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THE
BIBLIOTHECA SACRA.

ARTICLE I.

THE TESTIMONY OF ORGANIC LIFE.

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WE have endeavored, in this Journal for the current year, to show that the morphological and teleological arguments, drawn from the vegetable and animal kingdoms, are, in their value, independent of all theories concerning the development and succession of animals and plants. We have said that no form of the development theory is satisfactory, or properly deduced from facts; yet the grand theological axiom of the divine economy, so fruitful of scientific results in the mechanical principle of the least action, authorizes us to expect some better theory in the future, which will accord with the facts of the case. That better theory will not ignore the theological foundation, on which all true science is, consciously or unconsciously, built,—the assumption that there is a divine plan, an intellectual order, in the economy of nature.

The fundamental antithesis of philosophy is the distinction between mind and matter; an antithesis which cannot be ignored by science when it approaches the boundaries of metaphysics. Yet in the speculations of a philosopher, not scientific, and of a scientist not metaphysical, there sometimes appears a confusion of thought, leading them to suspect the identity of matter and spirit. Thus Huxley apparently wonders at himself, that he should be “individually no mate-

rialist, but on the contrary believe materialism to involve grave philosophical error"; while he yet "can see no break in the series of steps" by which "carbon, hydrogen, oxygen, and nitrogen," "all lifeless bodies," unite in varied proportions, and in varied conditions, in more or less complex bodies, of which one of the most complex is protoplasm, which "protoplasm exhibits the phenomena of life." From this point again he sees no logical halting-place, between the admission that such is the case, and the further concession that all vital, intellectual, and moral actions are the results of the molecular forces of protoplasm.

Huxley's wonder that he retains his faith in spirit, while admitting the existence of protoplasm, in the unproved and improbable form above stated, may arise from his never having examined and appreciated the logical grounds of his spiritual faith. There is nothing in the modern discoveries of the correlation of forces (sublime triumph of science as it is), any more inconsistent with spiritual philosophy than the familiar facts of sleep, fatigue, exhilaration, birth, and death.

In this workshop of nature, in which men are put as apprentices, are various simple raw materials; among them the four organogens enumerated by Huxley. Under proper conditions, of heat and light and other molecular forces, they combine in various compounds. By the art of the chemist, varying the conditions, a still greater number of compounds is produced. In plants and animals there is a yet greater variety of products; but the brilliant success of the chemists during the last few decades leads them to hope that they will ultimately be able to produce from the elementary organogens all organic products. Enthusiasts also expect to produce from organic elements organic beings. And this is the precise point at which the confusion arises in the passages which I have quoted from Huxley; the confounding of organic products with organic forms. Organic products, if not amorphous, have only a crystalline form; their whole constitution is explicable on chemical laws, and atomic figures.

Not so with organic form and vitality. The chemical and

atomic laws give coherence to the organic body ; but neither give life nor the specific form. The best judges, even among those who desire to uphold the doctrine of spontaneous generation, admit that, up to this date, all experiments have failed to show its possibility ; and that the axiom of Aristotle stands unimpeached : Every animal from an egg ; every plant from a seed. There is no conclusive evidence of a protoplasm exhibiting the phenomena of life, without an organic form. Here is the logical break in the series of steps for which Huxley asks ; it is in passing from organic or organizable product, to organic life and organic form. Careful physiological research has shown that there is no vital force ; all the forces in the plant, or animal, are chemical, or other familiar molecular forms of force ; there is no vital force ; but there is a vital guidance of forces, leading them in the organized body, not only to unite in peculiar chemical products, but to build peculiar forms, wholly unlike crystalline forms, and wholly inexplicable by any general laws, so far as the imagination of our best mathematicians can conceive.

Now this vitality, not correlated with the forces by which it builds the plant and the animal, — what is it, and in what does it adhere ? In the organized matter ? If the old views of vital force had stood under scientific examination ; if it had been shown that in the organism a new form of force was developed, correlated with the other forms, then we might have answered, yes, it is a result of the organization. But it is not a force, it is an ability to guide forces ; ruling them not by force, but by something that can be compared only to an intellectual guidance. It thus shows its kindred to thought, to the soul, and gives us, even in the lowest forms of vegetable life, the fundamental antithesis between matter and spirit. But, as we have various planes on which matter lies — the elementary, the composite, the vegetable, the animal, — and it requires force to lift matter from one plane to another, and sets force free for work when matter falls back again towards the elementary form ; so, also, we have spirit in various planes — in vegetable, in animal life, in un-

derstanding, reason, appetite, instinct, sentiment, in unconscious, conscious, in involuntary and in voluntary action — although we have not discovered any law by which it can pass from one plane to another.

