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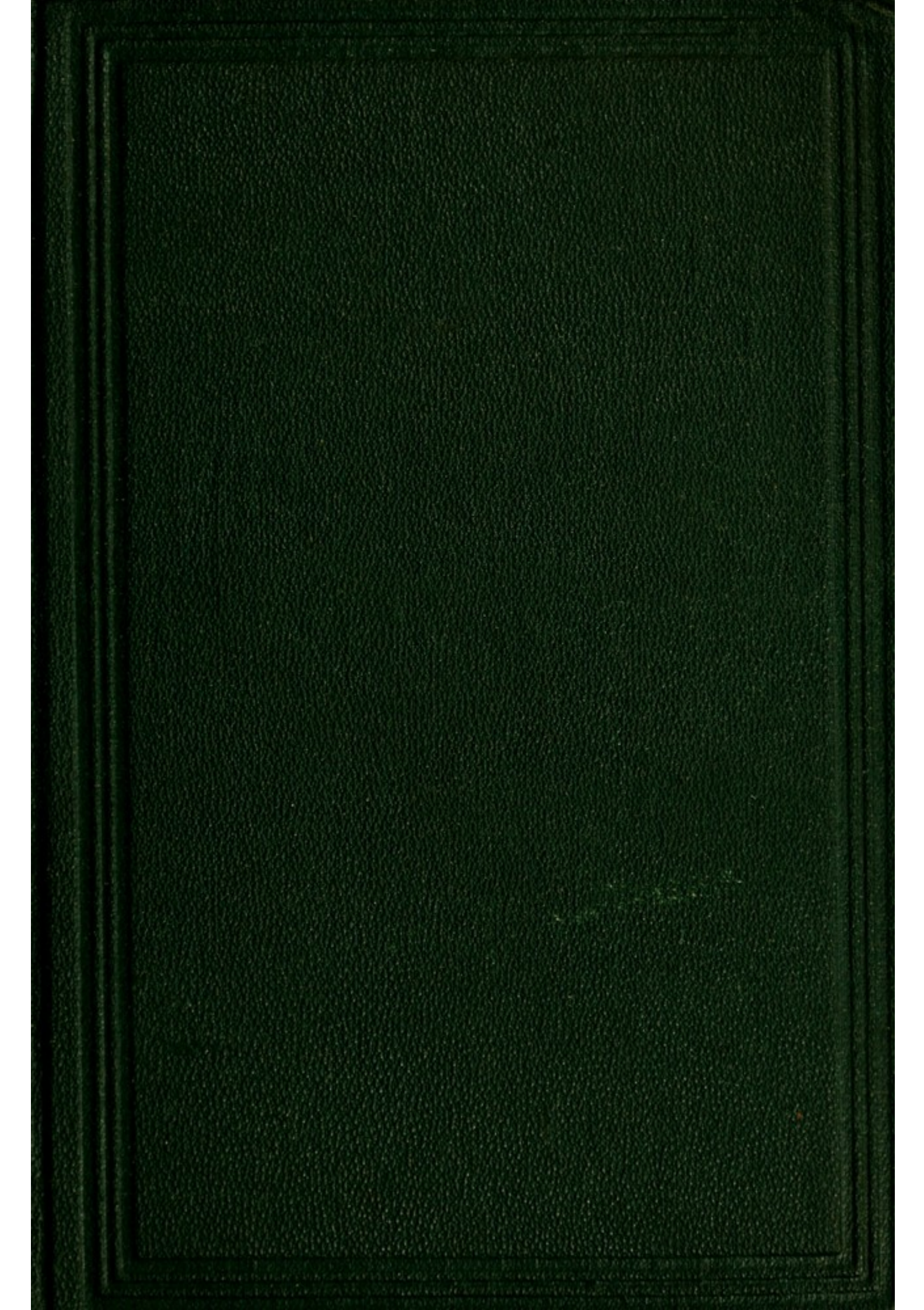
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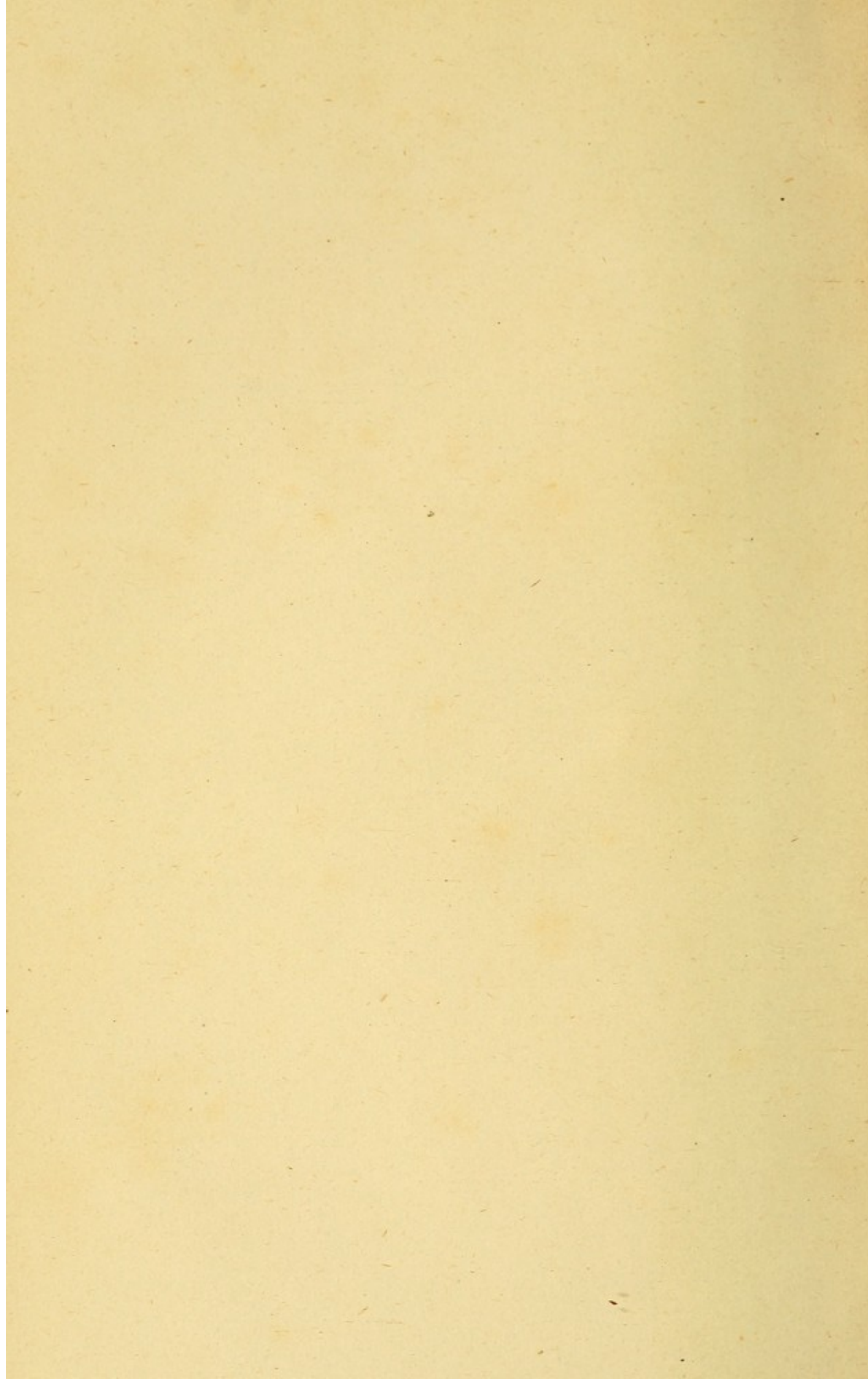


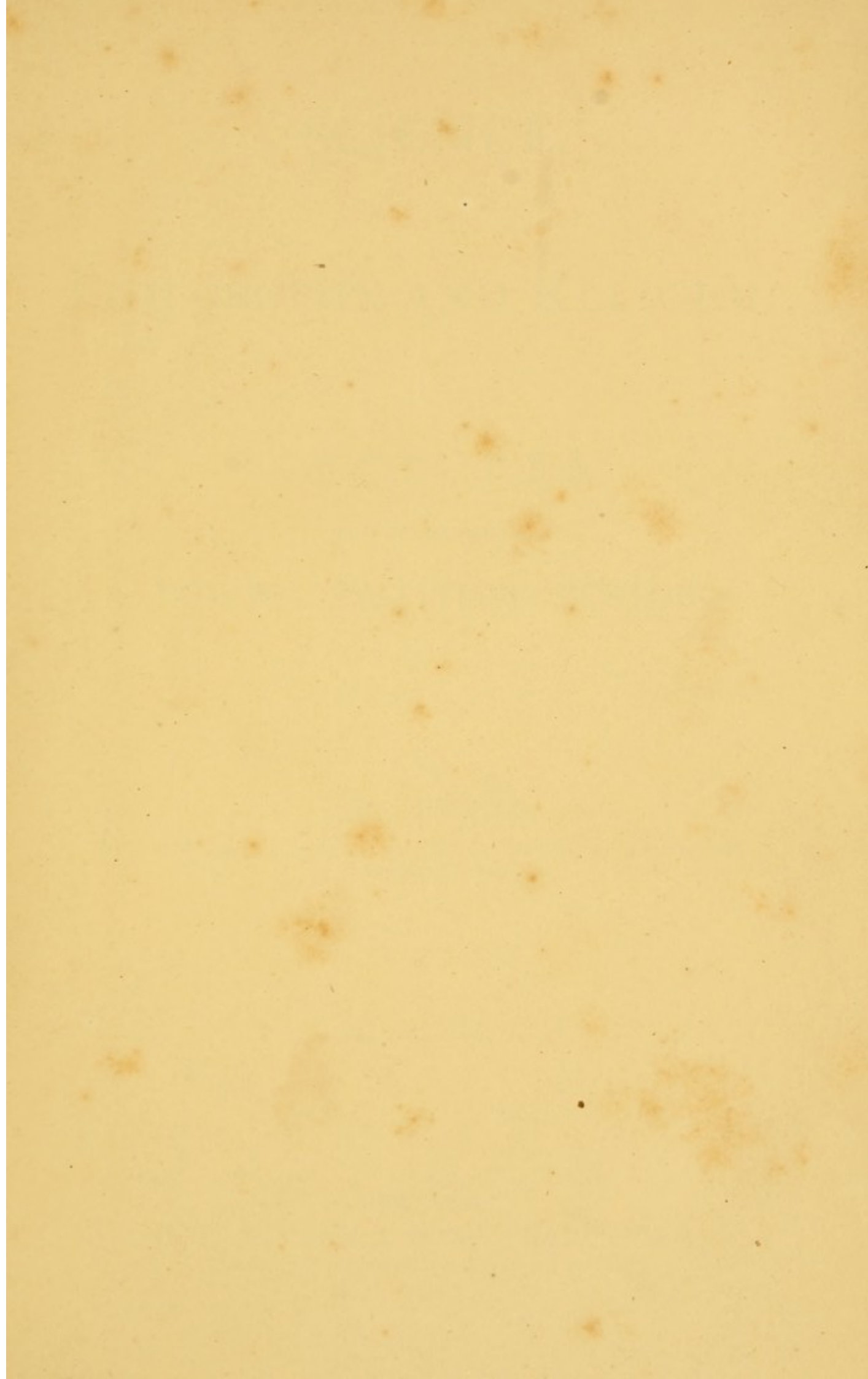
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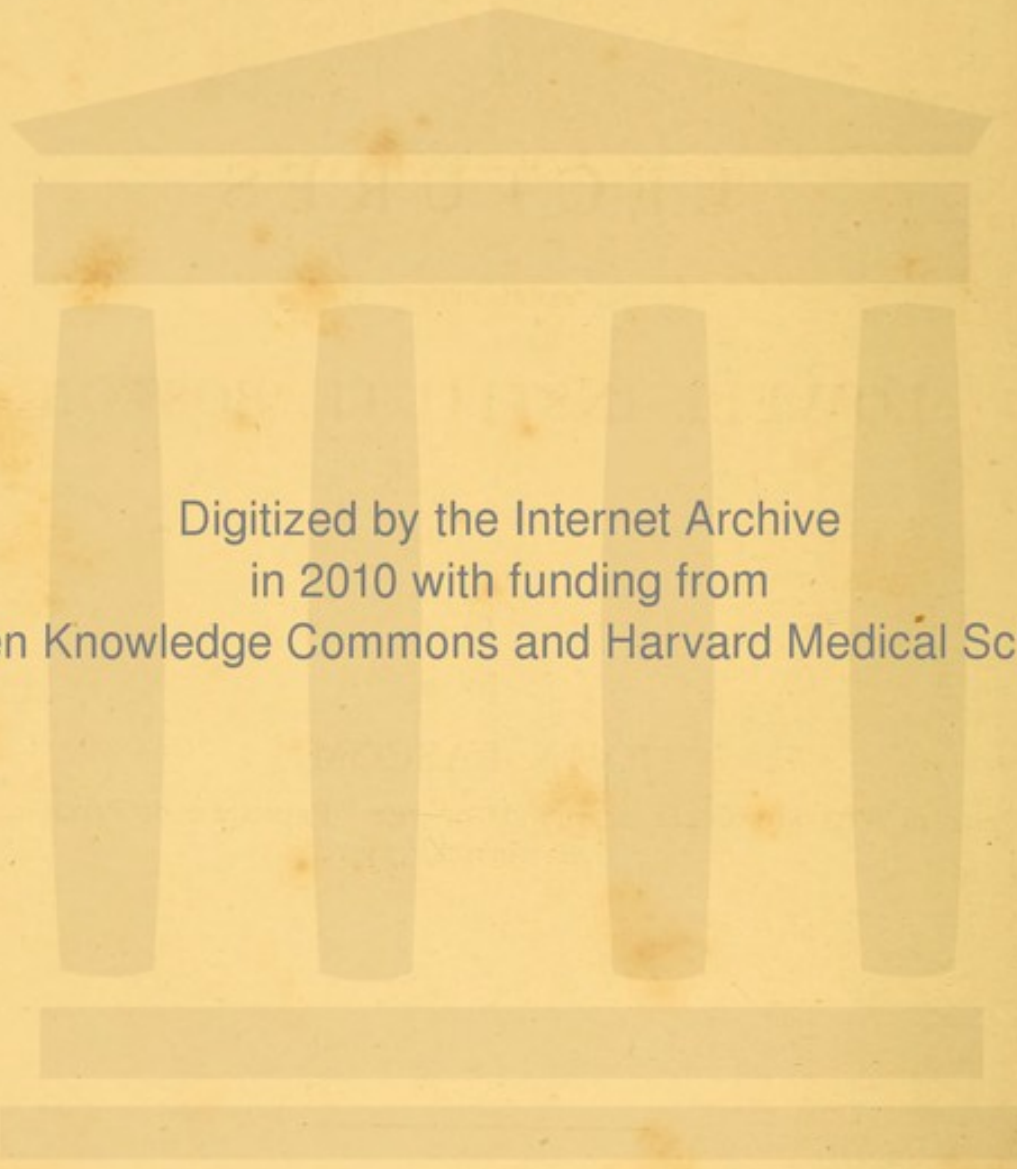


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SCIENCE,
PHILOSOPHY AND RELIGION.
LECTURES

DELIVERED BEFORE THE
LOWELL INSTITUTE, BOSTON.

By
JOHN BASCOM,
PROF. IN WILLIAMS COLLEGE, AUTHOR OF THE "PRINCIPLES OF PSYCHOLOGY"
"ÆSTHETICS," ETC.

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PREFACE.

THESE lectures, though in part an extension of principles already presented by us to the public, we have thought it well to publish, both as developing the central doctrines of our intellectual constitution in new directions, and as more firmly establishing them in old ones. It may not be unserviceable to the hasty critic, nor unwelcome to the patient reader, to indicate at once the points in this discussion most important. We start with philosophy, seeking in the mind itself those ideas by means of which it groups and explains the facts of the physical and the spiritual world. The close of the second lecture presents a tabular arrangement of primitive notions, which contains the key of the method adopted. This presentation contains new features; and, if at the same time it be just, the fields of science, philosophy and religion are at once defined by it, and the grounds of controversy greatly narrowed. Science and philosophy, starting with certain common ideas, take up each of

them distinguishing notions, and, moving along independent lines of inquiry, meet again in religion.

The plan of the lectures and their merit, whatever this may be, centre here, and are commended to unsparing, yet fair and searching, criticism. If these lectures shall serve, even by a little, to deepen our impression of our powers, and our sense of hope in their handling, a chief object will be reached. We believe in the unspeakable elevation of our spiritual nature, and are willing often to shift the view, if so be, through clouds and mists, we may catch some more distinct prospect of those heights on which it is our earliest and latest effort to plant the feet of men.

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SCIENCE, PHILOSOPHY AND RELIGION.

LECTURE I.

DEFENCE OF PHILOSOPHY.

THE theme which is to occupy us in the lectures before us, is—"Mental Philosophy ; its Bearings on Science and Religion." We thus have occasion to direct our attention to ourselves, the nature, form and validity of our knowledge ; what hold we have on the invisible world within us ; what hold, through this, we have on the visible world about us, and what, through these both, on the future, visible and invisible, which lies before us—that future without which the present perishes, as the flower plucked from the stem, leaving no seed behind it.

This theme it is a pleasure to meditate upon, and a pleasure to present, and, though I know how strongly the current of intellectual life is setting elsewhere, how rapidly and gayly the shallops that float on other streams speed onward, I cannot but hope that it shall not be barren to the attentive mind.

