements of the character of man, and more rational motives will doubtless be cultivated for its maintenance and growth. It will probably be included, as an essential element, in the most rational of all motives, that of the fullest possible enjoyment of life.

There are of course good practical reasons for the feeling of responsibility, (just or unjust) to the courts of justice, to those who especially engage our affections or upon whom we are dependent for a living, and to our fellow-man in general, upon whose approval and sympathy we depend for our happiness in life.

Of most essential importance is our responsibility to the laws of nature, upon obedience to which depends our

physical and mental welfare and in fact life itself. In connection with this responsibility there are direct questions of fact only and not of justice. Strange to say, it is this, the most fundamental of all our responsibilities, which we are most apt to disregard by excessive indulgence of our mental and physical appetites.

GLEANINGS FROM HISTORY.

From a superficial knowledge of general history, I have derived the following impressions:

There is no historic evidence of that improvement in the native ability of man which the principle of evolution might have led an imaginary observer to anticipate. To be sure the period is a very short one in the process of evolutionary development, still some improvement might have been expected. Some of the ancients left records of their accomplishments many centuries prior to the beginning of the Christian era, which show at least as great an inherent power as that of the ablest men of to-day. The Egyptian astronomers were men of genius who three or four thousand years ago devised a method of determining in advance the dates of eclipses of the sun, without telescopes to aid them in acquiring their data, and without a convenient system of mathematics with which to make their calculations. It was what we should to-day recognize as the highest order of genius in Euclid which enabled him to devise a system of geometry which practically forms the text-book of to-day; in Hipparchus to discover the eccentricity of the apparent solar-orbit; in Homer and the Greek poets to compose epic poems and plays which have never been excelled; in the Greek architects and sculptors to invent and execute designs which have served as models ever since.

When we consider the lack of facilities in those time we feel impelled to doff our caps to the men who accomplished the many remarkable intellectual feats which are still of record. Galton, in his work on "Hereditary Genius" makes an estimate of the native abilities of different peoples, and places the Athenians of 400 or 500 B. C. at the top of the ladder, and our best type of European community of the present day on the next lower round. In the intervening time there must have been operative some deteriorating influences to counteract the normal evolutionary development from a lower to a higher type.

Persistent warfare was evidently one of the influences. The strong, the courageous, the enterprising, the able were repeatedly led to sacrifice, while the weak, the timid, the incompetent were left behind to propagate the race. Those among the strong and able who survived and succeeded, generally acquired power and wealth. Their offspring, who might otherwise have handed down the fine qualities of their ancestors, too often rested upon the laurels of their parents, and lived upon their means. Original effort is an essential element in higher development. The offspring found that they could maintain a high position and gratify their tastes for luxury without the effort of providing the opportunity for themselves. Their innate energies naturally found vent in dissipation resulting in degeneracy.

Again, as Draper shows in his "Conflict between Religion and Science," there prevailed in the dark ages much superstition leading to outbursts of religious fanaticism; to the enforcement of deleterious dogmas; to the prohibition of publication of many valuable results of investigation which were branded as dangerous heretic learning; to the suppression of free intellectual effort; and to the ultimate extinction of a large portion of the native genius of the people. Buckle shows plainly, in his remarkable "History of Civilization in England," the retarding effects of intolerance.

During the last few centuries we have gradually emerged from the thraldom of many of these detrimental influences, though in a somewhat maimed condition. We are still subjected to the bad effects of hereditary wealth and position, of the unjust division of the results of labor, and of innumerable evils which have been handed down. We are now improving in various ways, but shall never make the marked strides we are capable of, until we learn how; to better regulate the conduct of the citizen without unduly limiting his liberty; to provide safer outlets for the native energies of the people; to maintain more rational standards of right-living; and to control, by some reasonable process of selection, the propagation of the

race, that is with some regard to the principles of what Galton calls the Science of Eugenics.

The great improvements of recent times consist: in the fundamental development of the sciences; in the extensive utilization of the forces of nature for man's benefit; in the development of the mechanic arts, of the arts of surgery and sanitation; in the provision of unprecedented conveniences and comforts for the masses; in the protection of the individual against personal enslavement and persecution; in freedom of thought and liberty of speech; in the great spread of educational facilities for the masses.

The late outburst of destructive and brutalizing warfare will of course modify some of the advantages gained, but it is hoped that the results may bring us to realize, as never before, the vital importance of some systematic regulation of international affairs.

The rapid development of the sciences since the dark ages is the most notable element of progress. The school-graduate of today, who has taken a reasonable advantage of his opportunities, has a better general knowledge of the nature of his surroundings, than the professional scientist had a few centuries ago. There has been no like progress in literature or in the aesthetic arts.