Yet the existence of a something different from matter and force in each of these, and higher forms, is avouched to us by the exhibition of phenomena for which no conceivable action of matter and force will account. The materialistic school of psychologists endeavors to reduce all this diversity of psychical development to simple law, and to show how the unreasoning, apathetic, sightless, and deaf zoöphyte, gradually grew into man, with his perfected senses, his exalted feelings, his soaring imagination, his glowing faith, his rapt devotion. To us their endeavors seem to be total failures; they need an infinite unrecorded time in which to effect the recorded changes; while not only does physics show that the planet's whole duration has been occupied in depositing the stratified rocks recording the mere results of the changes; but the very appeal to infinite time to effect what finite time shows no tendency to do, is a concealed fallacy, arguing from the infinite, which it is not lawful to do, and which justifies Agassiz in his sarcastically referring them to Chamisso's "Tragische Geschichte." But, granting that they had succeeded in showing how the present diversity came, this would not alter the conclusion whence it came. The adaptation of the world to this process of development, and to the creatures in each stage of the development; and the adaptation of the primal laws of nature, to produce such an orderly, intelligible development, would still force us to ascribe it to an intelligence of infinite wisdom and power as its source.

We hold, therefore, that whatever may be the fate of the modern development theories; whether, as their authors hope, established as scientific facts, or whether sent, as we predict, finally to the oblivion of forgotten dreams; the adaptation of instincts to the organization, and to the world, is one of the invincible arguments for the being of God.

The honey-bee presents a hacknied example, but we select it as an illustration on that very account, that we may not deceive ourselves with any false facts. This insect lives upon honey as its principal food, and in this climate, stores it away during the summer months, as if for future use; stores it in cells, built of wax secreted from between the rings of its own abdomen; and uses this wax chiefly for the manufacture of cells to hold honey, or to hold young bees. They live in large families, consisting each of one female, some dozens of males, and some hundreds of apparent neuters. The work of building cells, gathering honey, feeding the young, etc., is done by these neuters; and if the female is killed or removed, the neuters make a larger cell, and placing in it an egg which would apparently have otherwise developed into a neuter, make it become a female. She was by the ancients called the king, by the moderns is called the queen. We have seen her walking among an immense multitude of her subjects, a way being cleared for her sacred person, whichever way she turned, so that she never came in contact with any of the crowd. This apparent sanctity of person is probably what has given the female bee titles of royalty from men.

Now the argument may be thus stated. The bees lay up honey, as if by foresight of a failure of food in the winter. They have a peculiar power of secreting wax; and peculiar skill in using it to build cells. They are without developed gender, but seem to know the office of the sexes, kill the males after the pairing, bestow upon the future mother the most obsequious attention, and watch her eggs and feed her young with tenderest care. If this mother perishes, they provide a new mother, by developing, through proper care, the female sex in an egg otherwise about to give rise to a neuter like themselves. The inference is incontrovertible that their mental and moral faculties, or the instinctive desires and volitions which stand for them, are exquisitely adapted to their organization and to the actual condition of the world. A second inference is, to us, equally irresistible,

that this intelligible adaptation sprang from intelligence in the cause. The argument may be considered a branch of the teleological, the argument from means and ends; only that, in this case, the means are partly spiritual,—the instincts, and amount of reasoning power, adapted to the creature, its needs and opportunities. Why should the bee hoard its honey, more than the fly? Why not cast her wax as the aphid his honey-dew? Why should the neuter care for the eggs of the queen, or feed the young? Why should they, when a queen is lost, enlarge a cell about a young grub, and so change its food, as to develop its sex? It is difficult to conceive that, in the infrequent losses of a queen, this mode of replacing her could have been discovered by accident, or have been handed down by tradition, or inherited, when discovered. All the ingenious cobwebs of the natural selection of species and of the evolution theory in psychology seems to me, swept away by such facts as these; and we are shut up to our reference of all to the intelligent choice and plan of the Creator.

The bee's cell is perhaps an even more hacknied theme, but the argument is alike unassailable. The honeycomb consists of two sets of hexagonal cells standing bottom to bottom. The material of which they are made is as precious as the pelican's blood, and must be used with economy; the food stored in them is liquid, the cells need therefore to be watertight and strong to resist pressure. Wax is waterproof, hexagons pack close, and have the shortest sides among figures that will pack close. The cells are set, one over three; making each floor supported by three partitions running to its centre; and the floor is sunk in the centre so as to save more from shortening the partitions, than is lost in enlarging the floor. We, of course, concede that the hexagons are not perfect; that the corners of the cells are not dug out perfectly clean; that the thickness of the walls is not absolutely uniform; that the sinking of the floor varies slightly, and that the average of the measurements may not give the exact depth required for the greatest saving. Neither in