Would we not do well to confess to a certain shame at the steadiness with which every one peers outward, as if the pageant of the exterior world had dazed us ; as if the long and gala procession of nature opened

and occupied all our senses in dumb astonishment, and left us, like some country rustic, with parted lips and bewildered thought, to be knocked down and run over by some cavalier in the ongoing throng? So has it happened to many. Philosophy, the self-respect, composure and assurance of philosophy have forsaken them, and, venturing into the throng, some bullying law of development, some sanguine, sanguinary theory of physics has tripped them, and quickly they have found themselves regarded as little higher than monkeys, and treated no better. We believe in the principle that life is more than meat, the mind more, at least to itself, than all that the mind contemplates, and offer it as a first reason why we should pursue with patience the line of thought before us. Stars and nebulae, atoms and molecules, are good things not to be objected to, but they are so, chiefly because they interest the mind, provoke and reward its inquiries, and are thus to it means of strength. Food is nothing save through the palate which appreciates it ; knowledge is nothing save through the appetite of the mind that knows it, and the knowing power is thus the centre at which converge all lines of thought. It is worth our while to pursue butterflies, entrap moths, pin beetles, but chiefly worth our while because each and all of them are fragments of the divine thought wherewith we feed our own thought, and ourselves grow in the divine image of knowledge and strength. Nor is this mental feeding like the physical feeding of the brute, that, under a few instincts, with a few feelers, goes on safely by day and by night, finding a perfect fulfillment of

every end in its own blind action. Mental life is crystalline and transparent, not adhesive and opaque. There is in it an interior plan known to itself, an eye that ranges through its own products, not merely to discover their order, but to aid in its establishment. If any deny this, they equally with us must take their appeal to the mind itself, and in the study we propose decide the points of difference. Indeed, we are willing, by the amplitude of what we claim, to provoke denial, and thus initiate inquiry on the grounds of philosophy. Better is it to do this than quietly to build the defences of thought on headlands deserted and without assailants, all the world beside voyaging to some polar sea in patient pursuit of another physical fact. Truly it is not to our credit, it cannot remain to our credit, that we should wish less to know what we ourselves are, and what are the sources, conditions, issues of our lives, than to know how the world was rolled up into an opaque ball out of the undefined nebulae, covering, in the dawn of time, the unenclosed fields of space ; or how life appeared on, and spread over the world, how it struggled for possession, multiplied similar types, shot up into higher types, and became like a forest, pursuing the light with its growing summits, yet hiding, in every inch of soil below, many living centres. Why this interest in the way out of myth and chaos, if we have no corresponding interest in man ; in every view of the subject, the end and goal of progress ? Why not stand on the summit and look down from the tower of our spiritual strength, as well as climb up to it ? It is *thought, mind, reason*, is it not, that

lights us at every step of the ascent, and may it not be possible that the mind itself may be, like the lantern of curious construction, manifold reflection and changeable light, more worthy of study even than the structure which lifts it—a sentinel of unsafe and dreary seas? If it is a pleasure to know, is not that pleasure most complete when we ourselves are the objects of knowledge? If knowledge is power, is not that power greatest when it pertains to mind? If truth fills the soul with its own satisfaction, is not that satisfaction most perfect when the truths that confer it pertain to the highest subjects of thought? Whatever the excellence of knowledge, that excellence cannot fail to be enhanced by being attached to that central, luminous and self-luminous, conscious and self-conscious thing—the human soul.

But from this first ground of interest—that all lines of thought converge in the mind, there follows a second—that power and control, flow forth from it. Even when it suffers, it is not a passive recipient, and when it acts, it is the image and the sole image of all spontaneous and free movement. You are pleased to deny this spontaneity. We can only say, let us discuss it, and see. It is a poor thing to contemplate the forces that flow in on the mind, bowing it to the physical constitution of the world, to the influences that find expression in soil, climate, race and civilization, unless we also consider that personal power which meets them, rises above them, shapes them, uses them, and, by slow digestion, incorporates them into its own structure. Some dark paint may be dashed at once in quantity upon the color we are

mingling ; all seems hopelessly blackened ; yet as we proceed, the light strikes up from beneath, in the end gets the mastery, and puts its own cheerful face upon the whole affair. So physical facts rush in and spread over the face of society a deluge of barbarism. Anon, in the slow mingling of centuries, there come up from beneath the germs of past mental power, and a new civilization is the product. It is in this out-going power of mind that we find liberty, duty, and the mastery of the individual and the race. In these we all practically believe, and many of us theoretically. If the foundations of duty are here ; if what we may do and what we ought to do are found here ; if the questions, what we are to require of others, and the fitness of what we suffer in ourselves, are here tested ; if hence are the sources and laws of the practical power we are to exercise ; if the lines of rational action, which are momentarily initiated, and become momentarily more and more unmanageable in the good and evil that flow from them, here originate, then truly all the obligations to know, that life can lay upon us rest primarily here. If duties there are for me or another, then it becomes a duty to know these duties. If power there is for evil or good, then should there be a knowledge of this power, that it may be used. Since our activities, more to us than all activities beside, go forth from ourselves, their limits and laws should be sought in ourselves. But activity is not duty alone ; it is joy and hope as well. Among the preëminent characteristics of man is this—that the future is as much and even more to him than the present. It is only the spend-

thrift and profligate, that mortgage the future to the present ; the philosopher and Christian make the one the seed-time of the other, and accept much hard labor now, in view of a proportionate harvest hereafter. These hopes, this gathering up of the aims of life, and casting them far ahead, as a gauntlet into the midst of the enemy, are a further and urgent reason for the inquiry proposed. No mind, earnest and broad, will abide in the momentary joy of the present. The life that is in it must become to it a light wherewith to forecast the road to be travelled, and whether it shall be a faint, flickering flame, crowding back by a little the heavy darkness, casting portentous shadows, giving a weird, uncertain aspect to surrounding objects, suggesting rather than revealing danger ; or a searching head-light, gleaming far along the safe way, must depend upon the nature of that truth that is caught up in reflection by the soul, and thrown forward on its path to immortality. Who can be robbed of his hopes, and who can define them and make them certain, save in a mastery of the nature and conditions of his own life ? And who can find the foundations of this knowledge, save in philosophy and religion—religion as it rests back on philosophy, philosophy as it opens the way to religion ? If we are to enlarge our vision at all, if there is to be any daylight, any inheritance for us in the years to come, the grounds of our convictions are to be found in the structure of the soul, and God's providential ministration to it. In whatever field we glean knowledge, the best ministration of that knowledge must be to ourselves, to that hidden life which is the dis-

tinctive feature of man, and increasingly so as he becomes intelligent. Indeed, what is intelligence but the enlargement of the life within us—an imparting of penetration to its thoughts, and power to its emotions. The character of this life, the home of the soul, the domestic companionship to which it is ever retiring, the seat of true spiritual consumption, at which the crude material of good the external world affords is turned into food and pleasure, must depend on our method of transmuting knowledge into emotion, wisdom into serene satisfaction and assured hope; and in this transformation all knowledge becomes philosophy and religion. How slight a thing is it to know, unless we know also the transmutation of knowledge into peace and joy; unless truth is to us that light which suffuses the clouds, woos them out of the region of night, and makes them the beauty and glory of the day.

We are here introduced to another class of reasons why we should have a sound philosophy—I use the word as equivalent to mental philosophy—and a sound religion. So certain are men ultimately to come home—home to themselves, that it is impossible for them in any numbers or for any length of time to be destitute of these estimates of the mind itself, and of its relations to seen and unseen things. I care not how vigorously men scoff at philosophy, it is only to make way for some form of philosophy. To discard metaphysics is the child's sport of whipping round the ring. What we pursue in front, pursues us in turn in the rear. Some notion of what liberty and thought are, drives the physicist on as he

strives to overthrow the general belief concerning them. No intelligent man is ever without at least the adumbration of a system of metaphysics and ontology with their religious corollaries ; and the vigor with which he rejects ordinary beliefs, held and enforced under these names, only shows the nature of his own convictions, and how much in earnest he is about them. If not Trinitarian, then Unitarian ; if not Unitarian, then Deist ; if not Deist, then Atheist or Pantheist ; or if not Christian, then Spiritualist or Buddhist, or one of the isms that come in to occupy the soul, swept of its first faith. Such is the universal law of thought—if not realism, then idealism ; if not idealism, then materialism. No more striking illustration of this can be offered than that furnished by Comte, the founder of positive philosophy. He started with discarding theology and metaphysics as at once impracticable and effete. He put in their place positive knowledge—the knowledge of observation and induction. Could he, the leader of a school, drawing many eyes, a bold pioneer in independent thought, pledged to consistency and tenacity, hold himself firm on simple denial, stand poised on negations, falling on neither hand into affirmative, dogmatic belief ? When the momentum of pure thought had expended itself, and the soul began to look around for something to embrace, something to console itself with, that great intellect was put to the strange, the surprising task of the invention of a religion. Says Martineau : “ Since the publication of the books of Exodus and Leviticus, no more elaborate system of ‘ religion ’ has appeared than M. Comte’s. It has its

cultus, private and public ; its organization of dogma ; its discipline, penetrating to the whole of life ; its altars, its temples, its symbolism, its prescribed gestures and times ; its ratios and length of the different parts and sorts of prayer ; its rules for opening or shutting the eyes ; its ecclesiastical courts and rules of canonization ; its orders of priesthood and scale of benefices ; its adjustment of the temporal to the spiritual power ; its novitiate and consecration ; its nine sacraments ; its angels, its last judgment, its paradise : in short, all imaginable requisites of a religion—except a God.”

Having banished the Omnipotent One from his philosophy, he proceeds to occupy the vacant place with an invention of his own. This new being, this *Grand-Etre*, born of Comte in definite time and with specific circumstances, receives from him this philosophical description, table of contents, schedule of value—“the aggregate of co-operative beings endowed with nervous systems of three centres”—and is handed over to the world of art under the symbol of “a woman of thirty with a child in her arms.” The worship has the merit of being in harmony with its object. “At your altar in the morning, for instance, you are to adore your mother, become subjective to you, and requiring to be brought before your secret vision. To help the effort and express the inwardness of the object, you must shut your eyes. This done, you first set up the *place* on which the figure is to enter ; next, fix her intended attitude ; thirdly, choose her dress ; and then, at length, permit herself to glide into view ; taking care to idealize by subtraction only, not

by addition. In due order the prayer to her ensues, consisting for the first half of the hour in 'commemoration' of her goodness; then for the rest, in 'effusion' of the feelings thus awakened." This "effusion," in most cases, would probably take somewhat less than the remaining half hour. It was rather of an heroic worship, however, as this morning service was to be followed by a mid-day devotion, and this by an evening prayer. Yet, as this last was to be said in bed, it would, doubtless, in practice, exhibit great elasticity, and fit in between sleeping and waking with much snugness and comfort. "The public worship only applies the same principle to a wider circle of relations, running through and celebrating all the great social ties, the several stages of human progress, the natural classes of the body-politic: and forming an ecclesiastical calendar, with special services all through the year. The temples are all to face towards the metropolis of humanity—Paris, of course; but meanwhile the positivists will not object to use the churches and cathedrals as they are, and occupy them as they fall into disuse. Even the Madonnas may pass well enough, with altered name, for the Goddess of Humanity. But instead of the cross (or of the crescent) must be substituted, as sign of the faith, the curve described by the hand in touching the three chief cerebral organs. There are no elements too incongruous to blend in this strange 'religion.' The dissecting-room, the high altar, the lover's bower, all subscribe their proportion to its ceremonial and sentiment; not without an ever-recurring preponderance of the last, significantly expressed

in the saying, that 'soon the knee of man will never bend except to woman.'"

If anything is at once absurd, pitiful, strange, instructive, it is this prince in the school of modern, materialistic thought, whose intellectual radiance is spread through a larger circle by Englishmen—men and women, first commanding attention, astonishment and admiration by the peremptory, positive way in which he turns his back on the Christian system, and then providing for his bewildered disciples, the above private theatricals, in which the farce so outweighs the tragedy as to make gravity impossible. Yet here is instruction. Who will say what tricks and fooleries are not possible to man in the night-time. Forsaking the sober light of day, a weird, fantastic, extravagant spirit takes possession of him, and the sense of liberty passes into the intoxication of revelry. A wonderful Nemesis overtakes the irreverent, profane mind ; it plays loosely and wildly, and at length, like one who, on the face of a precipice, has exhausted his strength in climbing and failed of the top, it falls forever, overpowered and spent by its own activities. The inquiry of Eliphaz becomes pertinent : "Should a wise man utter vain knowledge, and fill his belly with the east wind?" Thus also Buddha, rejecting the conception of God, was himself exalted to the vacant throne by his later disciples.

A plain and pressing reason for a sound philosophy is found in the fact that we can only thus exclude an unsound one. Scepticism itself is a philosophy, and if not a religion, at least a solution of religious questions, a prolific source of belief and conduct. There

is no escape from opinions, inferences, actions, save in sterility. Deserts alone are free from vegetation. The fertile field is occupied ; if not by this, then by that ; if not by seemly, then by unseemly growth. We can hide ourselves from the search of thought in bestiality alone ; nor here completely, for man has never yet sunk so low but that religion has percolated down to him, petrified upon him ; has never hidden himself so close in animalities but that some pinching witchcraft, some biting superstition, some stinging fear has found him out, and robbed him of repose. As, then, there is no alternative, and philosophy we must have, let us have a sober and sound one ; let us face questions we cannot escape, and struggle at the solution of problems that inlock our own lives. The confession of Huxley, in his lecture, "On the Basis of Physical Life," that he escapes the materialism of his own views only through the scepticism, the nihilism of Hume, is sad and pitiful. Having built up with much pleasure, patience and ingenuity his system, and retiring a little to look at it, it assumes, like some demoniac deity, such a dire and threatening aspect toward man and mankind that the philosopher is compelled to say, and to find relief in saying : "After all, what do we know of this terrible 'matter,' except as a name for the unknown and hypothetical cause of states of our own consciousness ? And what do we know of that 'spirit' over whose threatened extinction by matter a great lamentation is arising, like that which was heard at the death of Pan, except that it is also a name for an unknown and hypothetical cause, or condition, of states

of consciousness? In other words, matter and spirit are but names for the imaginary substrata of groups of natural phenomena. And what is the dire necessity and 'iron' law under which men groan? Truly, most gratuitously invented bugbears." Thus he builds his image, trembles before it, and strikes it to the dust again that he may fear it no longer. What we seem to know has so bad a look that he makes haste to remind us that after all we know nothing certainly. Like his master in philosophy, he seems to care little what becomes of his own work, if he can escape by its demolition the entire truth that called it into existence. He gives echo to these words of Hume: "If we take in hand any volume of Divinity, or school metaphysics, for instance, let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter-of-fact and existence? No. Commit it then to the flames; for it can contain nothing but sophistry and illusion." How large a portion of Hume's own labors would be swept, under this rule, into the flames! Those certainly on which the larger share of his fame rests. We have often taken pleasure in acknowledging the great sharpness and logical force of Hume as a metaphysician, but in this instance he seems to have felt the blind heat of that second Erigena who, in his eagerness to strike a toad with the snath of his scythe, forgot that the blade encircled his own neck, and, with one concentrate, irate, successful blow, made an end of his adversary, and sent his own head rolling in the dust. How much of the liberty, the courage, the physical

good even, of the race has been due to this discarded line of thought, this philosophic and religious thought, which braces the mind to faith and heroism !

A second like reason for metaphysical inquiry is, that we thus put ourselves in the true line of progress. We unite the past to the present, and without retaining all, or rejecting all of its inquiries, complement and complete them by our own. There is an assumption in the physicists of the present day truly astonishing ; or rather, in that portion of them who represent the extreme tendencies of physical inquiry. They are disposed to set aside, in the most unhesitating and contemptuous way, all methods not identical with their own ; all conclusions whose premises and proofs lie out of their own field. Of this class, in different degrees, are Draper, Maudsley, Huxley, Buckle, Spencer, Büchner. The temper of this school of physical investigation is not so much that wisdom is to die with them, as that wisdom has been born with them ; that inquiry hitherto has come to nothing ; that the roots of true knowledge strike into the past but one, two, or at the most three centuries deep ; that science is new—new in direction, new in method and in spirit ; antagonistic to the past, aggressive in the present, and ready to clutch, with a conquering hand, the future. Now what are the antecedent probabilities of the correctness of such an attitude ? if these so self-assured spirits will allow us even to inquire into the general bearings of their claims before we make an unconditional surrender. If the mind of man has been absolutely and totally wrong up to a given moment, mistaking the proper subjects,

the proper methods, the proper points of inquiry ; if it has congratulated itself on absurd conclusions, and delighted itself with pure chimeras ; if it has been in a dream, and seen things without substantial form or dependence ; if it has tickled its thoughts with conjectures, and built its faith on figments ; what is the prospect that this same mind, so surprisingly acute and subtle, yet so perfectly self-deceived, has now, at once, as it were, waked up, hit on exactly the right theory, and caught truth in a trice, before she had time to say, With my permission ? If a man never has told the truth, the fact is a narrow ground of faith that he is now speaking it. If the world has been all wrong and everywhere wrong, it would seem at least very problematical whether, in its latest tendency, it is perfectly right. It is a poor preparation for the growth of a tree to cut its roots just below the soil. If the milleniums past have done nothing for the world, it is probable that the years now passing are but another state and stage of dreaming, and that the vision before us has no other, no superior ground of belief, but rests on the mere fact that it is the last image on the screen of fancy. If it is not safe to suppose the great minds of the past all right, it is not more so to think them all wrong, hopelessly and extravagantly wrong. Such a supposition cuts the rational life of the race midway, and leaves each moiety to wriggle in imbecility. We are, because they were, and what we are we owe, no less in spiritual and intellectual than in physical descent, to them. That view has, beyond all doubt, probability with it, which gathers the past into the present by sequence

and growth, not by rejection simply ; that contemplates with as much certainty and pleasure the strengthening cords of truth, gathering fibre after fibre of thought, and incorporating into themselves all historic, vigorous movements, as those with which it beholds the life of the world and its physical events, pouring down upon us from years beyond our human horizon. This obliteration of the past in human history ; this beginning with 1900, or 1600 even, this contemptuous arrogance begotten of new ideas, simply shows that the mind is not yet familiar with its acquisitions, and that these, like new garments, cannot quietly subserve the purposes of service till they have met those of display. Philosophy and religion are as old as the world, and we do not believe that science, the last born and petted progeny of time, will displace them. It is rather our problem to see how these great forces, these distinct lines of conviction, are to include the later agency, accepting its position under the elder agencies, and the three unite at once to restrict and enlarge each other—to define the fields of spiritual and physical forces, and to discover the conditions of their interaction.