Aside from the art of printing, the discoveries, tending to promote the intellectual development of man, which have impressed me most, are those of Newton and Darwin.

Newton invented a mathematical method, called fluxions or calculus, which enabled the ready treatment of many physical problems that his predecessors could not handle. He adopted the astronomer's estimate of the moon's distance from the earth. He assumed the moon to be attracted to the earth in accordance with the now established law of gravity, and proceeded to test the assumption by means of his newly acquired power of handling problems of motion. He calculated the rate at which the moon would fall toward the earth if actuated according to his assumption. This should be a measure of

the deviation of the moon from a straight-line tangential motion. The result was compared with the known path and was found to be not far from the truth, but too inaccurate for the valid application of the law. The paper upon which his estimates were made was laid aside.

After the lapse of sixteen years, Newton accidentally learned that recent measurements had caused a material change in the estimated distance to the moon, amounting to about 15 per cent. He eagerly examined his old paper, and upon realizing the effect the change must have upon his calculation, it is said that he was so much agitated that he had to call in a friend to assist him in figuring. The result was a substantially accurate verification, and practically established the extension of the law. Imagine the feeling of exultation over a discovery so controlling, so far-reaching as to encompass in anticipation the relative motions of all the suns, planets, meteorites and comets of the universe, a discovery resulting simply from the persistent application of the reasoning faculties of man! Is there an instance in history more sublime?

The discovery was soon applied to all known bodies of our solar system. It introduced simple order where chaos was threatened, where under empiric methods, complication upon complication had arisen until further progress in the most important branch of astronomy seemed to be almost hopeless. Mathematical formulae were established by means of which there could be simply calculated the orbits of the planets due to the sun's attractive force, and the minor perturbations due to the varying attractive forces of one planet to the other.

Many years afterwards the planet Uranus was discovered and an observed irregularity in its path was at first unaccounted for. By the application of Newton's formulae a hitherto unknown planet was indicated to be in a position necessary to produce this perturbation by its attractive force. A large telescope of the Berlin observatory was directed in the calculated course and the planet Neptune was discovered. What a victory for the power of logical reasoning!

This is an oft-told tale, but it will still bear many repetitions.

Newton's discovery, with one fell swoop, demolished for all time the claims of the occult scientists, the astrologers, by means of which they had been imposing upon the credulity of the masses during all historic time. It established a rational recognition of the order of nature, and of the inevitable and far-reaching character of its laws. It freed man from the intellectually debasing influence of a line of superstitions which were otherwise exceedingly, if not hopelessly, difficult to overcome.

In a few years Newton prepared his great work known as the "Principia." It is a wonderfully comprehensive and masterful work, and is, according to the estimates of those who are able to comprehend it, the greatest book ever written.

Darwin's establishment of the leading principles of evolution was another great step in the advancement of human understanding. His work is gradually releasing man from the thraldom of various superstitions which have prevailed for scores of centuries, notably from the barren belief in separate creation of species and arbitrary endowment of our mental and moral attributes as they now appear. It has already so released most of those who have given the matter intelligent and unbiased consideration, and their influence is rapidly spreading. It throws a wonderful light upon the natural history sciences. It offers the most promising means of enlightment regarding the development of the human faculties.

It is the recognition of the processes of evolution which distinguishes much of the philosophy of Darwin's contemporary, Herbert Spencer, to whom is doubtless due some of the credit which is commonly assigned wholly to Darwin and Wallace. Spencer's method of treating ethical questions by considering the development from lower types, offers many valuable suggestions.

SOME EFFECTS.

The views expressed in the foregoing pages present what at first sight appears to be an unattractive picture of our status in this world. Notwithstanding our conscious superiority, we are but relatives of the beasts of the field. We are mainly governed by arbitrary laws of which we have but a meager understanding, and which are not in accord with our ideas of justice. We are subject to many dangerous appetites, with but weak powers of resistance. We are swept along by the tide of events with only a limited ability to shape our course within a narrow scope. After a life which seems too short to satisfy us, we are presumably extinguished. Our notions of a sympathetic "Heavenly Father" to share our pleasures and listen to our appeals, and of a future life in which we may shed the ills of the flesh and realize the ideals vainly sought here on earth, are mere pictures of the imagination with no reasonable foundation in fact so far as we know.

These, or similar opinions, are now held not only by a great number of scientists and philosophers, but by many practical laymen as well, and are surely spreading among the people. We are all tending more and more toward empiric and rational views.