1880, when, in childhood, we first heard of the problem, nor in 1842, when we made and measured plaster casts of empty combs, did we suppose the measures would perfectly coincide with the theoretic forms. The cells are built to hold honey, a practical end, for which, approximation is all that is necessary. Perfection in execution would be a waste of time and labor, forbidden by the same divine economy which prescribes the law. The bee shows herself a better mathematician in not using seven-place tables, where three-place answer every purpose. The organization which secretes wax, and the instinct which leads her to use it in cells, hexagonal, fitted one against three, closed at the end with three rhomboids, brought to a practical working finish, slightly varied to suit circumstances, are so admirably adapted to each other, as to constitute a revelation of wise, intelligent thought, of which we cannot suppose the bee conscious. What her conscious purpose is, may be a matter of debate; but, however decided, the decision cannot affect the main inference, that a higher intelligence made these three things—the world, the bee's body, and its soul to fit each the other. Goethe is truer than his wont when he sings:

From the cold earth, in earliest spring,
A flower peeped out, — dear fragrant thing!
Then sipped a bee, as half afraid;
Sure each was for the other made.

And the bee was made for the flower in another sense. The fertilization of the flower, the perfection of the seed, and perpetuation of the species depends largely upon the agency of bees. No more conclusive book in proof of the presence of thought and design in the arrangement of the world can be found than Darwin's popular account of the fertilization of the orchids; and, perhaps, no more curious instance of a writer bringing forward a vast array of facts not to draw from them the inference to which they naturally lead, but to twist them into the support of a whimsical theory.

We have given this example of the bee, as a familiar illustration of the argument which immediately suggests

itself on witnessing the harmony between the sensible and the intellectual universe; between the world cognizable by sense, and the world cognizable in consciousness, and in the realm opened to reason and imagination by the facts of consciousness. Each species of plant finds its proper soil and climate; each kind of animal finds its home and food and mate, and lives according to its structural needs. "All is well and wisely put." Even should we limit ourselves to the nest-building instincts of animals, we should have an almost inexhaustible field of research; so numerous are the species which show a talent precisely adapted to their wants, from the hermit-crab, who takes possession of an empty mollusk's shell, to the Indo-European man, who builds his modern cities.

The bee lives upon honey, and makes good wax. Feed her upon sugar, and her wax becomes viscous and useless. The appetite for food is a striking instance of the adaptation of instincts to organization. The kid cut from the goat, killed, skinned, and the skin carried away before the little prisoner was released, selected goat's milk, in preference to other liquids set before it. How rarely even domesticated animals eat poisonous herbs, which we know are abundant in their pastures. Even foreign plants, which neither they nor their ancestors can have seen for many generations, are selected or rejected with almost unfailing accuracy. Some insects select plants of a single botanical family; the *Asterias* butterfly takes parsnips or caraway for its young; but, although thus varying so widely in her selection, never lays her eggs, so far as we have observed, upon any but umbelliferous plants.

Another familiar and oft-quoted example of instinct adapted to organization is found in the young mammal's power of suction. In this class of animals there is a peculiar closeness of connection between the offspring and the mother, first in gestation, afterward in lactation — a connection bearing so many evidences of intelligent adaptation that we may well excuse those who feel impatient at any denial of the cogency

of the argument. The young creature, growing at first within its mother, takes, as it were, her blood into its circulation, and is nourished wholly by it — straining it, however, through a layer of four thicknesses of fine membranes, so that there is no actual passage of red blood from one to the other, and the larger proportion of the mother's diseases are thus excluded from the offspring's life. While this is going on, the mammary glands are preparing for a connection to be renewed externally after birth. In the marsupials the young are born so young, so small, and so partially developed, that they are conveyed by the mother's tongue to the nipples within her pouch, where they cling by an involuntary constriction of the muscles of their mouths. They have not strength, at first, to draw the milk, and the mother injects it, by muscular action about the nipples, into their stomachs. As they breathe by lungs, this process would be dangerous, and probably fatal, did not a membranous funnel lead down their throats past the opening to the windpipe. In these facts, furnishing such an irresistible teleologic argument, there is also one step of marvellous instinct, that which leads the mother to receive her helpless young upon her tongue, and convey them to the nipple. That link failing, the whole process would fail. Indeed, that is the reply which we recently heard made to the whole of the morphologic and teleologic arguments. "The presence of a perfect intellectual plan and order, or harmony of events, proves nothing," we were told, "because such plan or order is the necessary condition of the existence of the universe — we cannot conceive of a universe without it." The objection might be parodied by saying that the demonstrations of the *Principia* and the harmony of *Paradise Regained* prove nothing concerning Newton and Milton, because demonstration is the essence of a book on mechanics, and harmony, of a poem. The simplest answer would be to point out volumes of weak and rough writing, and to turn the telescope upon a nebula or upon the moon.