A last reason to be urged, not against the scientific, but the exclusively scientific, spirit, is, that being a reactionary one, and that, too, against the knowledge most native to man himself, it first restricts and then debases thought, and, through it, character. This is no personal accusation against the materialist of to-day. A belief rarely reveals at once, in those who first present it, its mischievous relations to conduct. Philosophers use doctrines primarily as fruits and

conditions of intellectual activity, and find strength and elasticity in them as a gymnast in his bars and rings, without much reference to their exact form or practical value. Not thus those who stand removed, by one or two circles, from the real centre of intellectual activity. They are chiefly affected by doctrines in their relations to action, in the practical conclusions which flow from them. Much that is stimulating in the first instance is very stale at second-hand. The feast, as it progresses, has its redemptive features, but life has wholly passed from its next-day odors. The real value of a philosophy is best tested by the popular estimate of it, by the class that remotely clutch at it, and do not so much rally under it as unfurl it on the march they are already making.

In this more remote and broader view, we see, that that physical bias of inquiry which rejects metaphysics or wholly perverts them, cannot but be unfavorable to character. Liberty and right, freedom and obligation, and hence the sense of power, opportunity, responsibility, which springs from these, are wholly overlooked or greatly modified by the materialistic tendency; and thus man falls away from himself not less on the practical than the theoretical side. He accepts, as inevitable, the laws of physical evolution which are said to enfold him, and floats on—save as appetite, desire and passion give the lie to his faith, and impel him in the wrong direction. We shall never, on account of our philosophies, require much less of our fellows than we do now—no false theory is able to baffle or turn aside the claims of self-interest; but it may furnish an apology to the mind for not doing

itself what it is indisposed to do. We shall excuse ourselves on grounds of philosophy which would not avail for others. Deny liberty, and resolve obligation into interest, and you have houghed the spiritual steeds, and left us to make a lame and foot-sore journey in the paths of virtue. A man, in the growth of character, scarcely does more than he feels he can do and ought to do, and the power and the obligation issue out of our spiritual, not our physical, life—out of that which is higher, downward; not out of that which is lower, upward. If one feel creeping all over and through him the close-knit connections of causation, he must submit, or strike at once for manhood; and the liberating blow of thought must spring from the thoughts themselves; from the mind's belief in, and exercise of, its own strength. All in philosophy that removes, reduces, or disguises that in man which is most peculiar to him—all that submits him to the forces below him, necessarily lowers his estimate of himself, alters his entire relation to the world about him, and thus humbles character, whose eminence is found in freedom of conception and boldness of execution. If the sources and resources of our life are all below us, the sweep of our vision will be quite different from that which belongs to us, if these are chiefly above us. One's absolute position may seem much the same if he stands on the last round of a ladder that stretches below him, or the first round of one that rises above him, but tendencies and incentives are every way different. On both sides, then, are we urged to patient, sound philosophy; by what it gives us, and by what we lose without it.

It remains only in the present lecture to mark out the direction of our inquiry. We are to speak of philosophy in its relations to science and religion. The point of departure is the mind ; but it is not our object to give a systematic statement of its powers, but only that limited presentation necessary to the general apprehension of its own phenomena, and their bearing on science and religion. As the mind is the instrument of all knowledge, and must, therefore, by the form and certainty of its own action, determine the nature and validity of that which is known, it is especially fit to commence our inquiries with the instrument itself of inquiry, and to be first sure of the faculties at our disposal, the ground of our faith in them, and the fields which they cover. Moreover, nothing can be more certainly known to the mind than the mind itself, since whatever else is revealed by any perception, reflection, intuition, the act of knowledge is also disclosed by which this outside matter finds admission. The knowing stands an omnipresent condition of the thing known, and it is well, therefore, to start, if possible, with this perpetual ground, these sources of knowledge, rather than lose ourselves at once in the outside, objective inquiries which are offered to us.

Again, the mind lies central between the physical and the spiritual realms : it is allied to both, and is the only common term between them. A knowledge of our powers, therefore, is a preparation for an outward movement toward the visible things of science, and an inward movement toward the invisible things of religion. Nor shall we find these so

far apart as many are willing to regard them. Science by no means deals with the visible, the tangible, alone; it is rather constantly hovering over these with conceptions as invisible, intangible, as much beyond the verification of the senses as any which belong to the realm of religious faith; while, on the other hand, those doctrines which pertain to the soul, its constitution, immortality, and spiritual dependencies, are constantly descending into the world of facts, with phenomena as coarse, palpable, cognizable, as any presented in the laboratory. Now the rationalizing of facts, the taking of them up into the region of abstract thought, into the systems of science, is a process as purely intellectual, as strictly dependent, for its apprehension and validity, on the laws of mind, as is the formation of any ethical doctrine whatever, and its application to the conduct of daily life. We are, therefore, to inquire, first, into the powers of mind so far as to see what it is capable of doing, of knowing. Then, with the fields made accessible to us by its own activities before us, we are to consider the form and validity of its action in the physical sciences; also the certainty and limits of its knowledge in these directions. There will thus arise those questions which pertain to the existence and nature of matter.

The chief force of our critical argument will throughout be directed against materialism, because this is the fruit of the scientific tendency, and because it is especially congenial to the English and American mind. Idealism has hardly found a footing in any nation except the German, and is rapidly losing

hold there. English thought is far too gross, sluggish, practical, to ascend into this thin region of pure speculation so long as it can graze in the spiritually quiet and physically rich fields of materialism. It would be contending with an almost imaginary evil for us to throw up defences against idealism. Only a few erratic, nimble diletanti of the philosophic world ever traverse these regions; and these, like antlered deer, would readily overleap the barriers, no matter how high we might raise them. Materialism, on the other hand, marshals, in its rear, the unlettered masses, and is formidable as much by the blindness as by the sight that is in it.

Having contemplated the laws of the mind's action in the physical world, we shall do the same in the intellectual world in the study of its own phenomena and activities. We shall dwell on the new laws of thought here present, and new limits here disclosed. We shall then consider the two fields in their relations to each other—the nature of life and of mind, and the scope and character of our knowledge concerning them. We shall thus be prepared to contemplate the mind's activity in that central, religious conception—the conception of a God; the forms of this activity, their relations to us, and our knowledge of them; and, in conclusion, to discover the connections of science, philosophy and religion; the nature of the mind's activity in each; the order and the dangers incident to the growth of knowledge. If we shall thus do even a little to lessen the colliding of knowledge with knowledge; of investigation with investigation; and, above all, if we shall save our faith

from that jostle and strain which loosen its hold on so many minds, we shall think our labors well bestowed. The necessary breaking up and modification of belief in the progress of truth are often destructive when they should be rather reconstructive. The resistance which makes of progress an earthquake, as notable for the ruin it occasions as for the new conditions of life it furnishes, should be laid aside; and free inquiry provoked, sought for, disarmed by the easy admission of its truths. When every honest, earnest mind presents a point for the discharge of the electric fire of every new theory, it will no longer generate thunder-bolts, and will cease to shatter, with sudden shock, the belief of the unwary. The skill of an intellectual life is found in getting from the old to the new without the loss of either: from the old to the new in government without the waste and overthrow of revolution; from the old to the new in social customs and order without the shock of aroused prejudices, the bitterness of sarcasm, the irritation of unwelcome truth; from the old to the new in faith, without schism, the falling back of this branch into rapid decay, the putting forward of that into precipitate progress; from the old to the new in philosophy without the irreparable loss of complete rejection, or the irreparable loss of unlimited acceptance, without leaping wholly off from the sure foundations of the past on to other foundations of merely fanciful strength, that have not been tested by the storms of many centuries.

LECTURE II.

PRIMITIVE IDEAS ; THEIR RELATION TO KNOWLEDGE.

THE point about which the conflicts in philosophy, and more especially between the philosophical and scientific tendencies, the metaphysical and the physical methods, are becoming increasingly warm, is that of intuitive ideas. Does the mind, as mind, independently bring anything to the explanation of the world about it ; or, are the initiations of thought and the forms of thought alike from without ? This is the pregnant question, which, put in a great variety of ways, is seeking an answer. Spencer laboriously handles it through many pages. Mill returns to it again and again. It is the germinant point of the philosophy of the unconditioned, as urged by Hamilton and Mansell. It reappears in every treatise on ethics, and a negative answer is assumed by every disciple of Positive Philosophy, and every physicist who fancies himself solving problems of mind as well as of matter. Nor is this discussion unworthy of the attention that is bestowed upon it. The bias of our philosophy, of our thinking, must be received at this point ; and the answer given by us to this question will discover at once our lines and our methods of investigation, and settle the general character of the results to be attained by us. To broach this inquiry clearly, in the outset, therefore, and answer it squarely, is necessary to perspicuity and soundness of method ; since some

answer to it, explicit or implicit, will be lurking in our entire discussion. No man ever ridiculed metaphysics, and then proceeded to handle any system of thought, to present any conceptions whatever with breadth, who did not plainly involve in the treatment this very point—the source and authority of our general ideas. Those ideas have been variously designated, each name striving to seize upon something in their connection with the mind, or with other ideas, peculiar to them and fitted to define them. They have been called intuitive ideas—that is, ideas directly seen by the mind ; ideas furnished neither by the senses nor by reflection. They have been termed innate ideas, thereby expressing their independence of experience and priority to it ; having the same end in view, they been spoken of as a priori ideas ; and, in reference to their power to bring order, cast light, into all our conceptions, they have been designated as formative, regulative, rational, general ideas. We need merely to understand exactly what we are seeking for, under these various appellations, to wit : notions, which owe their origin—fitting occasions being given in experience—exclusively to the mind, to its penetrative, explanatory, power ; its intuitive, rational, comprehensive grasp. The one philosophy claims, that, in the last analysis, the mind furnishes the notions in the light of which it sees and understands the external world ; brings with it its own intellectual solvents, reducing matter, otherwise opaque, to a transparent and penetrable form. The other philosophy asserts, that all thought, knowledge, are exclusively the product of matter in its action

upon mind—the ripple marks left by the restless waves of physical forces ; that our settled convictions are but the worn path-ways in which repeated perceptions and sensations have passed along, lining out for us the roads of intellectual travel. Here we take issue, and affirm unhesitatingly, the mind does furnish ideas, and those, too, the essential ones which give order, system, reason, to *all* its actions.

Before passing to the proof, let us see something of the relations of this assertion. It raises a conclusive issue against materialism. If the mind originates any portion of its own ideas ; if it originates the most necessary and characteristic portion of them, there is in it an independent source of power. It is not a harp cunningly played on by winds that know not the skill that is in them. We do not say that there are no other satisfactory proofs against materialism, but that these intuitions, if established, must afford a final and complete refutation. Thus all materialists signal the character of their philosophy by firing a gun at this citadel of thought ; or, if unable to see the exact locality of its bristling works, into the mist supposed to contain it. All other activities of mind, aside from the intuitions, are so immediately consequent on perception as to give color to materialism. Without the recognition of these notions, the problem would stand somewhat thus : Certain physical facts are invariably connected with certain mental facts ; the last have no known existence aside from the first, or otherwise than as shaped by them. How the one springs from the other we know not, but our universal experience teaches us that they are

inseparable. An open eye, an aroused optic nerve, bring perception; the play of nervous influence or energy in the brain is an occasion or ground of thought. On these and like conditions exclusively are intellectual phenomena present to us. The assertion thus becomes easy, natural and plausible, that the two are so far identical that they may be regarded as opposite sides of the same thing, and that we are at least justified, practically, in identifying the facts of mind with what all must admit to be their inseparable conditions, and with what may be their exact equivalents. Nor does the fact, that the inside look of thought is so distinct from its outside, physical, accompaniments—the sensation so different from the nervous modifications in the organ which produce it, present so formidable an obstacle to materialism as at first sight it seems to, since this is a difficulty which presses with more or less weight on all theories. The idealist, to escape it, makes a stroke in the opposite direction as bold and destructive as that of the materialist, and affirms that exterior facts are illusory—mere facts of mind projected outward; their true nature disguised by the ease and rapidity with which the mind evokes and unfolds them. Nor is the realist, accepting both mind and matter, much better off, theoretically, in his handling of the two classes of facts, physical and intellectual. He has simply, in confessed ignorance of their real dependence, to hold them apart, to cage them separately, lest the one shall devour the other. Fancy two rooms, wholly unlike, apparently remote from each other, and whose relation in space to each other we cannot

discover: the one dark, subterranean; the other light, aerial. The transpiring of certain events, known by touch alone in the one, keep exact pace and time with striking appearances in the other, known by sight only. We transfer ourselves from one to the other, we know not how, and find this dependence fixed, uniform, unchangeable. What conjectures should we bring to the solution of this relation of dependence? How should we be baffled and perplexed by the problem, each more strong to overthrow the conclusions of his neighbor than to maintain his own! Such distinct chambers are the body and the mind—the opaque casement of the brain, and the wide, light, expansive realm of consciousness; such diverse facts are those that transpire unheeded under flesh and bone in the eye and ear and skull, and those which flash vividly and spontaneously out in the mind itself, alive either to truth or to the cheerful visions of fancy.

Suppose the controversy thus standing between the idealist, who uncovers his high attic toward heaven and watches the meteors of thought; the materialist, who retreats to his earth-enclosed chamber, and makes what cheer he can with furnace-light, glowing crucible, and sulphurous fumes; and the realist, who visits both apartments and is not altogether at home in either: suppose it now to be discovered that what transpires in the mind is not throughout in perfect dependence on matter, on sensations, single or reiterated, but that the initiatory movement of knowledge is from above, while that given from beneath only serves as raw material: suppose that actions that were thought to be synchronous, and thus pro-

nounced identical—identical as read from their physical side by the materialist, identical as read from their intellectual side by the idealist, are discovered to be reciprocal ; the initiative passing now to this extreme, now to that, according to the phenomena before us ; in sensation, the line of force setting inward toward the mind ; in comprehension, outward from the mind ; and do we not see, at once, that a new aspect is given to the whole problem ? Establish here, in this line of action, the initiation of mind from above, and is not the materialist put to rout ?—establish there the initiation of matter from below, and is not the idealist silenced ? In each field, still clinging to the figure, in each compartment, must be discovered an alien force entering from the other, or the thinker will inevitably make those forces which are most familiar to him, which are for him always initiative, the efficient, primary, sole forces, first to the oversight, and, at length, to the loss of all other. In the intuitions, then, we trust to establish, as against materialism, a clear, undeniable commencement of action by the mind itself—of action which makes knowledge to be what it is.

But not only is the independence of the mind vindicated by these ideas, its nature and office are disclosed. Mind alone is a rationalizing agent ; that is, one which discerns reasons, relations, inherent dependencies, in the facts before it, and which consciously constructs its own actions on like intellectual connections. It is the very nature, the exclusive nature and office of reason, to see and employ the principles of law and order which bring phenomena

out of chaos, out of irrationality, unintelligibility, and make of them things to be understood, thought about, explained, logically, intellectually digested. Organic products are food to the physical man, come under its powers of separation and appropriation. Things viewed in the light of ideas, into which the order and relations of ideas have been suffused, are food to the mind; and these first conceptions, which are not things, but the conditions of things—the conditions of their existence and intelligible form, it is the office of the mind to furnish. If the place, time, casual connections of events could be assigned them by themselves, could be directly found in them and learned from them, then, indeed, would mind and matter be identical, and this deepest distinction of the universe be obliterated. If the physical world puts reason—for it is full of reason, a product of rationality—into itself, its events, then is it mind, for this is the distinctive feature of mind; and the first step of our philosophy leads us to the obliteration of the lines of division between agents and the things acted upon, between comprehension and the thing comprehended, between mind and matter: that is, to a confusion than which none could be greater to our present modes of thought. If, then, such primitive notions as we maintain are established, it will doubtless, at once, be admitted by you, that they spring from that peculiar power of the mind by which it is mind, the power of using in a rational way, handling intelligently the facts before it; the power of organizing the intellectual world, and making it distinct from every other. It will also be seen—and more

quickly and easily seen by hastening on, than by pausing at this stage of our inquiry fully to establish it—that these ideas define our knowledge, its general directions and limits, and thus are preliminary to a separation and classification of the provinces of thought, the several forms of inquiry. An initiatory idea or ideas afford the frame-work, the general lines and grounds of every investigation. Thus the character and validity of our knowledge are seen in the nature and certainty of the notions which have guided us in its pursuit. It is, then, to our purpose, in mapping out knowledge, lining off its scientific, philosophic and religious territory, to start with those intuitions which are respectively the land-marks of each. The proof for the presence in the mind of these regulative conceptions we shall pass rapidly, striving rather to present, than impregnably to establish, our premises, believing that the later proof of their fruitful character, of the light they bring, the explanation they afford, is at once the most pleasing and powerful. Let the seed grow, and we shall see its character without minute dissection; radical and plumule will separate and disclose themselves as the living impulse reaches them.