Sudden relinquishment of the old belief results in sad disappointment. The new view appears as a blow to higher aspiration, and as a discouragement to self-denial in the effort to conform to established rules of right-living. There is a depressing reaction from the indulgence of vain hopes. But fortunately the change of view is generally of slow growth. Our first doubts are vague. They are accompanied by some uneasiness and are checked by various considerations of policy. Gradually we come to realize that there are compensations and advantages in the changes of opinion, and after all we think it is best to recognize and face the truth.

Our derivation from a lower type of animal opens up to us a better understanding of our attributes and nat-

ural tendencies. It means progress in the past, and promise of improvement ahead. It is more hopeful for the race than the belief that we were created in a superior state and have degenerated. As some author has said, there is more promise in the "rising ape" than in the "fallen angel."

Regarding our status in the matter of free-will, the first consideration of the subject leads us to realize our limitations, and has perhaps a discouraging tendency. Recognition of the powerful influences of inheritance and environment, and the comparative weakness of our power of resistance, suggests excuse for indulgence of evil tastes, or for relaxation in whatever costs an unpleasant effort. But, discarding the idea of fatalism, there is a different outcome. Our deliberately formed opinions bring us to a more definite realization of consequences. They lead us to understand more clearly: that submission to external influence produces effects which enter into our composition and form incipient parts of us; that we are in great measure built of such effects; that they ultimately form some of the most important blocks of material in our mental and moral structure; that they are not of an ephemeral character, as we are apt to assume, but are more or less tenacious and once acquired are difficult and often impossible to dislodge; that surrender to an evil influence means a permanent injury; and to a good influence a permanent benefit; that the one is like a virulent disease and the other like a health-giving food. The result of this understanding is a more intelligent motive for self-control. It suggests the opportunity to further build ourselves of choicer material, to fit ourselves more and more for the rational enjoyment of life. It augments our belief in the value of will-power and in the strengthening influence of earnest effort, and stimulates the desire to cultivate the power in ourselves and to encourage its development in others.

Regarding the fact that nature's laws do not operate in conformity with our ideas of justice, we must bear in

mind that it is futile to complain of what we cannot help, and is incomparably better for our welfare here on earth to accept the fact and consider its essential bearing upon the outcome of our actions.

Our feeling that life is too short, is in great part due to disregard of the laws of nature. With growing knowledge, it is claimed by physiologists, the average period of life may in future be doubled. It is furthermore claimed that the individual who inherits a healthy constitution, leads a proper life, and reaches the old age he is capable of attaining if free from disease, will be content to rest, and will die without pain or regret. Toward the close of a well-spent life, a healthy old age, with suitable provision, has doubtless many compensations for the loss of youthful vigor, as indicated by Cicero in his delightful essay on the subject. It now seems probable that with the improved conditions which science is seeking to promote, there will ultimately develop a growing tendency toward restful contentment in old age. Metchnikoff in his remarkable work on "The Nature of Man" indicates that while there now occur very few cases of "natural death"—death without preventable disease,—with due encouragement to scientific investigation and government by its valuable results, there may be established, step by step, in future generations, a great increase in the length of life and a natural desire for rest in death. He shows that certain deeply rooted superstitions and sentimental prejudices are still opposed to progress in this direction.

Belief in the personal love, sympathy and protection of a Heavenly Father is the natural sequence of the dependency of childhood. In the future development of man it seems probable that he will outgrow his dependency upon this belief and become more self-reliant intellectually. At present we are asking ourselves the question: Shall we hold to the comforts of an imaginary parental protection, or shall we give more sway to reason and accept the consequences? The proper answer doubtless depends upon the stage reached in in-

tellectual and moral development. There is great advantage in self-reliance when coupled with mature intelligence and power of self-control,—not otherwise. For various reasons the great majority of us are far from being prepared for so radical a move as a declaration of complete independence. We are mainly the products not alone of our own experiences, but of those of many generations of forefathers, and, if suddenly subjected to radical change of control, the effect is not likely to be beneficial. The change, to be efficacious for good, must be of slow growth with ample time for adjustment. It is especially evident that it is not fitting to the interests of the young and ignorant, or the vicious, or those who have grown up under the influences of oppression or fanaticism, to be liberated from the bonds they are accustomed to, excepting by very slow processes,—and often not at all. Herbert Spencer, in his "First Principles" indicates that "those who relinquish the faith in which they have been brought up" for a more "abstract faith" often "fail to act up to their convictions."

He says: "The substituted creed can become adequately operative only when it becomes, like the present one, an element in early education, and has the support of a strong social sanction." This is doubtless true in a general way, and indicates the importance of time for adjustment.