In Mammals not marsupial the young creature at birth goes at once to the mother's nipple, and instantly begins to

draw milk. The glands begin to secrete a fluid adapted to the needs of the young; dry until that time, they at first yield a watery fluid, and then milk—a food, again, eliminating most of the weaknesses or disease of the mother's constitution,—and this continues until the little one is able to turn to the food upon which the adult lives. This coincidence in the appearance of the supply at the moment of the demand is not to be ascribed to chance, nor is it easy to trace the causal connection between the gravid uterus and the expanding mammary gland. But we have quoted the instance with special reference to the adaptation of the instinct to the organization. The act of drawing milk from the nipple and swallowing it, while still the process of breathing is going on,—both processes being entirely new to the infant,—is a very difficult one, implying a voluntary command over several sets of muscles. It is still further complicated in the Cetacea by the necessity of exercising it while floating in the salt ocean. The new-born whale or porpoise must, at the moment of birth, practise three new arts, and prove a proficient in each,—swimming, breathing, and sucking,—under penalty of drowning, strangling, or starving if he fails in either; but his instinctive genius enables him to triumph and be happy under this triple Draconian law. The human infant has but the two arts to acquire, and he shows himself as ready as any of the lower mammals. It seldom needs so much as a sprinkle of cold water on the face to set him to breathing, or more than fifteen minute's breathing in a tolerably pure air to set him to hunting for his mother's breast, and to exhibiting signs of temper and resentment if it is not given. He draws as well at the beginning as ever; nay, it is to be particularly noticed that if he does not immediately begin to practise the art, he in a very few days loses the faculty. The instinctive desire to suck is not exhibited before birth, as is evident upon the slightest thought; it is shown with great vigor within an hour after birth; and if not gratified, that is, if nourishment is given by a spoon only, it is lost in a few days, and even

the power is lost with it, and cannot be regained for years. What other explanation of such facts is credible than that this instinctive desire and ability was implanted by the Creator with a wise adaptation to the whole organization of the parent and offspring. Every attempt to explain this instinct in the manner of Bain seems to us ingenious trifling, improbable as the chimeras of Eastern fancy; but suppose them true, and grant that the organization and instincts of the mammals were gradually developed from those of the mollusks, you will still be forced to acknowledge that the wondrous harmony between the instincts and the organization must have sprung from foreordaining thought.

The bee, gathering honey, carries pollen from flower to flower, and fertilizes the ovaries. We imitate the process with a downy feather, and produce hybrids; but the bee almost never produces a hybrid. She does not like, it appears, a variety at a meal, and confines herself at one ramble to a particular species. And, rare as the accident of hybridization in plants or wild animals may be, there seems to be a provision for eliminating its effects, and the descendants of hybrids are inclined to revert to one of the original stocks. Addison has written a few lines upon the marvellous instinct by which each species of animal knows its own mate, however diverse from itself, and is never deceived by a close likeness. The instinct for selecting food, excellent as it is, is deceived much more frequently than the sexual. We have seen a dragon-fly catch a small moth, and drop it as if in disgust; toads pick up pebbles and violet-buds thrown before them. The instinct of predaceous creatures seems frequently foiled by the likeness of insects to other strong-flavored or poisonous insects. The eye of hunger and robbery is thus sometimes deceived; but "The lover's eye can look an eagle blind"; and we do not know of any instance of mongrel or hybrid issue arising from any such mistakes.

If this preservation of the order of the animal kingdom, through this instinct recognizing the mate however disguised, and rejecting all others however closely resembling, arises

from a fortuitous concourse of atoms, then the composers might have set up this Article with a dice-box, without seeing the manuscript. The great diversity of species has been preserved unchanged and unaltered for thousands of years, by the power of an instinct acting in the mind of each creature in the countless multitude, leading each to the right selection of its mate. Development theories strive to show how these instincts were evolved out of sexless, protoplasmic cells. Grant them their eternities of evolution, and their numerous blanks in the record, covering vastly longer periods than the records themselves cover, and concede that they can show the steps by which it was all brought about; still, the exquisite beauty and perfection of the results would demonstrate that a word of infinite wisdom had created the sexes thus adapted to each other in all organized beings, and caused them to repeat, through so many ages, the wonderful inter-twisted harmony of their relations.