It would seem natural to enumerate, to exhaustively state, these intuitions of time, space, existence, cause, before we urge, even briefly, the proof on which they rest. As we shall have occasion to do this later, preparatory to indicating the leading divisions of thought, we will not anticipate the effort at this point. Any of them, as those mentioned above, may be brought to mind in giving distinctness to the ar-

gument on which all rest. First, we say, no antecedent improbability attaches to the assertion of their existence. It is a fundamental principle of the inductive, the truly scientific method, that we are to come to no department with anticipations, prepossessions, disinclinations ; that we are simply to inquire what is, seeking for it where it is, and rejecting nothing which seems to be, on the ground of unlikeness to previous experience. In no direction are this simplicity and fairness of observation and interpretation more called for than in mental science. Invincible opinion, inveterate prejudice, I may say, is often brought to questions, which, as lying in totally new directions, should be opened and pursued with a readiness to reach very unexpected results. Our antecedent power to decide what is to be expected in a department is so very small, that any use of it is much more likely to mislead and embarrass us than to furnish us valuable hints. We say, then, that there are no antecedent grounds of conviction against the presence of intuitive ideas worthy of a moment's consideration. No field is more novel, more unlike all others, than this of Mental Philosophy ; and we should wait till we are fairly in it before we conjecture what we are to find there. Is this the method of physicists ? Quite the reverse. They insist on induction, yet often come to philosophy, with no intention of starting their inquiries within its own field, and there slowly building up and establishing their conclusions. They are not philosophers, when they philosophise, but physicists still : their entire thinking remains saturated with physical conceptions which

they are, unconsciously to themselves, determined to foist upon the new facts before them. Fixed, physical connections are all they are familiar with, and all they are disposed to allow of; and with one of the most settled a-priori looks that ever haunted a scientific or philosophic visage, they confront the task they have assigned themselves, of subduing under material laws—conquering for physical science, the phenomena of mind. To this effort, the spontaneous, original powers of mind, finding chief expression in intuitive ideas, are the great obstacle, and hence to these, there is an antecedent, deep-rooted repugnance. The physicist, distinctively so, so by preëminence, attacks inevitably, by instinct and unconscious predilection, every claim of original, spontaneous power in mind. Now, we say, that this whole crusade against a-priori ideas rests itself on an a-priori ground of the most untenable, possible kind. Honest induction cannot recognize the fitness of those pre-judgments; it rather declares, that in passing such a border as that which separates matter from mind, every pre-judgment should be laid aside, and very new and diverse facts anticipated. That is a perverse a-priori use of thought, to say beforehand, that no intuitive ideas are to be found in the mind. One of the surest ways of evincing a distorted a-priori bias is this of attacking, in an unqualified, general way, a-priori conceptions and arguments. These assaults are themselves inevitably of an a-priori character, and that, too, in an insufficient and false way. We say, then, to the extreme physicist—and we are speaking of no others—give us induction, but give us real,

honest induction, that which is made on the ground gone over, and reaches its results from what is there found. Slip the sandals from your feet as you enter philosophy, for this is holy ground—that is, ground not to be travelled over in exactly the same coarse way as that already traversed: the mind is not to be reduced in crucibles, nor snipped up with the nippers of the anatomist. Absolve your thoughts from old associations, turn inward your vision, and, believe us, there are other learners than those whose eyes feast on rocks, and linger lovingly on skeletons.

We invoke a fair field, an open way for philosophy, and fling back the denial of a-priori ideas as itself hasty, unfounded, a-priori. But, it may be asked, if these intuitions are so fundamental in mind, how does the physicist himself proceed without them? He does not proceed without them. Some of them he theoretically rejects, and practically employs; some steal into his service unbeknown to him; and some he knowingly uses and fallaciously explains. This is our second consideration in making way for proof; the untenable attitude of the materialist in his denial of original intuitions in the mind. As an example of these regulative notions, momentarily employed, and, at long intervals, formally rejected, we instance cause and effect. Materialism can do nothing with this notion, can make nothing of it; and the physicist, therefore, when he so far becomes the philosopher as to discuss the question at all, resolves cause and effect into simple antecedence. This is the conclusion of Mill, of Spencer, of all who break ground in philosophy in behalf of simple physics. Indeed,

what other position is possible to mere science? The causes that underlie phenomena are never seen, heard, felt: it is to account for what is seen, heard, felt, that they are invoked—invoked by the mind alone. Causes are always and forever below the surface, out of sight, beyond the touch, and are brought forward to account for, to explain, to enable us to understand what is above the surface, in the eye, or under the hand. I hear a sound: my thought explains it, not by the mere fact that a steam-valve has been opened in the distance, but by the further belief that there has been a transfer of force by wave-motion through the air to my ear. Now this force no man has ever heard, handled, in any way directly reached by the senses. It is of hypothetical, mental origin, brought in to explain what is seen, felt or heard. Materialism, therefore, denying that the mind furnishes anything in the apprehending process, knows not what to make of this notion of a force, of a cause actively present in phenomena, and momentarily giving rise to them. Its only resource is to deny the validity of the idea, and reduce causation to simple antecedence. The valve opens, the air moves, the ear hears; but there is no common term of force which unites the three.

Nothing could be more at war with the practical attitude, the working conceptions of science, than this, its theoretical conclusions. Science is full of the notion of force, of causation, from top to bottom, and its investigations cannot proceed without it. Make of its connections, mere connections in time, and there is not more difference between the close-

wrought cable and its impression in the sand than between scientific results as they now are, and as they would be under this view. Attraction, cohesion, what are they to the mind but forces that pervade space and matter, and by instantaneous efficiency handle the orbs of a solar system, or the motes in the summer air? Are these figments? Then is science a figment, a cunning texture of conceits, a waking dream. Force is nothing, unless the notion of causation is valid; since this necessity of the mind to refer appearances to efficient agencies back of them, gives rise to the conception of force—force everywhere at work to occasion, account for, and order phenomena. Science is full of this notion of force, mechanical, crystalline force, electric force, chemical force, heat force, and, latest of all, thought force, and the correlation and equivalence of forces. Yet, if the intuitive notion of cause and effect cannot stand, neither can this ingenious scientific structure which rests upon it. If there are no causes, then there are no forces. If there is no soundness in this first inference of the mind by which it puts force, super-sensual, intangible force under phenomena, then there is no substance in those elaborate conceptions by which it expounds the mechanical, chemical, vital facts of the world.

Moreover, this denial of the notion of causation is suicidal to materialism. If phenomena have no other connection than one in time, the facts of mind cannot be otherwise dependent on those of matter than chronologically. Hence, thought and feeling, diverse in form from brain action, and in no way the fruit of it,

cannot be equivalent to it, however constantly they may accompany each other. Materialism destroys itself, if it admits causation as an intuitive notion, since the mind then becomes the seat of independent, authoritative interpretation. It destroys itself if it denies causation, since all things then fall apart. All things have necessarily an independent, and an equally independent, existence ; mental and physical facts in regard to each other, not less than physical facts among themselves.

While some regulative ideas, like this of cause and effect, are theoretically denied, and practically employed by materialism, others are tacitly assumed, quietly taken by physicists, and used unbeknown to themselves and others. Of this class is the notion of resemblance. We do not open the discussion here, whether this is or is not an intuitive notion. We so claim it. It is by comparing one series of sensations with another, that Spencer, the latest and most generally accepted philosopher of materialism, reaches the notions of space and time. He furtively seizes upon this notion, gives it no explanation, does not even think that it needs an explanation, and by means of it arrives at other intuitions which he uses as further relays to bear him on his way. If, however, the idea of resemblance is denied him, under which these comparisons take place, and these alleged generalizations are reached, he is at least thrown back another step, which must be first established before his reasonings can be brought to bear. Surreptitiously availing himself of one notion, he is able to initiate his intellectual activity—to get his thought-

process in motion ; and, by a little confusion of analysis, to bring forth, as the boasted product of his mental jugglery, those few notions whose presence he is willing to admit. This is the third method belonging to the physicist in his treatment of regulative ideas. Some he denies ; some he overlooks, and yet uses in reaching others ; and some, as those of space and time, he feels the necessity of allowing, but presents them as the fruit of generalizations. Now what is generalization ? It is an act of abstraction, by which we consider a quality or relation belonging to many things without considering any one of the things to which it attaches. Thus the flavor, known as sweet, found to exist in many things, is at length designated under a word which covers the quality with no reference to anything which possesses it. Spencer claims that the notions of space and time only express certain relations which are found to belong to many things in common. I can move my hand, backward and forward, over the desk before me, and thus secure a series of sensations which I can repeat and reverse at pleasure. I find the same true of many other series of perceptions : as when I slide this index across my finger, or when I slowly turn my eyes from one part of the room to another, and then restore them to their first position. This relation of indifferent, permanent succession, by which sensations can be repeated at pleasure in a given order, or reversed in their order, attaching as it does to many things, gives rise, says Spencer, to the word space, by which we designate this fact, common to much of our experience. On the other hand, some sensations have a

fixed order which cannot be retraced. The day advances, and we may follow its various grades of light, its series of events, but cannot reverse them, or renew them at pleasure. Our thoughts, in conversation and in speech, move onward, but do not remain to be gone over a second time, or to be followed back to their commencement. Here is a second, fixed relation, which a share of our experiences have to each other, and this is designated as time.

This account, now compactly given, when fully presented, and skilfully enforced, seems very plausible. Indeed, it so closely approaches the truth as not to be easily distinguished from it. Yet, the error is the old one of antecedence, so often expressed under the image of the cart and the horse. Which of two ideas contains the other, draws after it the other, is, again and again, the grand question of philosophy. In the case before us, does the notion of relation go before and give rise to that of time?—or, does the notion of time give rise to that of relation? Says materialism, the first is true; says intuitive philosophy, the second is true. Which is most specific; time, space, or the idea of relation? Evidently time and space, since both of these, together with many other connections, are included under the idea of relation. Now which is, by generalization, taken from the other: the more general from the less general—that is, relation from time; or the less general from the more general—that is, time from relation? Plainly, the first. We do not arrive at the specific sweet of honey from the general notion of sweetness, but reach the general notion of sweet-

ness from this and many other specific examples of it. Thus, we do not derive time, a specific relation, from the general idea of relation ; but relation in general from time, space, casual connection, each and all specific cases under it. We must, therefore, know time, space, cause and effect, antecedently as kinds of relation, before we can reach the yet more general idea of relation ; that is to say, we must know time, as we know sweetness, in a direct, concrete way, before we can make it the product of a generalization : that is to say again, all our knowledge must be specific, separate, intuitive, before it can become generic, general. Time and space must, therefore, be either sensations like hardness or softness, or mental intuitions, present in each case, before a process of generalization, which is one merely of separation and distinction, can reach them. We cannot analyze gold out of a mineral that does not contain gold. No more can we generalize time out of a mental content that is not seen to involve it.

This brings us to the very pith of the discussion. If the product we are to deal with is wholly one of sensation, if the mind is to add nothing to it, cast no new light upon it from another source, then a process of generalization, that is, of analysis and separation, can furnish nothing but distinct, sensational qualities, as hard, soft ; bright, dim ; sweet, sour ; since these alone are our coarse staple to be reflectively worked up. Time, then, is a sensation, or it cannot be evolved from sensations. Relations, conditions, one and all, imply some definite method of viewing the subject ; and this definite method or form, this con-

trolling, regulative idea, is not a matter of sensation, but something furnished by the mind in view of its own ends. Suppose, for instance, with Spencer, that we could have gone through with the successive events of an hour, and have had no idea of time, we should then have taken no step towards such an idea ; we should have been no better off at the close than at the commencement of our experience. A second, a third, a fourth hour, used in exactly the same way, would carry us no further. Either at the close of the first hour, we must have observed this relation of succession and grasped it, at least incipiently, concretely as one of time, or we would be no nearer to it than at the outset. And who does not see that it is by rising out of the sensations as sensations, and taking a synthetic, intellectual attitude toward them, that we get the conditions under which the mind flashes on them this conception of time. Moreover, this conception, come when it may, comes instantaneous and complete. It is not made up of parts, compounded of ingredients, fabricated of odds and ends of thought. It has a most specific, simple, primary character, and thus, like all such ideas, must come at once, come directly, find admission through some open, spiritual sense, as color, or taste, or sound enter the precincts of the mind through a physical sense. A thing is ultimate, single, simple, on this ground alone, that a direct, final faculty discloses it, and time and space, as primary relations, must be referred to a specific cognition of reason, or of the senses. As time and space, ultimate conceptions, are not sensations, they must be intuitions : as we do

not see them, or taste them, or touch them, we must, by the insight of a spiritual eye, discern them. We must, with the subtlety of a rational sense, grasp their imponderable forms, and furnish them, the moulds of thought: time, under whose silent, eternal arches, measuring their progress, flow all events; space, beneath whose open concave all the creations of time are poured out in palpable, visible form, as waters, escaping their cavernous bed, glance for a little in the light, and are gone again. Thus by denial and refutation do we prepare the way for the positive argument, establishing the mind's independent, penetrative action in handling the material of thought presented by the world about us.

A first direct reason we offer for an acceptance of an intuitive element in our intellectual processes, is, that all careful and discriminating analysis yields it. So evidently is this true, that the notion of cause and effect, persistent and omnipresent as it is, is theoretically rejected, simply because its presence cannot otherwise be accounted for than by recognizing the existence and validity of an intuitive faculty. To escape the product, physical philosophy rejects the power, not considering that the only proof we have of any mental faculty is the results it yields. Liberty, right, the infinite, are treated in a like way. That is to say, these ideas are confessedly present, the phenomena of mind evidently yield them, analysis discloses them, yet they are termed fallacious, symbolical, pseudo-ideas. Now we know no other safe philosophy than that which accepts the uniform assertions of the mind simply because it makes them.

We might as well reject color, though the eye sees it, as to reject causation, when the mind steadily, inevitably, affirms it. Many of those ideas called intuitive are even by the materialist allowed to be present, and then characterized as fanciful and fictitious, for no other reason than because they do not enter by avenues whose existence he has recognized. Of course, if there cannot be an intuitive faculty, then there cannot be intuitions. It would seem, however, to be novel proof, as directed against the existence of such a faculty, to assert, that seeming intuitions are illusory ; and illusory, not because they deceive us, but because we started our philosophy with the conviction that the power to which they are referred is no power. We are thus entitled to the full force of the admission, that materialism so far recognizes the correctness of that analysis which yields regulative ideas as to be ever striking at, and hunting down, these ghosts of thought, whose valid existence is nevertheless denied. The man cannot sleep, a fever is on him, his flesh creeps, but he believes in no spirit ; no, not he. But, it will be said, the physicist denies the correctness of this analysis, even when such notions as that of space, admitted by him to be real, are concerned. Here is the chosen ground of the physical school, and we are willing to meet them on it ; to put the question distinctly. Does the eye, for instance, yield extension as a sensation, or is there, in every special judgment, a rousing of the mind to furnish and apply an element of its own, that of space ? Suppose a board, one foot square, to be placed before the eye two feet from it,

is its extension determined by the eye as a sense-organ simply? We say, No. Yet, this is a case as favorable to materialism as any that can be put. Suppose a second board, two feet square, to be placed two feet behind the first, and in exact line with it: the first will completely hide it. Withdraw the first, and the second will occupy precisely the same space on the retina as that covered by the first. There are here two extensions—the extension of the board for the time being looked at, and the extension of its image on the retina. Which of these is it that the materialist will affirm is directly known as a sensation? If he says the extension of the image on the retina, we make a double answer. In the first place, we, by mere outward sight, by direct sensation, know nothing whatever about the retina, not even its existence, much less the size of the image upon it. In the second place, the two boards—and a thousand others might be so arranged that the same would be true of them—occupy exactly the same area on the retina, and, therefore, should appear of the same size, yet they do not. If it now be said that the extension directly discerned is that of the board looked at, then we say, that this should be exactly known, whereas, in many cases, it is not, and cannot be. Let a series of boards be arranged, as we have intimated, under the open sky, in the space directly above the spectator, with long distances between them, and he will find himself utterly at fault in deciding on their dimensions. The reason is obvious: sensation, as pure sensation, is thus separated from the conditions which ordinarily accompany it in forming a judg-

ment, and it finds itself embarrassed in deciding on the dimensions of objects so located. Thus we ask each other, How large does the moon seem to you to be?—and receive every variety of answer. If dimensions were a direct, complete product of sensation, as is color, then, like a given color, they should remain constant, distinct, uniform: their variable, indeterminate character show the presence of another element—that of constructive judgments. Moreover, if the size of an object is directly seen, how happens it that a convex mirror magnifies or distorts to the eye an object without affecting that object?