Relinquishment of the dogma of "just responsibility" leads us to recognize more clearly the unworthiness of the spirit of revenge. The Christian spirit of forgiveness, while truly earnest, is curiously mixed up with the threat of punishment if the terms of regeneration are not complied with. It conveys the idea that while Christ was charitable God is revengeful.

The errors of man being due to inheritance and environment, the criminal is either born with abnormal tendencies, or his mind has become diseased through contact with external influences. Logically, we should regard him with pity. He should no more be hated than the unfortunate victim of leprosy. Christ admonishes

us, both by word and deed, to regard the culprit in this charitable light, but there seems to be a lingering doubt among us regarding the propriety of sympathy. This is doubtless due to the irrational belief in just responsibility.

The criminal must be restrained and if necessary entirely disposed of, but only as a matter of expediency or protection to society, and not as a matter of just punishment. There are already various indications that all idea of "punishment" will gradually be relinquished in favor of "prevention," "protection," and "reform."

In responsibility to God there is, however, an element of control over secret action, which cannot well be replaced in the ignorant or vicious. Responsibility to man leads to deception, while that to God does not. We are all more or less prone to practice deception, upon one another, but the believer does not try to deceive his God, for he necessarily regards the attempt as useless. Those who believe that God metes out heavy punishment for lying are influenced by that belief in favor of truthfulness generally; yet the prevailing belief does not seem to have established a very great respect for truth. Prevarication, in various forms, is widely prevalent among believers and unbelievers alike. In God's estimation prevarication can be no better than outright lying, while in social intercourse man makes a distinction. The inference is that the average believer either fails to feel that God very seriously condemns lying, or else he is more strongly influenced by his worldly than by his spiritual responsibility in the matter.

It is recognized that our social conditions prohibit complete freedom of action; and consideration for our fellow-man as now constituted, and ourselves as well, makes perfect candor absolutely unfeasible. Social intercourse would be utterly impracticable if we should, on all occasions, tell our acquaintances exactly what we think of them. A certain amount of secrecy is imperative, but while we may not always blurt out the truth, we may as

a rule at least avoid the wilful utterance or acting of untruth.

There are a number of earnest people whose belief in God has greatly strengthened their determination to be veracious, but on the whole it is plain that such belief has had very little effect upon the average citizen in this regard. How can we expect to inculcate respect for veracity by persuading the young to blindly assert belief in mysticisms which they secretly doubt. It is believed the habit acquired by the advocate of naturalism in regarding simple fact with greater respect is more likely in the long run to lead to truthfulness. Without doubt the earnest pursuit of knowledge involving the recognition of unadulterated fact has a tendency to develop love of truth.

There remains, uneliminated, the effect of "belief" upon secret action against one's neighbor. Responsibility to man is avoided if secrecy is maintained. Nature does not directly concern itself. We therefore look for control in the matter to the motive arising from responsibility to God. In the contemplation of secret crimes of grave import, such as murder, robbery and the like, the strength of this motive in the believer whose faith is really serious, cannot be doubted. People who earnestly believe in responsibility to God, and are at the same time possessed with the inclination to commit such crimes, ought not to be disturbed in their belief, for the non-believer cannot offer them a safe substitute.

There are great differences of opinion regarding the effects of prevailing forms of religion. Historic evidences are subject to different interpretations. It may be true, as claimed by churchmen, that the feeling of responsibility to God has had a controlling influence on the morals of Christian communities; but of late years the gross injustice of eternal punishment in a future life has become so apparent to intelligent people generally that the belief in such punishment has been greatly weakened, and the controlling effect of the responsibility has been greatly reduced. At the present time it is not deemed to

be so potent with the average citizen as that of social responsibility which is so much nearer to hand.

The belief in a future life without suffering and with the promise of persistent contentment, is of course attractive to those who entertain such an expectation. Otherwise a perpetual hereafter is hardly to be contemplated with satisfaction. The belief when seriously relied upon, affords much inner satisfaction, but it is apt to be detrimental to the interests of the present life in some respects. It frequently leads to neglect of opportunities which offer a fuller enjoyment of this life.

The purpose of this life may be viewed from various standpoints. The rational mind will, as a rule, conclude that the most sensible purpose of the individual is to obtain the greatest amount of happiness possible in this world,—we may say the greatest algebraic sum of happiness, including unhappiness in the calculation as a negative quantity. The proper purpose of the community is to promote every opportunity for the greatest average happiness of its members,—happiness in the sense of rational pleasure in connection with which there is an earnest endeavor to avoid the entailment of misery.