Man's architectural talents are declared, in the Jewish Scriptures, to be an inspiration of God. He also gave us our appetites and passions, and we may expect to find in them the same evidence of wise and kind foresight as in the instincts of animals. But man is free; his soul certainly stands on a higher plane than that of the animals; and he abuses his freedom by making his appetites and passions his masters and his destroyers. Yet it is well shown, in John Ware's little book on the True Relation of the Sexes, that fastidiousness of taste and vigor of appetite, in civilized man, have been the spring of important enterprises, and the remote cause of a large part of human art and refinement. Agriculture, manufactures, navigation, foreign commerce, arising primarily from this source, bring wealth, leisure, civilization, science, literature, philanthropy. Nor should we forget what social pleasures and social virtues are connected with eating — good-fellowship, kindness, charity, hospitality, and love. The holiest rite of the holiest religion on earth is in the form of a supper, and the highest hope of its disciples is to be admitted to the marriage feast of the Lamb.

None of these things can have been a surprise to the infinite foresight; nor can we divest ourselves of the belief that these effects were intended when man was made omnivorous in diet. The natural state of man is not yet attained; it consists in a perfected civilization, when all men shall be truly helpers of each man in attaining the best ends for himself, and doing the best service to all.

As free will has abused the appetites, and brought in drunkenness and gluttony, so it has abused other passions, and brought in still deeper degradation and misery. But the divine wisdom and holiness is vindicated by the innumerable blessings bestowed upon our race through the almost unconquerable strength of that love which binds man and woman in one. The sanctities and joys of human life, lifting us above the brutes, and exalting us into communion with the heavenly spirits, cluster around the sacred family altar. The holiest affections of our nature are called out by the family relation; they owe even the opportunity of existence to the primal and strongest bond which holds together the two heads of the family, and makes them one; thus is created a home with its sanctifying influences. For the protection of homes, civil governments are established; and all the inestimable blessings depending on civil law, are thus called into being, primarily by the instincts which lead to marriage. Aristotle compared the political instincts of man to those of the bee. Yet how different is the hive from a city. The hive is but one enlarged family; the city is an association of families; in the hive there are but three varieties of individuals, in the city there are a thousand.

The laws which govern the hive are worthy of study, and repay the labor of investigation; the laws which govern the state are still more complex (we speak, of course, of natural laws, not of legislative enactments), and are equally evident manifestations of the forethought, wisdom, and beneficence of the Creator. Some investigators have confounded the results of human error and human sin with the operations of natural law, and have thus given expositions of political

economy which make it the science of despair. But those who have taken larger surveys of human history show us that all the numerous instinctive tastes and likings and abilities of men are exquisitely adapted to the production of a multi-form harmony, a unity out of diversity, which ever moves forward toward better and grander results. The normal tendency of human society is toward the accumulation of greater wealth, and toward a more equal distribution of wealth among men. This tendency is thwarted or fostered by men according to their wisdom or their folly. The proper course of agriculture leads to increasing fertility and abundance — when lands wear out, and crops decrease, there has been legislative interference, somewhere, to cross the natural course of events. Thus also, under wise legislation, guarding against injustice, but laying no restrictions on transfers of real estate, on choice of employments, or on other commerce between men, wealth of all other kinds increases, subdivides itself more and more equally, and civilization and human happiness increase. Under the clear light poured by Carey upon political economy it becomes the science of hope and faith.

One more source of natural religious knowledge remains unmentioned, and we have reserved it to the last, because it connects itself so readily with the consideration of the value of revealed religion. The testimony of our fellow-men is continually a source of knowledge, and rules or criteria, for estimating the value of testimony are as important as rules for testing the results of observation and the deductions of logic. The testimony may be concerning observations of what has been seen, heard, touched; or it may be concerning belief, feeling, disbelief, and the grounds thereof. And we ground our estimate of the value of their testimony, not simply on our confidence in their truthfulness, but also on our confidence in their soundness of sense and of judgment, and on their opportunities for observation and for knowledge. The authority of witnesses is, thus, carefully estimated; and may range, in its value, from absolute worthlessness, to absolute certainty.

Nor is any sphere of human thought exempt from the authority of testimony. Even in the lowest spheres, in which it has been often said that authority is not recognized at all; it is, on the contrary, true that without constant and complete trust in the authority of testimony, none of the mathematical and physical triumphs of modern science had been possible. The greatest masters of the sciences of space and time continually build their most sublime deductions partly upon confidence in the results of inferior men, partly on the theorems of their fellow masters. It is so also in physics, and in the historical sciences. In the psychological and theological departments the value of testimony may be less, but it does not become zero. There is no break in the grand hierarchy of sciences; the higher departments are simply less fully developed than the lower.