The true explanation is this: the mind, with the antecedent idea of space, is able to interpret varying sensations, which in themselves disclose nothing directly of extension, so as to judge of the dimensions of bodies, and these judgments are all open to the errors and deceptions of peculiar circumstances, not included in our previous experience. Thus, with its notion of space, it can look at a painting as a perfectly plane surface, or, by a flash of insight as it were, open it up instantly into a landscape of great distances and innumerable objects. Everywhere will analysis yield something more than mere sensation.

A second reason to be urged in behalf of these original strokes of power in the mind, is the fact, that it can thus begin to think in many directions. Sensations as sensations are complete; reflection can add nothing to them. Bitter is bitter, and if one wishes to increase his knowledge, he has only to taste again: reflection will not help him. Thought cannot grapple these complete, spherical sensations

except by virtue of some relation to be established between them, such as one or many, here or there, now or hereafter, like or unlike. But each of these relations is specific under a distinct idea, and this idea must be forthcoming. We cannot say that things are like or unlike, till we have compared them ; and we cannot compare them, till we have the notion of resemblance. The mind might as well be a mirror, holding now one object, now another, as to be a mind, if it can do nothing more than hold phenomena, if it cannot, asking itself whether things are like or unlike, proceed to see. Here, exactly, is our affirmation. The eye does not see things to be like or unlike, but proceeds to see them ; that is, when the mind has suggested this direction to attention, the sight is so ordered. We are asked, Were the two horses alike? and make answer, We did not observe. We saw, but did not see, because the antecedent idea of resemblance was not then present to us. Now, as men are thinking in all directions—that is, combining sensations, this fact shows the universal presence of specific ideas or relations under which thought takes place. No other union by virtue of thought merely is possible.

A third proof of the nature of this intuitive action is found in the character of the conclusions which rest exclusively upon it, when compared with those which arise from sensation. Mathematical lines and surfaces are secondary conceptions under the general idea of space. Hence the mind affirms some truths concerning them by direct insight. Of this nature is the following: Two straight lines parallel through

a portion of their extent, are parallel through their entire extent. That the two bars on a railroad track can never meet if parallel and straight, is a fact which every rational mind sees to be necessarily true. Contrast it, for instance, with the strongest possible assertion resting on mere experience, and observe the difference. All crows are black. Put yourself on an unknown continent, would you direct a moment's attention to the question whether parallel lines should be found to meet? Would you be any more than surprised at a flock of crows, a portion of which were brown, or gray, or white? Yet Mill is compelled to put both of these conclusions on the same ground of authority, and therein signally refutes his philosophy. Geometry and Botany do not rest on the same basis of proof, and a theory that affirms that they do, is remarkable for audacity, if not for penetration. There is in the one, instantaneous insight; in the other, slow perception: in the one, demonstrative conclusions rest on a single example; in the other, a probable conclusion follows many examples.

These necessary convictions are scattered everywhere, and can be accounted for only on the ground of an intuitive grasp of their unchangeable conditions. It is easy to conceive of causes that might break in on the order of nature in any direction. Immutable laws, so called by physicists, are no further immutable than are the forces that give rise to them. Vary these, and change in those must follow. But the logical laws of thought, the geometric laws of space, are immutable in a far deeper sense. We can un-

derstand no forces or causes that could modify them. They are the very frame-work of thought: break them up, and coherent thinking is gone; while no change in the order and character of mere events disturbs our contemplation of them. The mind asserts itself, its own line and order of movement, in these necessary truths, and the blow which strikes them away falls on the intellectual life as one of syncope and dissolution.

Further, these regulative ideas maintain their grounds, as do all theories, by the light and order they bring into our thinking—by the harmony and coalescence of facts under them. Nothing is lost. One half of the world of knowledge is not sacrificed to the other. We have science, and we have philosophy. On these, as joint foundations, religion is able to rest. But this best and most complete proof can only appear in its full force as we proceed.

We close the lecture with a brief enumeration of these regulative ideas, not being able to pause to justify each separately. The first of these is existence. Existence and the idea, the thought of it, are quite distinct. This is not a sensation, but the mind's simplest act of explanation in reference to a sensation. But things are finite, divisible, and a second act of thought resolves them, under the notion of number, into one or more, according to the purpose and method of contemplation. We have twenty cattle, or one drove; fifty sheep, or one flock; as the mind chooses to regard them. Separate things are compared under the notion of resemblance, as like or unlike, and thus they coalesce

again in groups of the mind's own establishment—groups which depend wholly on the phase of resemblance present to the thoughts. Marbles, granites, ores, may all be heaped together as minerals over against a pile of organic substances ; or may be parted in divisions among themselves as marbles, granites, ores. Thus innumerable lines of order, of synthetic thought, are shot through the chaos of many and diverse things. So far, in these three intuitions, we have the common ground of all being. Now comes a deep division : the stream parts, and the notion of space gives us one territory—that of physical facts, swept through by the one current ; and consciousness a second territory, occupied by the second current—that of intellectual facts. These two proceed in diverse form and method. The first has a second regulative idea—that of cause and effect. Under efficient, measured, unchangeable forces, present in the material world, its events progress with a strict, causal connection everywhere. In the second field of activity—the spiritual—we have the notion of liberty, the counterpart of causation, and of right and of beauty, which furnish the conditions and ground of liberty. Between these two forms of being, and common to them both, lies the intuitive idea of time. The same time—identically the same time—overlies physical and spiritual events. Finally, these finite events, flowing on in a double channel, lie over against the infinite, come from it, and are gathered into it, under it—are poised with it ; the infinite, the source and end of the finite, the finite the revelation of the infinite.

These ideas admit of the following presentation :

Existence,		
Number,		
Resemblance,		
Space,	} Time,	Consciousness,
		Liberty,
Cause,		Right,
		Beauty,
The Infinite.		

Thus starting with existence in its feeblest, finite form, we return to existence in its fullest infinite form. As ocean currents are sundered on the headland of a continent, and skirt its divergent coasts—or as they overlies and underlies each other in the same seas, with diverse directions and diverse temperatures, yet all spring from the same great sources, and feel the same general momentum, so material facts and spiritual facts part to the right and the left, or above and below, in the fulfillment of one end, under the propulsion of one purpose, together expressing and fulfilling the plan of God.

The above division of regulative ideas goes far to answer the inquiry, Why these and no others? They cover, and completely cover, the entire field of phenomena, and, as broad as the knowledge of the mind, show themselves to be its frame-work. No department of thought being omitted, these ideas, with those secondary ones involved in them, are sufficient for all the purposes of the mind, unless it can be shown, that within these bounds some irresolvable link of judgments has been overlooked. We have not the ambition to try to establish, that there can be no

other regulative notions, but only that these notions are actual and sufficient for all the objects of thought. Grant us these, and the map of the mind is before us. We see at once the themes which can occupy it, the ideas under which all its judgments are constructed. It is something for reason to thus mark out its own bounds ; and it ought not to be urged against these results that they do not explain to us why these limits, and no others, are set to the mind.

LECTURE III.

SPACE THE FIELD, CAUSATION THE LAW, OF PHYSICAL FACTS.

WE closed our last lecture with an enumeration of the fixed or regulative ideas of the mind. As much that we are yet to say will depend for its correctness on the correctness and completeness of this list, it would seem in order, to take up, one by one, these ideas, and to establish their independent, primitive character, that the mind brings them to its experience for its apprehension, and does not evolve them from that experience ; in other words, that they are not to be regarded as products in the mind of outside influences, but as original perceptions of the mind, by which it becomes mind, a thinking, comprehending power. As, however, this separate consideration and defence of these ideas have been entered on by us elsewhere, and would now greatly delay us, we shall assume the correctness of the enumeration, and proceed to consider the field of human thought in Science, Philosophy and Religion, as mapped out by it.

Evidently, if the mind brings to its thinking these primary conditions, then the entire form of thought, the relations of all the things considered by us, will be fixed by them, determined in character by the particular idea under which they arise. These laws, these organizing forces of the mind, will be to the

subjects considered by it, what the cross-lines of a telescope are to the objects that come within its field ; their position, motion, measurement, in an otherwise vague and indeterminate space, are thereby established. Observation thus assumes a precise form, and produces exact, mathematical results. As mathematics enter the instrument with the lines, projecting their rectitude into the outside world, so apprehension, reason, enters the mind with regulative ideas, lining before it the universe of thought. No inquiry can be put which does not involve one or more of these notions, as the form of the judgment which it calls up. Where a thing is ; when it is ; under what form—that is, resemblances—it appears ; by what causes it is occasioned, are examples of leading aims of investigation.

The first of these intuitive ideas is existence. This notion is tacitly present in all thinking, ready to be evoked as a direct object of thought at any moment. Indeed, so instantly does the mind yield this idea of existence, of reality, that in reference to all the things actually present to its senses, or its consciousness, it rarely puts it in the form of a judgment. Does the light exist ? is a question only made possible and intelligible by its very being, and the notion of being is inseparable from that which provokes the inquiry. When existence, however, is not purely phenomenal in the world of appearances, but is sub-phenomenal in the world of abiding realities, the question of being assumes a different and more difficult form, and we have the science of ontology, which inquires into the reality of matter, of mind and of God ; into the proof

of their independent existence. Thus one of the latest and most perplexing of questions springs up in connection with an idea, omnipresent, and, in its earlier forms, so simple as often to involve its acceptance in the mere direction of the attention to it.

Next comes number, the root of mathematics. If the notion of being is primary, that of number follows instantly upon it. Indeed, only as we pass out of one sensation into a second, from a first attitude of mind into a succeeding one, and are thus ready to separate them as numerically different, do we get motion, thought, a play of mental powers. Moreover, the primitive character of this idea of number is seen in the fact that we so early handle it, abstractly from all objects, all concrete relations; and that the calculations of the several branches of pure mathematics are of an exact character, which does not and cannot belong to them in their practical or applied forms. The units which I add, subtract, and divide, three and three of which make six, and six and six of which are equal to one another, are units of the mind, not things. Six stones are not equal to six other stones in any sensible properties, nor are six bushels to six other bushels. Indeed, a bushel, meaning thereby a precise amount, never actually did exist or will exist, and will only find an approximate existence according to the nature of the commodity and the means of measurement. No process in arithmetic or algebra applies exactly to any actual things or transaction. A given field does not contain precisely the acres and parts of an acre specified; or the money paid for them, precisely the value indicated. The problems of

arithmetic may be shifted, again and again, in the commodities named, and yet the problem remain numerically the same. It may be six cords of wood, or six yards of cloth, or six bushels of grain, that bring the two dollars and half per cord, or yard, or bushel, and the calculation is unaltered. The players change, but the play is the same: nay, no set of players exactly represent the play, meet everywhere its conditions; and this because it comes to them from abroad—from the creative realm of genius, and can only find partial reproduction in those in a measure ignorant of it. Thus all numerical processes have an exact, ideal form—a pure thought-form, springing up precise and complete under the penetrative, mathematical eye, while the bushels and the barrels, the pounds and the ounces, the dollars and the cents, actually current in the inexact, physical world, over-reach and fall short of those perfect estimates of the mind. Indeed, to suit the fact, by increasing exactness of measurement, to the garment of thought—the mathematical estimates under which the mind would present it—is the ever-returning labor of the arts. This absolute identity between the mathematical units, whose equality and relations are asserted—this accepting as units things utterly unlike and unequivalent to each other, and by no means one to the senses, marks the antecedent, constructive force of the mind, the power by which it brings order, arrangement, relation, to its material, as frost shoots bars of crystal through the congealing water, crosses, unites and compacts them, till the whole assumes definite and beautiful form.

The third regulative idea, in our list, is resemblance. First is being, then multiplicity of being, then diversity of being. The single does not pass into the plural, save through variety, agreement and disagreement. We have more than one, and the units part from each other in diverse positions and qualities. These three are the conditions of all forms of existence ; but at this point, there is a division in the processes of mind ; its ideas lose their generality, and we have, on the one hand, those which group and arrange external, physical existence ; and on the other, those which give the conditions of being, and the principles of arrangement, to internal, mental phenomena.

Space, a position in space, is the essential condition and distinction of all physical things. Nothing is in space, occupying it, conditioned to it, and defined within it, which is not physical. A force which finds locality and expression in space, is what is meant by a physical force, as distinguished from a spiritual one. Intellectual force, thought-force, on the other hand, appears in consciousness, and there only in its strict, primary character. These two forms of being, apprehended each under its own idea, fall so utterly apart, are so foreign to each other, that we can run no lines from one to the other, can place the one neither above nor below the other, within or without it. Each is reached separately, each maintains its integrity, each gives its own irresolvable phenomena. A thing is no more a thought than a thought is a thing. A physical process and an intellectual product remain forever distinct ; and to iden-

tify one with the other is the loss of half of the facts of the world, an oversight of the deepest and most unchangeable of differences, a return to the unity of chaos and confusion, not an advance to that of classification and resolution.

Standing at this dividing point of knowledge, at which a true philosophy places us, we see how the inquiries of natural science and mental philosophy must part, the one to the right and the other to the left, and remain forever occupied in distinct realms, and, as we shall later see, with diverse and opposed conceptions. To clearly apprehend this diversity of directions, objects and methods, is a first condition of entire success in either department, and in both departments. Men first sought to expound facts, facts of the exterior world, from within, by a fanciful application of the laws of thought, by theories altogether conjectural, and failed. Later, delighted with the results of physical inquiry, they have striven, reversing the process, to carry the laws and forces of matter into mind, and are as signally failing. The philosopher and physicist must part company, each to his respective field, waiting to meet again and gather up their completed inquiries under that final and inclusive idea—the infinite, the Infinite One, from whom both classes of facts proceed, and to whom they return. To this assertion there is one most essential qualification. These two lines of investigation are parallel; these series of events transpire in one time, and are in constant action and reaction. Though we know not how the contact takes place, how the transition is effected, yet, like two opposed

electricities, they do mutually reach and momentarily modify each other.

We now turn first to those ideas which control the conceptions of science. The central one of these is space. Its primitive character is disclosed in the way in which the mind furnishes it forth according to the circumstances and estimates present to it. It fills the recesses of the mirror with it as if it were a window opening into another world. It hangs in the shallow stream a reversed concave with its inverted trees, pendant mountains, and distinct clouds ; it enlarges the elastic painting into a landscape, and pushes it back in remote vistas and dim perspective ; it furnishes airy stretches as the field of visions, and the arena of dreams ; and in this actual world of ours, of fixed bounds and immutable measurements, will extinguish one conception, and flash in another, on some change in the conditions of judgment, with as much ease and rapidity as additional gas is inflamed in the burners. Space, combined with number, opens up new branches of mathematics. Geometry is an a-priori science. Though mathematics take their rise in number, which is an idea common to mental phenomena, it receives such enlargement in connection with space as to turn its almost entire power, as a means of inquiry and progress, in the direction of physical science, rather than of philosophy. The units of space are so perfect and so varied, and so important in their practical connections, that mathematics at once lay hold of them with great power and scope. Not only have we the direct measurements of space, but many indirect applications. Thus the

intensity of heat is shown by the vertical range of the thermometer ; the weight of the air by that of the barometer ; the presence of heat or electricity by the play of an index along a graded circle : in a multitude of ways the nature of forces and their degrees are resolved for the eye into a movement in space.

The primitive power of the mind, its action, independent of experience, is abundantly shown in Geometry. First, there are axioms, self-evident truths. Now no truth can be self-evident that is derived from experience through sensation. It is not self-evident that an ox-eyed daisy is white ; that a buttercup is yellow ; or that a stone falls to the ground. Again, the proofs of geometry are single, yet absolute. A proposition enunciated for the first time, and established by a single line of argument, is yet demonstrative. No proof resting on one instance in experience approaches demonstration. Plainly, the mind relies on its own insight in the one case, as it does not in the other. Again, the conceptions of geometry are not those of the senses. Its lines have no breadth ; its planes, no thickness ; its circles, no defects ; its centres, nothing save position. These are all super-sensual conceptions, wholly alien to experience. Once more, it makes assertions that no experience can verify—as that an hyperbola will never meet its asymptote, or a parallel line its fellow ; and it conceives and discusses curves with fulness and exactness wholly, or almost wholly, unknown to observation. This primitive, organic power of the mind—a fact to which we are willing often to return,

as it is so important in itself, and so constantly denied—is wonderfully disclosed in mathematics. The great geometrician is so almost wholly by the force of his own conceptions, unaided by external objects. Mathematics might take their birth, and reach well nigh their completion, in the solitude and darkness of a cell, were it not that the mind will not accept excessive development in one direction unsustained by kindred growth in others. In the fact, that mathematics are thus rooted in the intuitive ideas of the mind, we see an explanation of the fact, that this branch is so frequently pursued to advantage early in life, and a justification in education of that scheme of studies which assigns them a prominent position. Mathematics do easily, naturally, come before much observation, much science; and this fact reveals their independence of experience, and their necessity for its interpretation. The conclusion we have now theoretically reached from a study of the powers of the mind, conforms to that disclosed by our familiar experience in the growth of knowledge.