It seems a pity to waste one's valuable time in preparation for an imaginary future. If there is a future life in store for us, we can know nothing about its conditions, and it is a waste of effort to make an artificially self-sacrificing preparation which may be wholly at fault. The prevailing idea seems to be that the future life is a continuation of this mental life, and that we shall carry forward the mental qualities acquired here on earth. If this be true, it suggests the best preparation to be the cultivation of that habitually happy frame of mind which results from the rational enjoyment of this life. We have full employment for all our inherent strength of character in resisting the temptations of those momentary pleasures which lead to misery, and in carrying out arduous tasks for the sake of future happiness in this world, without encumbering ourselves with the imaginary requirements of another world.

When we meet with disappointment the sensible thing is to try and overcome the effects in some practical way; not to nurse our grievance and cherish the hope of recompense in another world. In case of hopeless misery, due to irreparable loss, accident, incurable disease, or commission of unpardonable crime, there is much consolation in the hope of compensation or forgiveness in a life to come, but so far as positive relief is concerned, relief not alone from physical suffering but from torturing memory, extinction is the more certain source. If we should carry our suffering minds over into another world, upon what should we base an expectation of relief from misery?

In youth and middle age we are generally better off without false hope. We are more apt to take advantage of recognizable opportunities, and to seek practical relief when needed. In old age, cherished beliefs, whether sound or erroneous, have become essential to comfort by habitual entertainment, and it is unwise and unkind to disturb them.

CONCLUSION.

The foregoing statements lead to the claim that the unqualified recognition of fact is of the most lasting benefit to man in general. Our progress depends upon acquisition of knowledge, which means recognition of truth; and truth means unconditional conformity with fact. We should not be promoting the growth of knowledge by adhering to beliefs which require us to shut our eyes to facts. Theories, which will not bear the light of reason, will not, in the long run, fit our requirements so well as those which are in full accord with the laws of nature that mainly govern us. We may get more satisfaction out of life by studying these laws and framing and acting upon rules of conduct in conformity with them, than by endeavoring to follow unverifiable theories based upon visionary conceptions of the unknowable.

At some time in the future it is to be hoped that there will prevail a code of morals with the unqualified recognition of established fact as a fundamental precept. In matters of serious concern there is nothing more important than the acceptance of the unvarnished truth. First let us have the facts, and then we may find the means of benefiting ourselves and one another. It is believed that the persistent study of physiology, psychology, and practical ethics, by scientific methods, will gradually lead to the formulation of some true and comprehensive principles for safer and more effective guidance in the pursuit of happiness.

In considering a plea for the relinquishment of mysticism in favor of naturalism, we should avoid the mistake of assuming that our prevailing moral precepts were derived from, or are dependent upon the consideration of reward and punishment in a future life. Most of them, including the Golden Rule, are to be found in ancient records, ante-dating our Christian era, notably in the works of the disciples of Confucius without any reference to reward in another world. Confucius, who

lived 500 B. C., was a believer in Divine guidance, but not in a future life. The more important of these precepts are the outgrowth of social requirements by natural processes.

Rationalism leads to agnosticism, but there is no justification in the claim that the latter leads to pessimism. The real pessimists are the believers in pernicious design and punishment in a future life. It is often claimed that the agnostic is a cold-blooded materialist with little feeling. Such an accusation is unwarranted. It is very commonly the student of nature and ardent admirer of its beauties who is led by his fervent desire for truth to doubt the artificial theories of orthodoxy. It is true the agnostic is commonly opposed to many of our sentimental theories. It is not his purpose, however, to curb true sentiment, but to divert it from mere mysticism to the realities of life. He thus serves the more real interests of his brothers in the flesh.

Philip Vivian, in his work on "The Churches and Modern Thought," makes a strong plea for candor. He points out the tendency of the modern churches to neglect the consideration of the more mythical doctrines in favor of practical charity in the relief of suffering, and he ventures to predict that the religion of the future will be a "scientific humanitarianism." It is to be hoped that his prognostication may some day be verified.

There can be no doubt that the Christian nations owe some of their finer moral perceptions to the beautiful features of Christ's character. The Christian spirit of good will to our fellow-man has made an impression. The present European war makes us realize that this impression has not penetrated to the depth commonly assumed,—still we may hope for some reaction in its favor after the barbarous ambitions of the aggressors have exhausted themselves. In other respects we have plainly suffered from the retarding influence of Christ's supernatural doctrines, and the impracticability of many of his precepts which disregard the essential requirements of social organization.

Future generations will doubtless discard the mystic and impracticable elements of the Christian religion, while retaining its humane spirit and its purer elements of morality. The religion of the future, in order to be persistently effective, must have additionally a due regard for established facts, for the development of reason, and for the practical requirements of the people.