A child accepts his parent's authority in moral and religious matters; it is reasonable that he should do so. He may in after years become wiser than his parents, and his children will accept in turn his authority. And he will, in his own higher wisdom, see that the general consent of wise and judicious persons to an opinion creates a presumption in favor of that opinion. Man is, in all countries and tribes, a religious being; which is a very strong presumptive proof that man sees some real truths in religion. This insight in religion may also be justly presumed to be, in some degree, proportionate to the religious character of the individual. The agreement in religious doctrines among the holiest and most saintly men in all denominations of Christendom, and even in Mohammedan and heathen lands, is much greater than a careless observer might suppose. Men of religious character, even among pagans, have held monotheistic views, have believed in the wisdom, beneficence, and holiness of God, in his providence over individuals, in his answer to prayer, in his displeasure at sin, in the forgiveness of the penitent, in the inspiration of our holiest and best thoughts, in human immortality, in future retribution, in the obligations of piety and charity. These glorious doctrines of the Christian faith

have been held in all ages by saintly men, even among pagans; and this concurrent testimony certainly creates a presumption in favor of their truth, and throws the burden of proof upon those who would deny them.

In all ages of the world there have appeared persons who claim a peculiar knowledge of spiritual things from their intercourse with the dead; the dead being assumed to have greater opportunities for knowledge than we. The fact that this belief in the intercourse of the dead with the living, by means of chosen mediums, has been common in all ages, creates at first a presumption in favor of its truth. But on the other hand, the most religious persons have not accepted it, or have been dissatisfied with it. Moses forbade it; the Christian church repudiated it. Its perpetual presence is due to the inextinguishable faith of man in human immortality, and to the inappeasable longing of the heart for communion with the beloved dead, to the insatiable curiosity of men concerning the future, and the unseen, and to the perpetual recurrence of phenomena above our power to explain. Its perpetual failure to command general assent and respect from the best men, arises partly from the unsatisfactory nature of the tests by which the fact of intercourse with the spirits of the departed is sought to be established; but chiefly from the total want of correspondence between the supposed testimony of the dead and our own best and purest ideas of the spiritual world. The wide prevalence, in all ages, of faith in some intercourse with the dead is a very strong argument to show that such intercourse is possible; but the utter failure of ancient or modern necromancy to obtain responses worthy the higher light into which we trust the saints have ascended, leads us to suppose that if they are permitted to have intercourse with the living it is by the way of inspiration and providential guidance,—by influences which the recipients cannot distinguish from the workings of their own minds, nor from the influences of the Spirit of God.

But the pseudo-science of this century cries out against

any faith in spiritual influences, either from departed friends, or from angels, or from God; declaring that all thought and feeling move by invariable laws of the association of ideas; and that free will both in man and in spiritual beings is thus rigidly excluded. But such an invariability of psychologic law is a mere assumption, not warranted by anything in the nature or necessity of science, and absolutely forbidden by consciousness, and by the truths implied in the moral judgments of conscience. The doctrines of necessity, of whatever school, are fallacious inferences from the infinite, and certainly can have no force in the present case. The spiritual influences of angels and spirits could just as readily be in accordance with law as the influences which we are constantly receiving, unconsciously, from parents, teachers, and friends. If arguments from the infinite nature of God, and the invariable character of law, were permissible at all, we should certainly draw very different conclusions; we should argue that to infinite wisdom and infinite power, the inflexible and invariable is perfectly plastic, and leads to any result desired by the all-loving God. Is not the Almighty as free in his treatment of us, as we in the treatment of our children?

But the very nature of the organized bodies in which we dwell, disproves this assumption of invariable law, and demonstrates that the house is open to receive angels' visits. When we can conceive it possible that any inventive skill ever could make a machine, which (to expand Diderot's comparison) should be constantly forming letters, and arranging them, without intervention or guidance, into all the great books successively that have adorned sacred and profane literature, science, history, law, poetry, and the drama, from the beginning to the present; then we may attempt the more difficult conception that any general laws whatever can have produced the myriads of specific forms in plants and animals; each showing the guidance of thought as distinctly as any work of human art, and all bound together by intellectual connections and harmonies into one divine literature of Nature. In every organic form, and in the highest of them, the human body,

there is evidence of a constant spiritual guidance of the molecular forces to bring about a specific organic result. Whatever be the nature of that guidance, whether the will of God, or the unconscious action of the Infinite Spirit, or the unconscious action of our own spirits, it is certainly not the action of the molecular forces alone; there is a guidance of those forces to make them build and repair an individual and unique form; the guidance cannot by any strength of imagination be referred to the forces themselves; yet it is not in opposition to or violation of their laws; nor inconsistent with the supposition of spiritual laws governing our conscious life. This guidance of molecular forces to the building up of a body peculiar to the individual, proves that spirit is ruling within us, without our conscious recognition of its presence; proves, therefore, that the doctrine of inspiration by higher spirits, and by the Spirit of God, manifesting itself, and known only by its fruits of purity and love, is not inconsistent with the truths of physiology or of psychology.