But space also furnishes the field in which physical facts appear. We now pass to causation, which chiefly determines their character. The notion of cause and effect, or the conviction of the mind that every effect has, must have, a cause, requires thorough and careful discussion, since on a right apprehension of its nature and validity will depend the correctness of much of our philosophy; the strength and fitness of that net-work of connections wherewith the mind unites and explains the things about it. There is always some spider-web of thought, spun from within,

that beads together in beautiful array those dew-drops, those separate facts, that the scientific inquiry of the time has condensed and ensphered in the otherwise indeterminate realm of thought. We first inquire, What is this notion? It is not one of antecedence. The visible antecedent is not the cause of the effect which follows it, but one in a chain of effects. A strict cause is always cotemporaneous with the effect. The effect is its immediate, manifest expression. That is to say, the mind puts back of every phenomena, everything that appears, every event that transpires, something, some force, which causes it to appear and transpire. Fragments of rock are flying in the air in consequence of the explosion of a blast. The immediate cause of this momentary effect is the propelling force conceived of as lodged in each of the pieces, and ready to be delivered by it to any object which it may hit. When oxygen and hydrogen unite to form water, the cause of the water is the constant and sustained action of the two gases in union. Each gas, so far as it presents itself to the senses, or responds to chemical tests, is an effect, an appearance, a phenomenon, whose cause is found in the very nature, that is the invisible force or power, of the gas. The mind compels us to go back of these permanent manifestations, to some permanent existence which is their occasion or cause; and of transient appearances to transient forces whose momentary action has produced them. Popular language, while including this exact notion of a cause, finds it convenient to extend very much the use of the word; and hence

arises some confusion, and the need of re-directing our attention to the precise, philosophical meaning of language. An antecedent effect is very frequently spoken of as a cause. Thus, the explosion of the gunpowder is said to be the cause of the shattered and scattered rocks, because this explosion was one of the striking antecedent effects, which serves correctly to direct the mind to the entire nature of the process. With a little more liberty of speech, the drilling of the stone and the tamping of the powder, are said to be the causes, since they also lie in the line of previous effects. Proceeding in the same loose way, the person who hired and directed the workmen, is said to be the cause of the result. Indeed, anything which immediately or more remotely constituted a portion of the previous effects, may be said to be a cause of those effects. Even further, the motive which one has in view in performing an action is sometimes mentioned as its cause. Thus the cause of removing or blasting the rocks, is said to be, that the line of a railroad might be established. Yet even popular speech has here a preference for the word reason, and feels the strain put upon the notion of a cause. The last word ranges rather along the line of previous effects, and has there always a tacit reference to the forces which underlie them, and which they conveniently serve to designate. The true cause, then, is always unseen, unfelt, beyond the range of the senses, and is uniformly evoked to explain that within the senses. It stands to phenomena as the interior of a globe to its superficies; as the river to the ice which conceals it. The inside is

always inferred from the outside ; the bed of the river from its upper layer ; the depths of the ocean from its surface ; and the consecutive flow of causes from their coherent, visible effects. Causes are thus solely reached through the mind, and not through the senses ; are the result of the mind's action in supplying an explanation of that which arises in the senses. If it were said that solids are made up only of surfaces, the senses merely could not contradict the assertion, since it is only the outside that is ever seen, felt, tasted. What is interior, while it remains interior, is forever beyond them, and is only a matter of inference, and that, too, as we shall readily see, under this very notion of cause and effect. We believe the body to be solid, because its weight is thus explained. Again, the cause and effect mutually measure and define each other. The effect expresses the cause, the whole of it, and no more ; and identity of effects, proves identity of causes, and identity of causes necessitates identity of effects. All our reasonings in mechanics, chemistry, physics, imply this, rest upon it. If the same causes could issue in new effects, or the same effects be referred to different causes, there would be an end to safe reasoning in these provinces. The word cause, however, must now be carefully used in its exact meaning, and not in its popular sense. This measurement of the one by the other is involved in the general axiom of this notion, to wit : that every effect must have a cause. If there is a change in the effect, that change is itself an effect, and must have a cause, that is, another, or new, or modified cause : hence, with a changed effect,

the cause cannot remain unchanged. On the other hand, if the effect remains the same, the cause cannot be increased, diminished or modified, since this change can only be shown, proved in the effect, and this, by the supposition, presents no change. Such is the nature of a cause. Its chief features are, that it co-exists with the effect, is invisible, insensible, and is exactly equivalent to it, expressed in it in kind and degree.

We next inquire, Where is this notion of the mind applicable? Does it cover all phenomena, or only physical phenomena? This is a most important question, and a wrong answer, practically, if not theoretically, given, has involved endless mischief, and led to the loss of fundamental truths in philosophy. If it is universally applicable, a law of mind everywhere, then it necessarily excludes liberty; since this involves a totally different principle. It equally excludes the existence of an Omnipotent Being, since no amount of finite effects can otherwise than establish a finite cause, and moreover a cause of the same nature with the effects, to wit: a physical and impersonal one. The universe exactly expresses God, under this notion or principle of the mind, and hence God has no being beyond, or more than, that which is found as present force in the universe. We believe more careful consideration will show that this law of the mind has sway only among physical things, in space, and is not a law of pure, spiritual phenomena, of consciousness. Our conception of matter, material force, as opposed to mind, spiritual force, is, that it has a fixed, determinate existence, without

spontaneity or resources. Matter is an uttered force, one realized, and in its very realization has been defined and fixed forever. It has gone forth from the region of spontaneity, and, like the weight, the hand of man has attached to a machine, presses with a settled amount. It is between physical effects and physical forces that the mind affirms this perfect co-existence, and absolute equivalence, and not of its own acts; except so far as they have touched the physical world, appeared as force in it. The gauge of a steam-engine measures the exact pressure present, and there is then and there no spontaneity, no potential pressure possible: the thoughts and volition of the mind express a state or condition of it, but do not wholly contain or exhaust the being of the soul. Our practical judgments are in entire consistency with this view. We trace physical forces from one stage to another, and, when we stop, stop with a still further inquiry on our lips. We feel that every stage of the force is only a stage, and not a start, and we wait a convenient opportunity to pursue the thread of connection further. On the other hand, when a force has been referred to a free agent, we feel that it has found arrest, and the most stubborn necessitarian, even, practically suffers the inquiry there to repose. If a building has been fired by physical forces, we investigate these, pushing backward, step by step; if by an incendiary, we check the inquiry with this discovery; or throw it forward, not backward, in a search for his motives. The principle of causation, then, as a fixed law, is assigned by the mind to the fixed realm of physical

facts, and not to what it itself recognizes as the creative, spontaneous realm of spirit. No notion is of universal application, but each has its province. Causation attaches to forces, and force belongs—it is only by figure of speech that we speak of thought-force—to space, the realm of physical events.

We next seek for that in the physical world which rests upon this notion of causation. All our knowledge of the world about us, as a visible, extended, outside world, is to be referred to it. The world without distances is like a wrapped up tent, comes collapsing in on our senses, yet distance is a matter of inference from observation. By experience, we learn that certain impressions are due to near, and others to remote, objects, and from these effects we infer the nature of the causes which produces them, the dimensions and relations of the objects before us. Familiarity and rapidity hide these judgments from us—this approach to facts, to causes, through their variable effects, but perception does not thereby lose its character, as tacitly involving a large amount of inference; all that inference by which the earth is spread out in a vast plain under our feet, and the heavens pitched in incredible and immeasurable depths above us. Many things illustrate this complex, inferential action of the mind in sensation. A portrait does not present its object to us as large or small according to its own actual size. In a stereoscopic picture a slight deception is so practised upon the eyes, that we seem to see massive, public buildings, broad streets, and the dimensions of great cities. The spaces then of the visible uni-

verse arise under an instantaneous interpretation of effects, through a protracted and growing knowledge of causes. But not only are the scope and majesty of the visible world due to this idea, our entire belief in the invisible world rests upon it. Phenomena, sights, sounds, sensations, are underlaid with real, permanent existences ; settled, established, consecutive forces, by this notion of causation. Without this, our life would be a waking dream, distinguishable only from other dreams by distinctness of impression. All sense of reality, of valid being, permanent powers, and immutable conditions, all that in its extreme form passes over into the notion of fixed fate, an existence not to be escaped in itself or its circumstances, springs from causation. Those events, which toss us constantly from one to another, those fickle, flexible waves, dallying with every wind, and sporting with the shallop of our life—perfect images of mutability, are nevertheless sustained in thought, by the deep, silent, unchangeable recesses of being, as fixed in their quiet repose and equipoise as the mountain centres. We are anchored and held firm in the universe of God by this notion of causation.

Again, all reasoning concerning nature, all rational knowledge of nature, rests on the idea of cause and effect. If there are no causes, no effects, then each thing and event is a grain of sand, unapproachable through any other, unaffected by any other. No explanation can be offered of the existence and form of any facts, since these are perfectly independent of everything else. Nothing has affected them, they affect nothing, and the mind can branch out from no

one of them in lines of connection or government. The universe becomes a mass of disconnected facts, mere thrums cut short in all directions, its dependencies, figments of the head. It is of no avail to say, that stated antecedents can take the place of causes. They cannot do so, and give the mind any reason or explanation of their presence. The antecedent is unaffected by the consequent; the consequent has no dependence on the antecedent, and the conjunction, if apt, is a new ground of difficulty and surprise. Neither can the materialist, rejecting this idea of causation, explain from fixed sequences merely, any anticipation he may have of the future. That things have been together without ground and dependence, is no reason from which to infer that they will be together in like manner again; but rather the reverse, since accidental conjunctions are conceived of by us as changeable. Nor is the mere fact of a repeated concurrence of phenomena, as heat and light, a ground of expecting their continued occurrence because of the effect of this repetition on the mind. What right has the materialist to talk of an effect on the mind of ever-returning facts, if he admits no effects and no causes? No, all the connections of events, and hence reasoning concerning events, are sundered by the rejection of this idea; and we might as well expect a man to walk with every muscle divided, as the mind to think about physical events, explain and anticipate them, with the conviction that there is no causal dependence between them. Not only can nothing be understood which happens in nature on the materialistic view, no explanation can

be offered of any of the actions of men in connection with it. Motives, ends in view, cannot be assigned as reasons for any undertaking: for an undertaking implies a dependence of results on the means to be employed, a pursuit of objects through appropriate efforts, and these involve causation. Reason, therefore, falls away from human conduct, just in the degree in which causation disappears from nature, and the rationality of our lives is lost, withers under this one central stroke of severance and division of the universe of God from the root of force and purpose whence it springs. When forces fail to execute purposes, purposes must fail of conception or be born to imbecility.

Once more; our sense of the perpetuity of nature rests chiefly on causation. A certain quota, complement of forces, causes, combined in a definite method, are found in the world about us. These remaining, nature, in her present results and laws, will remain. We have, therefore, an expectation of the permanence of these, so long as the plan which includes them shall require them. There is a fixed, expressed purpose in nature, and we anticipate its accomplishment; a method, and we wait for its uniform development. What is this instant in the universe is fitted to carry it forward for an indefinite period, and those, therefore, who predicate a change, have the burden of proof resting on them to show the grounds and reasons of it. These are to be found, if found at all, not in causes themselves, not in the world itself, but in the purposes of God.

Such is the nature and application of the notion of

causation, and such a portion of the purposes subserved by it. What, then, is its proof? How do we know the action of the mind to be valid in affirming causes, in habitually uniting events by underlying forces? We answer, as this is a necessary and constant action of the mind, it is of the nature known as ultimate, or axiomatic. It is as much an axiom, that there is a reason or cause for the fall of a meteor to the ground, as it is that a straight line is the shortest path between two points. Neither of these statements call for any further proof, and for precisely the same reason; the mind is adequate to this knowledge, and this knowledge is ultimate with it. If a man requires proof that he sees, we can give him no other proof than to let him see again. If he denies pain to be painful, we have only to repeat the pain till he thinks differently of it. If equals added to equals do not make equals, there must be added till they do, or nothing can be done for a mind so awry. Accepting axioms is like adjusting a field-glass to its focus. Our labor cannot proceed till this is accomplished. If events can be accepted without causes, then the mind so regarding them is incapacitated to reason concerning them; since, as already shown, reasoning, conclusions, rest on valid connections, efficient forces, determining events to be thus and not otherwise. The ultimate, axiomatic action of the mind in assigning causes, is evinced by its constancy and universality. Neither Mill nor Spencer, nor any philosopher, through mere philosophy, has ever been able to force his thinking into any other channel. Their works are saturated with causation. Their

explanations everywhere involve it. They would not be content to say, the night and the day, the light and the heat, are as they are, because of a stated antecedence. Indeed, what is this very word, because, by a cause, in such a connection, but a suborned witness. Says Hume—an early advocate of stated antecedence, one of the most penetrating minds that ever employed the materialistic doctrines, and who uniformly used them merely as the weapons of an iconoclast, striking down the beliefs of men, while confessing a philosophical inability to supply their place—"Allow me to tell you, that I never asserted so absurd a proposition as that any thing might arise without a cause." He then proceeds to say that his real difficulty lies with the proof of causation. Is there not here a plain missing of the point, a falling off from true philosophy, when one can regard the assertion as absurd, that anything arises without a cause, and still call for the proof of causation? What is an absurdity but something contrary to a primitive, necessary conviction? And what constitutes our strongest and best proofs, but primitive, necessary convictions? Why are the conclusions of mathematics demonstrative, save because they rest wholly on these convictions? Mill's definition of matter, carefully worded, so as to avoid the implication of underlying forces, of causes, nevertheless involves them. It is this—"A permanent possibility of sensations."

Now, what is a possibility, but something which will happen on the meeting of certain conditions? And how can we conceive conditions to be condi-

tions, except as they determine the action of forces ? As far as any apprehension or rational explanation of the mind is concerned, the hand might as well be stretched in one direction as in another, if in neither direction there is any agent or force whose effects it is to feel. Say to a blind man, there is a permanent possibility of your being burnt if you put your hand down, and he will ask you, why. If you cannot respond there is hot iron in this direction and not in that, a fire here, there is not yonder, reason is confounded, and apprehension at an end. Men have wandered so far from the truth, because it is so simple and so near them. They have only to see, only to think, and they prefer to philosophise, till philosophy swallows up simple sight and the primitive conditions of thought. Philosophy has more often swept away the facts it has been brought forward to expound, than presented them in their first force and authority. Yet philosophy, false and insufficient, is the road to philosophy, just and complete, and this philosophy it is that lays bare the foundations of knowledge, and gives to the eye and the mind what before was assured to the foot and hand. There is in the part, which this notion of cause and effect plays in knowledge, a signal illustration of the dependence of physical science on a sound philosophy. The fundamental link between all facts, the connection of thought which every scientific theory from least to greatest is employing, has been denied to physical inquiries, as invalid, fanciful and metaphysical ; yet physicists have adopted and urged forward that materialism, one of whose first

achievements is to dissolve into independent, uncohesive points of vapor, this compacted and consolidated universe, woven and knit together from side to side, welded and riveted together from end to end with cords and bars of force. To be sure, they have matched their blindness on one side by a more fortunate blindness on the other ; and having accepted materialism, they have forthwith forgotten their allegiance to it, in a fresh enthusiasm for physical pursuits, as earnestly tracing causes and delighting in them, as if these had not just been pronounced, by those who lay down for them the laws of thought, mere illusions, Will-o'-the-wisps. Thus the physicist, again and again, strikes the foundation from beneath his own labors, yet goes on to build, employing any leisure moment that may fall to him in deriding metaphysics, of whose most unfortunate and grotesque results he presents the most unfortunate and grotesque example.

Again, we see in this notion one of the clearest illustrations of the weakness of materialism in deriving all knowledge from experience, in regarding the powers of mind as simply the reflex product of material forces. Are we to expect putty to become lucid, pearly, opalescent, by the protracted shining of the sun upon it ? Brilliants catch the light in their first making up, or fail of it forever. Crystalline structure implies primitive, crystalline power. The mind, by its own native penetration, with powers that make it to be mind, threads the phenomenal universe together by forces and agencies that never reveal themselves in the senses ; but, waiting spirits of thought,

stand ready, by explanation, revelation, illumination, to do service amid things otherwise dark, opaque, intractable, dead. The real majesty of the mind is only apprehensible as we see it thus reach, build up, and expound this substantial world of existences about us out of the slight suggestions of the senses, that, like a torch in the night, cast a few gleams of flickering, ghostly light on the things nearest them. The animal that lives in the centre of a circle of sensuous impressions—a circle, a few inches, or feet, or miles, in diameter—stands in what contrast with man, to whom the visible is but the symbol and suggestion of that vast, invisible procession that hourly troops before his inner vision, and makes him the companion of unseen forces, dealing ever with unknown agents, lodged in the matter about him, as ideas are contained in words! He puts his hand to the lever, that he may impart force; he draws near the fire, that he may receive heat; he opens his eyes, that he may catch light from out-lying stars; he lets go the magnetic needle, that it may feel attractions that run from pole to pole; he touches the telegraph, that he may send thought; he administers a remedy, that he may quicken life. Everywhere he is in fellowship with the subtle spirits that do the bidding of his Heavenly Father. Such is man, because such is mind in its primitive powers, in the image wherein it was at the first fashioned; because it pauses not a moment on the film of being, but presses inward in belief of its realities, and in fellowship with them, as substantial as they, as substantial as their common Author. The bit of mirrors that gives back the sky

to the sky were as marvellous as man, if man stood only in passive, dumb reflection of the world about him ; if thought and truth crept into him as light into a crystal. It is because light, comprehension, construction go forth from him ; because by the touch of his commanding thought he builds up this valid universe, not too large for his intellect, not too grand for his emotions, from the ephemeral appearances that come and go around him ; because he penetrates beneath the transient states of his constantly flowing, his infinitely flexible, experiences, and predicates of himself permanent being, immortality, that he stands revealed the heir of all truth, of the spaces and years in which his thoughts so freely, with such primitive ownership, rove ; because, reading the purposes of Heaven in their execution, rising on the present hour, the bower of the senses, as a little island in the great sea, he proceeds to overlook the undisclosed eternity, to declare where land is to be found, where lie elysian fields, the wealth of new continents ; to clothe himself with the faith and courage of a voyager, and, in obedience to the law and the hope within him, to launch forth, not to ground his keel again, save on the shores of the now invisible world.