By the very hypothesis of such inspiration, it is assumed to be undistinguishable from the action of the laws of association, and from the promptings of genius. Genius is inborn ability, inherited from ancestors, and supposed to be modified by ancestral culture. But when a man of poetic genius, suddenly, without conscious effort or premeditation, utters a new poem, that unlocks a thousand hearts, or the mathematician, in like manner, when thinking of something foreign to his science, is startled by a flash of heavenly light, revealing a new geometrical truth, putting the keys of nature's secret treasure-houses into men's hands; or a humble Christian struggling under temptations to sin, under doubts and fears, dreading lest all shall indeed end in eternal silence, frost, and darkness, suddenly feels his heart thaw as under a divine sun, beholds the mists roll away, and a world of transcendent spiritual beauty reveal to him his own destiny as a child of the all-loving God, and his soul swells and thrills with the sense of that glorious liberty; when men are thus lifted in a moment far above the level of their ordinary experience, it

is, and may forever be, impossible for them to decide to which of three causes to attribute the happy change; to a physiologic action on the brain giving it unwonted freedom in response to the spirit; to unwonted energy in their spiritual action compelling the brain to unusually prompt obedience; or to some inspiration from unseen spirits, and perchance from higher sources, from the ascended Saviour, or from the Almighty. There is nothing in the truths of physiological or of psychological science that renders this third supposition untenable.

The light of nature carries us, however, but little beyond the being of God and his attributes. Those attributes being infinite, our deductions from them are unsatisfactory. From the divine justice, for example, and the divine holiness, we may argue that sin is by nature unpardonable, and deserves infinite and eternal punishment. Yet from the same attributes, looked at from another point of view, it has been inferred that sin must be temporary and all souls finally restored to Eden. Nothing can be demonstrated from such premises; we are left to hope and fear, and to look to Revelation for clearer light.

Thus also the doctrine of the Holy Spirit cannot be demonstrated; it can simply be defended from the objections of pseudo-science, and shown to be by nature probable. Its probability arises from the fact that our souls are shown by the morphological and teleological arguments to have been made in the likeness of God, and our filial and paternal affections are to be trusted as some indication of his paternal character. This probability is strengthened by the craving which the religious mind has for personal intercourse with God; a desire which is universal among the best minds, and a desire proportioned to their holiness of character.

But whether the higher light, awakening the soul to a renewed consciousness of its divine origin and kindred come from genius or from inspiration, it gives to its recipient a certain measure of authority as a witness to religious truth. Men are frequently competent to understand and to test and

prove truths which were far above their power of original discovery. An algebraic formula may be put to the test of numerical substitution by one whose knowledge of algebra is wholly insufficient to discover the formula; in like manner, men may recognize the beauty and holiness of the best utterances of saints and prophets, without being able, unaided, to say, or even to think, things so good. They recognize the holy and divine character of the prophecy by the echo it awakens in their hearts, and by its evident justness to their experience.

There is also an important sense in which a man may be an authority to himself, appealing from Philip drunk to Philip sober. The mathematician may forget the steps by which he formerly demonstrated his theorem; he may through temporary indisposition be unable to retrace the steps; and yet he continues to believe it on his own authority. I have known also several persons who when in health had a cheerful faith in God and in Christ, but who when unwell became sceptical. But three of them had the reasonableness to say, "the sick man ought to defer to the judgment of a man in health; what I see in my highest state of health, I will not doubt because I fail to see it when my sight is blurred and dim and heavy."

We have spoken of the presumption in favor of believing the united testimony of good men in all communions, in all ages of the church, and we might add that the agreement of the saints of all times and all countries, even in pagan lands, in believing many of the great doctrines of monotheism, creates also a presumption that the guidance of the Spirit of truth has not been wanting. But even in cases in which the multitude of the saints has not spoken, even on points of rarer interest, or of deeper and more peculiar experience, the voice of a man of holy character is entitled to weight; it creates a presumption in favor of the truth of what he says, strong in proportion to his holiness, and to the glow of divine love within him. The saying that love is luminous is attributed to Swedenborg; it embodies a pregnant truth,

acknowledged, in some form, by wise and holy men both before and since the Apostle John, who says, "He that dwelleth in love, dwelleth in God, and knoweth God."