LECTURE IV.

RESEMBLANCE NOT THE SOLE LAW OF THOUGHT.

IN our last lecture, we spoke chiefly of causation. The discussion is not yet complete. Materialism has not brushed aside this notion without a vigorous effort to supply its place. It has been a great gain to sound philosophy, that the idea of cause and effect is so obviously beyond all observation that few materialists have even attempted to derive it from experience, but have been compelled to reject it as plainly not so to be reached. The great void in thought thus made has been left vacant, or filled up with stated antecedents, according as the parties who have occasioned it have been destructive or constructive in their tendencies—simply sceptical, or ambitious of a new philosophy. The constructive, creative spirit has decidedly predominated in the later phases of materialism, and such men as Mill, Spencer and Bain, have striven to give a consistent substratum, a sufficient connection, to thought without the idea of causation. This effort is deliberately, patiently, and powerfully made in Spencer's *Principles of Psychology*. It rests on the notion of resemblance, which is contained in, which necessarily underlies, that of stated antecedents. Like antecedents imply or give promise of like consequents, and hence the whole attention of science, of thought, is to be directed to likeness, to resemblances, as the real thread of order and coherence in the universe.

Now, there are two sufficient reasons against this phase of materialism which may be urged before considering it in detail. The first of these is, that the notion of resemblance has itself been pilfered, and is an original solvent furnished by the mind, not given to it. We do not see things to be like ; if so, every eye must pronounce at once, and always, on all shades and forms of likeness and unlikeness, as upon all colors. We do not see things, we judge them ; we think them to be like or unlike. The notion of likeness comes in, is brought in by the mind, to explain the things to which we apply it. A great difference between brute perception and rational perception will be found just here. Things are simply seen by the animal ; they are compared by the man, and their agreements as agreements observed. It is one thing to have a sensation twice, another thing to observe the fact, and affirm the identity of the two states. The first may occur many times before we make this last assertion of agreement. If, therefore, Spencer and others should succeed in resolving all judgments into one category, that of resemblance, they would still be called on to explain the origin of this idea, and should not be allowed to assume it as an obvious product of mere experience, of simple sensation. The mind cannot get to work, cannot begin to manipulate its sensations, and manufacture them into thought, without conceptions, ideas, under which it proceeds. If it starts with comparing its impressions, it must first be aware that this is what it is to do, and open the labor under the idea of resemblance. No mere

physical facts arrange themselves, unite themselves in classes.

The second objection, before inquiry, is, that stated antecedents constitute no explanation of facts, but are rather the statement of the facts without explanation. An apple, unsupported, falls to the ground is a fixed sequence, but this is not the ultimate statement, the observed and expounded fact to the true philosopher, but that rather which calls for and suggests explanation. Why, by what force, does the fall follow the detachment of the apple? How is the consequent locked in with its antecedent; directly as the expansion of iron under heat, or indirectly as the increased current in the galvanic battery on the addition of fresh acid?

These are the questions which science is really putting, and it seeks to settle antecedents only that it may penetrate their nature and relations, and thus answer these inquiries. So radical, however, would be the effect on philosophy and science of this analysis of all judgments and resemblance, that it deserves further attention, especially as metaphysicians, so far removed from materialism as Hamilton, seem ready, incautiously, to admit it.

“In opposition to the views hitherto promulgated in regard to Comparison, I will show that this faculty is at work in every, the simplest, act of mind; and that, from the primary affirmation of existence in an original act of consciousness to the judgment contained in the conclusion of an act of reasoning, every operation is only an evolution of the same elementary process—that there is a difference in the complexity, none in the nature of the act; in short, that the

various products of Analysis and Synthesis, of Abstraction and Generalization, are all merely the results of Comparison, and that the operations of Conception or simple Apprehension, of Judgment, and of Reasoning, are only acts of Comparison, in various applications and degrees. What I have, therefore, to prove, is, in the first place, that Comparison is supposed in every, the simplest act of knowledge ; in the second, that our factitiously simple, our factitiously complex, our abstract, and our generalized notions, are all merely so many products of Comparison ; in the third, that Judgment, and, in the fourth, that Reasoning, is identical with Comparison."

Now, as comparison goes on under resemblance, it is evident that Hamilton looked upon this as the all-inclusive idea under which the mind's activity proceeds, and thus virtually leaves no room for coupling our thoughts by cause and effect, or, indeed, by any other intuitive idea. The reason of this is found in his logic, and I need not pause to give it. Its plausibility will be more apparent later. We turn now to Spencer, with whom a kindred belief is the foundation of a more consistent philosophy. It is impossible to give anything more than the concise statement of the result at which Spencer arrives, as the discussion, with steadily growing and closely welded conclusions, approaches the end, through hundreds of compact pages. Says he, as he nears the goal ; " At length, continued analysis has brought us down to the relations underlying, not only all preceding relations, but all processes of thought whatever. From the most complex and abstract inferences of the de-

veloped man, down to the most rudimentary intuitions of the infant ; all intelligence proceeds by the establishment of relations of likeness and unlikeness."

This conclusion has been reached by an examination of mathematics, whose reasonings all proceed on perfect agreement, complete equality of units ; by a consideration of the classifications of science, obviously resting on resemblance ; and of its laws, the expression of like results as the fruits of like conditions ; and by the further and more difficult labor of resolving a portion of the intuitive ideas offered by us—that portion more commonly accepted, such as space and time—into the results of a comparison of like series and contrasted series of sensations. What, then, is the significance of this conclusion, for the red heat and forging of which, a fierce furnace of logic has been maintained, and trip-hammer blows of thought have been bestowed, through a whole volume of philosophy. What matters it, if it be true as Spencer affirms, that all, "the most complex processes of reasoning are resolvable into intuitions—that is, observations—of likeness and unlikeness between terms more or less involved?" In it, Spencer is well aware that there is found the germinant seed of materialism. If the one assumption of resemblance, as a product of experience, can pass unchallenged, and all judgments can be resolved into it, as their very substance, the work is done. Evidently, if we have no other sources of the material of knowledge than sensation, the mind can alone busy itself in comparing these sensations ; the likeness and unlikeness between them will be its sole resource of thought. If,

then, it can be shown by exhaustive analysis, that all judgments are of this character, as Spencer asserts, the clearest color of probability is at once reflected on the correlative doctrine, and it becomes certain that the mind has no other inlet of knowledge than observation, and no other office than the classification of the matter so obtained. The exhaustive and laborious discussion of Spencer is an effort to establish that which would admittedly be true on the ground of materialism, and thus, by an independent confirmation of its conclusions, to shore up the premises on which they rest. Here, then, is the source of the interest Spencer feels in the subject, and the reason of the labor he has expended upon it. The wedge of materialism finds entrance in this assertion of the one unmistakable character of all judgments. The scope of our faculties is thereby defined. Thus much we may do, and not more. So far our powers are reliable, and not further. We can deal with sensations, but we cannot transcend them. We can discover the order that is in them, but we can bring no order to them. The action of the mind on the material world about it is from beneath, upward, as wild vines climb on to and over shrubs in a hedge-row ; not from above, downward, as the hawk perches upon an oak. If we add to this doctrine the sorting power of our physical constitution as Bain presents it ; our nerves defining, connecting, and perpetuating the several classes of impressions that run along them, we see the alleged mechanical and physical features of the mind brought into bold relief. What a fanning-mill is to mixed grains, foul-seed and chaff, separating them and re-

turning each to its own drawer, or repository, our nervous organization is to the mingled impressions of the outside world, resolving them into feelings of various kinds, into ideas and memories according as they enter along this or that channel, tarry longer, or are expelled quicker. The drift of a swollen stream is no more certainly divided, the fine sand yonder, the gravel here beneath our feet, and the coarse cobbles behind us, than, under this general view of the mind, do the several products of sensation, floating in the nervous system, at length gravitate each to its own place. So important are the conclusions as regards the origin and character of our powers contained in this simple assertion, that "the most complex processes of reasoning are resolvable into intuitions of likeness and unlikeness, between terms more or less involved." The scope of our powers is of course correspondingly restricted. We can make nothing more out of morality than can be found in sensations ; these are the cucumbers from which we are to extract our spiritual sunshine, more or less, or go without it. We are limited to a comparison of pleasures, and, therefore, our inquiries can issue in nothing but utilitarianism. If we attempt, in religion, to set up this ladder of like and unlike, and climb into the heavens by it, we find it lamentably short. Indeed, how can God, standing off in the separation of his infinite attributes, be reached by resemblances, whose limited range is that of observation ? Hence, Spencer gives this notion of the infinite place among those pseudo-ideas that haunt the thoughts, but are never reached by them. Or how can any invisible world whatever,

of forces, or powers, or spirits, be reached by a philosophy whose sole occupation is comparison, and whose only material in hand, on which to base its resemblances, are earthly, visible, sensible appearances? The mind is thus imprisoned within the horizon of the eye; tethered down to the range of the nostril, the touch of the finger; and though sharp and cunning enough here, so far fails of immortality and another life that it knows not well what these mean. "Dust to dust," becomes the one law of its being.

How, then, it is asked, is this resolution, so fatal in its consequences, of all thought into the tracing of resemblances, even apparently possible? Because, we answer, there is in it a very broad substratum of truth, and when it is not true, it is closely allied to the truth. Utility, a comparison of enjoyments, is intimately connected with morality, though it is not morality: and the identity and likeness of causes are determined only by likeness and identity of effects, of visible things. If we refer for a moment to the scheme already given of regulative ideas, we shall see how this one of resemblance casts its shadow over all others, and thus, in constant contact with them all, may, by adroit analysis, be furnished as their very substance. We start with existence, but this notion cannot find bold relief till we affirm it of several things; till we have contrasted existence with non-existence, the presence of an object with its absence; and thus, by comparison, given clearness to the conditions of the conception. When we come to number, it involves at once unity and plurality, and a recognition

of the perfect identity or equality, or likeness of each unit, as a unit, in the numbers to be manipulated. Two and two make four only on condition that two is equal to two, one to one.

Again, when we pass to space in its practical applications, positions, locations, are utterly undefined, till we have taken two or more positions and instituted relations between them, compared them as on this side, or that; as above, or below. The words above, below, simply mark the way in which we designate objects that stand in certain like relations to other objects. When we pass on to causation, this is only approachable through resemblances—resemblances carefully, methodically traced among the things with which we have to deal. That like causes will produce like effects is the working axiom of this department: and the likeness of the causes can only be established by the likeness of those visible marks or signs which accompany them. How easy is it, then, dropping the notion of cause, to substitute for the more cumbersome expression, the simpler one, like follows like; and thus to resolve every inquiry of science into one purely of resemblances. This it already is in form, and therein seems to provoke this oversight of its secret nature. We could thus, with Spencer, trace throughout the processes of thought, and, by skimming a little lightly a few fields, reach the same conclusions with him. The error of this analysis will be seen, however, when we scrutinize more carefully our judgments, and strive to render all the elements they contain. Resemblance, as compared with our other intuitive ideas, has been

like more gross, when connected with more volatile, elements in chemical composition. Inaccurate analysis always renders those, while, more frequently than otherwise, these, their subtle companions escape, leaving them the field. Take, as an example, the notion of time. Let this be involved in a judgment, and there will always be a residuum of thought which resemblance alone does not cover. Says Spencer, in substance, if we compare several distinct series of events which follow in a fixed order, and cannot be repeated, the mind is struck with this agreeing fact in them. This sequential relation under which they transpire, in an irreversible way, we call time. In his own words, "It is impossible to think of time, without thinking of some succession; and it is equally impossible to think of any succession without thinking of time. Time, as known to us, is *relativity of position among the states of consciousness*." That is, the agreeing relation between two series of a fixed, irreversible order, is time. Is this analysis complete? Far from it. Stop here, and we have resemblance alone, a likeness of relation. Push it one step further, and we shall reach the missing ingredient. Let several things be given us to compare. We must be told in what respect we are to compare them; in size, in color, in form, or in flavor? That is to say, the comparison cannot be instituted or proceed, except under a specific idea. The injunction, Compare, Compare, is vague and bewildering till we are told in what respect to compare the things before us. Take now a series of sensations which are to be made the subject of our thoughts. We may be called

on to classify them as agreeable or disagreeable ; or the objects which occasioned them, as red or yellow, as hard or soft, for these impressions are all products of our sensitive organs, and may, therefore, guide the inquiry. In each case, however, the guiding point or consideration in the comparison precedes the comparison, has already been given in an organ of sense, and is the light under which the process goes on. Now suppose we are to institute a comparison between sensations in reference to their sequence—a relation, according to Spencer, involving that of time, equivalent to it. This notion also must first be given to the mind, be made present to it, before it can push forward a comparison under it. If the mind has not known a sequence as a sequence, it cannot consider separate series in this respect. The notion of time, then, precedes the comparison, and does not follow it as its fruits. As it is not a sensation, like white and black, it must be an intuition, an idea furnished by the mind under which it institutes and maintains the comparison in the several series of events before it. Thus our judgment is found to involve another antecedent element beside that of resemblance, to wit, that of time ; and this element can itself be made the predicate of an independent proposition. Every event happens in time, is a judgment turning on a distinct intuition, and is not analyzable into resemblance. The same could easily be shown to be true of the other intuitions, as space, consciousness, right. The fact, then, is, that every intuition is present in the propositions to which it pertains as an irreducible element, and that every judgment so

framed as to contain one of these as its predicate, does not suffer resolution. Other judgments, exceedingly like these, may be made to render up the idea of resemblance; but the simple, primitive judgments which apply our intuitions, have each a primitive character of its own. This event has a cause, this action is right, are assertions of first truths, not of a likeness between one event and another, one action and another. If we so strive to explain them, we shall be obliged at length to go further, and account for this likeness between the two events on the ground of the primitive conceptions of causation and of right.

But the notion of resemblance has been especially brought forward to displace that of causation, in connection with which it finds its chief significance. The relation of the two, therefore, in physical inquiries, in science, calls for a brief elucidation. The processes of science all proceed visibly, ostensibly, under the idea of resemblance. The classifying of objects in families, in genera and species, as of plants in Botany, or animals in Zoology, is the first difficult and ever-returning labor of the inquirer. Here a thorough penetration into agreements and disagreements, points of resemblance and of difference, is a chief requisite, and may seem to exhaust the mind's action. But even in these sciences, which are chiefly sciences of classification, this search after the likeness and unlikeness of things has tacit reference to fundamental qualities or properties which belong to them, which make them what they are; or to their descent from common parentage, impressing upon them their agreements.

In botany, plants were for a time united by one class of resemblances, and later, re-arranged under another. Why this change? Because the one set of agreements were believed to be more closely united to interior nature and character than the other; to better express the descent and general properties of plants, the forces in the past which have made them what they are, and the forces in the present which express their innermost being and affinities. What is it that marks the superiority of one system of classification over another but its more intimate relations to inherent, essential, efficient forces, and its greater power to express, therefore, the real position of a plant or an animal in the general plan of life, its kinship of characteristics and descent? And what is this but getting a little closer to the causal relations at work? No single outside agreements, however striking, are of much interest, provided, on the whole, they appear to have been accidental—not the indices of agreeing causes, not the marks of like relations in the plan of properties and powers. The mints have a certain kind of odors: this constitutes a strong feature of the class. But a like odor elsewhere, as in a geranium, is not particularly significant. It is, then, agreements which go beyond the senses, which have interpretation in them, which put us in connection with the secrets of vital and physical forces, that have interest for us, and make classification a scientific process, a means of knowing, of reaching and using, causes. The child may classify his broken bits of crockery by their shape, or the coloring upon them, and, as dealing with mere resemblances, the

relation is accidental, one of no interest. He may classify them according to the material of which they respectively have been made, and immediately they are attached to different portions of the earth, different nations, and very distinct stages of art. No department can establish its claims to be a science till its classifications begin to assume something of this pregnant form, to contain the underlying history of forces, and to strike out, here and there, into flashes of causation. When we get hold of the secret of a force, discover how to breed an animal, how to modify a type, how to mingle colors in a new flower, or flavors in a new apple, we feel that observation is passing into science ; that we begin to know, since we have penetrated appearances, resemblances, and touched with authority the forces that underlie them. Whatever defects the Darwinian theory may have, its chief merit, that which has given it hold on so many minds, has been this : that its classifications are thought to put us on the actual lines of development, to mark the directions of embryonic and of progressive growth. This theory, which is pressed by Spencer, and is chiefly used in the interest of materialism, nevertheless, owes its principal interest to the antagonistic principle involved in causation.