While the law is undoubtedly true that feeling and perception, as states of consciousness, have some tendency to exclude each other, and that a man may therefore be blinded by his feelings; it is also true that these states always to some extent co-exist, and neither can remain in the total absence of the other. There is no clear vision without attention, and no attention until interest be aroused; and there is no living interest in the spiritually beautiful, the holy, without adoration. No man who is cold to the issues of the late civil war, and without sympathy in the trials and sufferings of ordinary life, can give a just judgment of the statuettes of Rogers. No man without interest in dogs and other animals can justly estimate Landseer. No man who is unmoved by music is a competent judge of Rubinstein or of Wagner. And of what value is a criticism upon the labors of Agassiz or Bache or Peirce from a man who is without enthusiasm for any of the mathematical or physical sciences.

It is evident that while enthusiasm may mislead, and too great a depth of feeling blind the judgment, it is even more emphatically true that coldness must lead to injustice; and that aversion or dislike to a subject will prevent the formation of correct opinions concerning it. Over-zeal leads to extravagance of opinion; coldness is deadness and consequent blindness; while the highest healthy enthusiasm gives the clearest sight. If then human testimony has any weight with us, we should give, other things being equal, the greatest weight to the testimony and opinion of those interested in the question, and moderately enthusiastic upon it.

If now we apply these self-evident remarks to the question of theology, we shall see that it is only those interested in religion who are likely to form a sound judgment on religious matters. It is perfectly reasonable to ask those who are not devoutly inclined to give at least great weight to religious opinions upon which the majority of more devout

men agree. If, for any cause, I am inclined to doubt the being of God, the efficacy of prayer, the immortality of the soul, and the forgiveness of sin, and to sink into acquiescence with the notion that man perishes with death, then I ought to remember that those whose lives have given the best proof of a religious nature, and who have been most thoroughly and practically interested in such questions, have, with great unanimity, proclaimed these doctrines, which I am doubting, to be the most certain of all truths.

In the hours of deepest need, when our holiest longings are awakened, God is not an unknown and unknowable mystery, but a Father; of unsearchable wisdom, of boundless love, of unspeakable tenderness; he is the only judge who can decide what suffering and disappointment, what agony and bloody sweat may be necessary for us in this life, to fit us for the unutterable joys prepared in the world to come, for those who love and trust him. The fact that in our hour of deepest emotion and of most thorough awakening we cling to these common tenets of holy men, gives to those tenets a new and strong probability.

We were recently reading to a friend the report of a scene in the National Academy of Sciences. The Superintendent of the Coast Survey had poured out with great earnestness a chapter in his "Linear Associative Algebra," which he deemed of the highest importance; but it was necessarily clothed in language perfectly unintelligible to a majority of his hearers. When he had closed, and all were sitting in silent bewilderment, Agassiz arose and said, in substance, "I must confess that I have not understood one word of this communication, but I have heretofore had such ample reasons for believing in the speaker's clearness and soundness of thought, that I accept what he has now said as undoubtedly true, and unquestionably to become of great practical value." When I had finished reading the anecdote, my friend surprised me by saying, with decisive clearness: That is precisely my position with regard to Jesus Christ; Jesus assures me of the paternal character of God, and of the immortality

of the individual soul ; how he gets his knowledge, I do not know ; I cannot see those truths clearly written on the world, nor on the soul ; without Christ I could only hope they were true ; but I have seen, and do see, so many proofs of the wonderful wisdom and clearness of thought and holiness of character in Jesus Christ, that when he says that he knows they are true, I believe that he does know ; theorizers may debate as they will concerning the character and degree of his inspiration, in what manner or sense he was an incarnation of God, it is enough for me that the whole record of the New Testament gives me perfect faith in his wisdom, his holiness, and his truth ; so that when he says that he knows God is our Father, I know that he knows it, and therefore I know it. Nor was my friend unwise, much less unreasonable, in thus accepting, upon the authority of competent testimony, truths consonant with the intuitions of his soul, but beyond the reach of his faculties to attain.

ARTICLE II.

THE UNION OF THE DIVINE AND HUMAN IN JESUS CHRIST.

BY REV. PRESIDENT ROBINS, WATERVILLE, MAINE.

In the tenth chapter of the Acts, and thirty-eighth verse, it is declared that " God anointed Jesus of Nazareth with the Holy Ghost and with power ; who went about doing good, and healing all that were oppressed of the devil : for God was with him." The question which the present Article seeks to answer is, *Does the relation of the Holy Spirit to Jesus of Nazareth, as here asserted, furnish any clue to a right understanding of that mysterious life in which were so intimately blended the divine and human ?*

It is admitted, on all hands, that now, as never before, the battle of the ages centres around the person of our Lord.