Another and stricter class of sciences direct their attention more undividedly to causes, forces. Of this nature, are natural philosophy, chemistry, meteorology. In mechanics, we are tracing forces exclusively, and agreeing appearances are only thought of as the expression, the language of agreeing causes. Not able to penetrate to causes, we treat them wholly

through their effects, through the appearances that accompany them ; but the mind, the thought, is always truly dealing with the forces conceived by it to be present. A set of pulleys, under certain conditions, raises a weight ; a lever, under other conditions, performs the same labor. The mind has no explanation for these results, except that of equal force in the two cases. The likeness of the effects has its significance in enabling us to attribute, to unlike antecedents, a like secret efficiency or force. This word, force, following us everywhere in physical inquiry, is a constant witness to the nature of mental processes ; a constant reminder of the mind's interpretation of resemblances. In physics, chemistry, meteorology, physiology, we are satisfied only as we seem to touch and define the forces at work ; and it is our greater success in this respect, in one department than in another, in dealing with physical and chemical forces than with vital forces, that makes of the first a more complete science than of the last. It is a matter of choice in geometry whether or not we formally state our axioms. They just as certainly underlie the proofs in the one case as the other. The mind requires no reminder of axioms ; thus is it with this idea of causation. Phenomena run along on the surface, under the form of resemblance, and language often takes them up in this shape ; but the mind does not the less interpret them through the ever-present axiom of causation. A boy shapes the clay in his hand into a marble, and the bullet comes forth from the mould, round. The two balls, as balls, have no interest to observers. They are like in form from

totally different causes. The dew-drop enspheres itself at the end of a grass blade ; the shot falls from the tower, and reaches the water a solid sphere ; the earth, a mammoth globe, has felt its central force shaping it through every solid inch of its contents. Here, a resemblance opens a vista into forces, and the mind is all attention. The rounded pebbles of conglomerate rock, the abraded stones of a mass of drift, have meaning in their forms, because they indicate the previous action of forces like those which now chafe the shale on the beach. Resemblances, then, are the visible signs of an invisible thought, and it would be as possible and as philosophical to say, that in language we are dealing, not with ideas but with like characters and sounds only, because these are always present, and all that is present to the senses, as to say, that we are dealing in science only with the likeness of phenomena, because this likeness is the inseparable expression of the included causes. Scientific inquiry progresses under one idea, and through and by it reaches another, as the eye follows the printed page, while the imagination revels in the imagery of poetry, and the thought strikes deep into its sentiments. Indeed, there could be no depths in poetry, were there no hidden truths in philosophy : were all phenomena a spectral surface play, a filmy effervescence, an illusion of the senses, without source or issue, permanent being or efficient force.

This axiom of causation, this regulative idea of force, which we have now taken so much pains to define and establish, is the essential frame-work of

the physical universe. It is the limit and law of all its connections. It excludes fortuity, shuts out the chaos of chance, and limits accident to unperceived, unanticipated causes. Creation is order, is the settling and defining of forces; is the putting of given things in given places; is the shaping of results according to a fixed method: and this labor throughout is but the systematized action of causes. Creation is the wedding of defined action to a defined element for a defined end, and this is the law of causes. But that which conditions the presence of order in the universe, conditions the mind's apprehension of that order. All thought, all inquiry, all movement backward or forward for the apprehension of that which has been, or anticipation of that which is to be, must proceed along the connection of fixed causes. By as much as the effect should be found to differ from, or transcend, the cause, by so much would there be a loss of all connection, all dependence, a cutting of the thread of force and thought, which had entered the fabric of events. The mind, when dealing with things—observe the limitation—can only unite them by this notion, and, therefore, all forethought and afterthought, all passage of the perceptive faculties into and through the objects about them, must rest on this idea, must arise under this law of the physical universe.

What is true of thought, is true of our active powers. There is one and the same condition of their exercise. We learn to control events, because we learn the forces which are efficient in them; can ourselves add to their efficiency or withdraw a portion

of it from them. The physical universe is a middle term between us and God. It is an express declaration, on his part, of what he has done, and what he will do : what forces he will loan us, and on what conditions. We, therefore, enter the field of exertion under a settled contract. We can make no sudden appeal for favor ; we can find no extenuation for ignorance, nor oversight for indolence. We are put at once to inquiry and faithfulness, and the least failure in either is liable to a severe punishment. Now, under such conditions only, could we work with God, or find a motive even for exertion. If physical forces were not fixed in measure and law ; if they were liable to be suddenly withdrawn and re-issued under new conditions ; if they were occasionally complemented by supernatural intervention, so far forth elements of uncertainty would enter, inducing idleness, an ill-grounded faith in our own good fortune and God's grace to us. Indeed, a belief in the power of prayer even, is sometimes so held as to lead to an oversight of duties, of natural laws, whose injunctions are in the imperative form. Nothing is more natural and inevitable than for men, with many wayward desires and indolent tendencies, to excuse themselves from foresight and energy by some ungrounded trust in God. With the present stern and unyielding administration of natural law, there is yet much reliance on good luck, good fortune, and providential intervention. The power and office of prayer we shall discuss later, we only now remark that this stern force of causal connections, this frown of law, are needed to prevent prayer's becoming the pack-horse

of the lazy and imbecile. The possibility of work, the necessity of work, and the reward of work, are found in the stated connection of cause and effect. Through it, we know what we may do, under what conditions, and how far our doing will be effective. We know what we must do, or suffer the punishment of vagabond powers. We know what rewards are ready to crown our labor, and to unite the irksome entrance of toil to the glad exit of success. The cogency of this discipline cannot be abated one iota without immediate degeneracy ; without loss to that strength of will, that keenness of thought, that sobriety of feeling, which are now the means of success.

Not only is the universe a middle ground of labor between man and God, it is a middle term of thought. Revelation does do nothing, and could do but little, to contradict the lessons of the divine character and government given under the creative hand and seal of God. If there are unchangeable purposes in God ; if there are straight lines of law ; if his moral government involves grave responsibilities, and strange, momentous liabilities ; if indolence and ignorance are not to be screened from both rebuke and punishment, a foreshadowing of these truths must be found in the physical world. The fixedness and stability of causation, therefore, undergird the material world as by a divine foreordination, for a purpose wise in its conception and faithful in its execution. If coherence, consistency, progress have been thus secured in the outside world, coming up from the dawn of geologic time to the present, varied development and completion of his labor, a like coherence, consistency, pro-

gress are reflected on the moral purposes of God, and transferred from his lower to his higher Kingdom of Grace. If he was not stinted in time, or limited in resources under the one fixed law of causes, but brought forth from the merest germ of nebulous, chaotic force, this present world, no more, we are taught, will he be embarrassed and baffled by the law of liberty in man, in bringing forward his second, his spiritual work of creation. If there were fluctuation, change, uncertainty in the work already done, then might we anticipate like fickleness and feebleness in the future ; but now the outside world, in its unyielding laws and steady growth, is a purpose of adamant, an unchangeable truth between us and God, a key of iron, working between guards of iron, opening the door upon his foreordained purposes, his imperishable undertakings. Moreover, only thus could any final causes, any ends enter into the conception of the universe. Motives, objects proposed, are dependent on sufficient means for their execution, and are rendered rational, intelligible by the presence of such means. The plans of God give rise to a settled relation of means to ends, and, in turn, are expressed, revealed to us by this relation. What is done, steadily done by natural law, thus expounds the divine purpose, and gives us the design of our Heavenly Father.

It is not strange, that a positive philosophy that struggles against causes should still more resist final causes, and stigmatize those inquiries by which we forecast the drift of things, discern the ends around which they seem to rally, as futile, abortive, fanci-

ful. The mind naturally pushes its questions of explanation in two directions, backward and forward. It asks, whence a thing comes, when, where and how it was made ; and also whither it goes, for what purpose it was so made. These inquiries are mutually dependent. If the one is legitimate, then is the other. If we may ask how a thing is made, we may also ask why it was made ; if we may inquire whence it comes, we may also seek whither it goes : if we may search for causes, we may also for final causes. The rationality in its conception, in the making of a thing, implies a like rationality in its destination. Indeed, its purpose is locked up in its construction, and may be sought for there. The plans of God come forth to us in their settled methods of execution ; and in inquiring into causes we unconsciously see their drift, that which they accomplish and were intended to accomplish.

This law of causation, now seen to be so fundamental in the universe, so of the very essence of things, has given rise easily to two errors. It has been thought to exclude miracles. It rather makes way for miracles. How can there be a miracle, except there is a law to set aside, a rule to overrule ? If there is no firmness in the law, then there is no glory in the miracle. Indeed, coherence, cogency, are the conditions of the magnificent, sovereign exception ; just as critical laws and established tactics, in their general sufficiency and soundness, cast lustre on the solitary exceptions which genius discovers to them. Both the condition and the reason of miracles are found in the rigidity of the law. The natural law

is rigid for the reasons dwelt upon, but being rigid, it is liable to disguise freedom, and strangle personality. Hence, there come at once an opportunity and a reason for breaking through this web of law, when it threatens to become a veil between God and his children, for parting it, not rending it asunder, that it may be seen to be but a veil, on whose historic folds the divine, creative achievements are slowly wrought by the hidden hand of God.

Another like and more inclusive danger to philosophy has appeared in connection with causation. The mind, so constantly, so protractedly, so pleasurably occupied in tracing forces, and in the explanations which these afford, has been liable to deem this the true type of all thought, and to regard no solutions as satisfactory which do not eventuate in this connection. Hence, liberty, the freedom of the will, has come to be looked on as a species of fortuity, hardly to be recognized in sound thought. Physicists have established their methods and conceptions in the region of physical facts, and have not been able even to understand anything which transcends them. Hence philosophy, metaphysics, have been compelled to accept, in detraction, the appellative, transcendental; as if all that lies beyond physics were a region of moonshine. This view we hope later to do something to correct, and, while we accept causation as a corner-stone of the structure, to excuse ourselves from regarding it as the very temple itself, its penetralia and worship.

We will conclude this lecture by pointing out the necessity of a correct, thoroughly causal notion of

causation itself, in order to the plausibility even of this attack on liberty. Those who deny the validity of the idea of cause and effect, probably all of them, reject liberty, and unite the two classes of phenomena under the explanation of fixed antecedents. Yet what is more obvious than that inductively, by observation, no settled, unvarying sequences can be established as a clearly recognized fact between motives and actions ; between circumstances and the fruits of them in conduct. Every one sometimes disappoints us, and few indeed expect men to respond to every change of external conditions with the exactitude of a steam-engine, or an electric battery. The argument against liberty has always tacitly proceeded on an assumption of a certain force in motives, of their causal connection with the effects suitable to them ; and Leen attended with the further assumption, that, on any unusual change of conduct, there has been a corresponding change in the inner hold of the motives on the feelings. Now, if it turn out that there is no such causal relation, no grapple of actions by persuasives, the opponent of liberty is thrown back upon the much more difficult proof of fixed antecedents, to wit : that given circumstances are always followed by given actions. As the complete presentation of all that makes up circumstances, when the word is used in connection with choice, is impossible, and as the partial surveys of the conditions of human actions which are open to us, exhibit great variety and changeableness of results, very diverse actions following from circumstances closely allied, a plausible proof even against human freedom,

on this ground becomes impracticable ; while a cursory inquiry seems to indicate that the relation between antecedents and consequents, when conduct is concerned, is by no means so invariable as it is when we are dealing with purely physical forces, and thus to show that the connections are not of the same, settled nature in the two cases. It is the secret force of the idea of causation, its tending to go beyond its own field, and insinuate itself as the law of relation, of dependence, everywhere, that has wrought against human liberty ; and while, therefore, we reject the proofs of the necessitarian, we draw from his own doctrine this conclusion : that he at least should maintain a firm hold on causes, since it is on this ground that he accepts as certain a change in the force of motives, when no visible occasion for it, or trace of it, is seen. If the causal idea, by its own force, is so to wed the motive to the action as to imply a change of the one on every change of the other, and to make us willing to believe in an altered efficiency in inducements which remain externally the same, then must the notion be held in its integrity, not refined away into simple antecedence. Thus do we bear with us everywhere the secret laws of thought, seizing the explanations they offer. When causation has been theoretically rejected for matter, it is often restored for mind, and rooted up in its true field, is surreptitiously planted in another. We are constantly reminded that it is the first labor of thought, the true province of philosophy, to assign to their own field and phenomena the regulative ideas of the mind, and to maintain their primitive authority there : to

set up each faculty, an autocrat in its own realms ; the nose for odors, the eye for sights, the memory for recollections, the intuitive reason, in its diverse functions, for furnishing the just connections of thought. We thus stand where the hand of God has put us, where it has lifted us, that we may overlook his works, physical and spiritual ; that we may see the things beneath our feet, about and above us, the excellent things into which we have been born, the heavenly things into which we are to be born, as the soul, breaking its chrysalis, shall come to the full inheritance of its enlarged powers. There is nothing so damaging to God's grace and our immortality as not to use the eyes he gives us, as not to climb, with mingled faith and vision, the slant sunbeams of truth.

We have now directed attention to these points in connection with causation : first, its primitive character ; second, its exclusive application to physical events ; third, its absolute necessity for their apprehension ; fourth, the impossibility of substituting any other idea for it ; and fifth, that by means of it a common ground of activity between us and God is secured.

LECTURE V.

MATTER ; ITS EXISTENCE AND NATURE.

HAVING finished the discussion of cause and effect—the law both of force and thought, which applies in the physical world—we wish, before passing to the second correlative branch of knowledge, whose events transpire under the light of other ideas, to use this notion in the present lecture in an inquiry into the existence and nature of matter.

Matter is the seat and source of all forces. Forces, in it and through it, play on to each other, and the point of departure and return in their causal interaction, is ever some form of matter. The nature and certainty of our knowledge of the material world have constituted one of the most protracted and perplexed of philosophical discussions. Many have so far missed the proof as to have lost hold of this material side of our being, and to have cast the conceptions of the ear and the eye about the mind's own activity, as clouds encompass the earth, springing from it and returning to it, hovering in airy spaces, absorbed into invisible vapor, condensed again into visible form as the forces from beneath and above play upon them. The great difficulty in explaining the perceptive processes of mind, as indeed every other process, has lain in an oversight of the mind's original activity ; its unobtrusive and constant contribution, to every act of comprehension, of the prin-

ciples, the laws of that act. Sensation, reflection, memory, are prominent, salient forms of activity, but that mental rendering of the rational conditions under which they take place, which seem rather to be pervasive qualities of each act than any direct addition thereto—this has continually escaped attention, and presented the processes of mind in a confused, crippled and insufficient way, through the loss of that which is most peculiar to them. Thus, in the act of perception, the part which the notion of causation plays being wholly overlooked, or inadequately apprehended, has left the proof of the existence of matter unsatisfactory, and has led to very untenable statements of what the mind reaches in perception.

The first and spontaneous impression in reference to sensations and perceptions seems to have been, that they lie, as purely mental phenomena, wholly within the mind itself, and therefore, do not directly, of their own sufficiency, put us in connection with matter, as a physical existence forever outside consciousness. An oversight of the mind's necessary action under the notion of cause and effect, thus later led to the conclusion, that if the mind does not directly transcend itself in sensation, does not break out of the charmed circle of its own states and acts, does not penetrate to a world beyond itself, it has all the forms and the conditions of its activity within itself; and dealing with these, strictly its own phenomena, has the full complement of existence without any outside world whatsoever. Admittedly, all that the mind directly knows, all that is permeated by its own consciousness, are its own states and acts.

These, therefore, granted to it, render, it is said, the belief in an outside world unnecessary. Its sensations, in which, at first sight, the mind seems to reach something other than itself, being nevertheless, on further thought, shown to be wholly within itself, give it the entire material of knowledge, aside from any agency of matter; and matter, therefore, as superfluous, drops away. Hamilton, and many others with him, pushed by these and like considerations, have affirmed that matter is directly reached in perception, and that therein is found our proof of its existence. If by perception were meant the entire, complex act of the mind in connection therewith, both the effect in the mind which is due to an external object, and the mind's inferential grasp of this object, then we should heartily assent to the statement. We look upon perception as a wonderfully complicated and rapid process, as adding to a first susceptibility much acquired skill, and compacting many impressions and judgments into a penetrative and powerful act of mind, in which it especially displays its constructive and independent strength. Under the notion of causation, and by the teaching of protracted experience, impressions, impotent in themselves, are transformed into far-reaching and firm conclusions—conclusions so firm and far-reaching, that they seem to be lodged in the very organ of sense itself; and a landscape which we have constructed out of scarcely more material than Aladdin found requisite for his palaces, seems to be seen and known and felt by us through all its solid substance. We do not understand Hamilton, however, in his doctrine of perception to refer

to this inferential, complex nature of the act ; but rather to conceive the pure perceptive process as a direct and simple grasp of matter by mind, a sufficient and ultimate proof of its existence. To this, we decidedly object ; believing as we do, that the pregnant idea on which the existence as well as the nature of the physical world rest, is that of cause and effect. That Hamilton is to be understood as affirming this direct knowledge of matter in the perceptive element alone of perception, is clear from the following passage : " Suppose that the total object of consciousness in perception is equal to 12 ; and suppose that the external reality contributes 6, the material sense 3, and the mind 3 : this may enable you to form some rude conjecture of the nature of the object of perception." Plainly, Hamilton supposes that to the extent of 6, one half of the phenomenon in that state of mind which is the basis of perception, matter finds entrance to consciousness, and is intellectually permeated by it. This is not the doctrine, but quite opposed to it, that the pure mental state and product present in perception is made the necessary condition of the mind's inferentially reaching the external world, is the salient effect whence the mind strikes outward to the cause, and, in its further explanation and expansion, constructs the visible universe.

Examine sensation, perception, in each of the senses, commencing with the feeblest. What alliance is there between a given odor and a rose or a geranium ? How totally experimental is the reference of the one to the other ! How completely we fail to reach any matter, even the slightest particle, through

this sense, believing indeed in the presence of such floating particles only through our idea of cause. Almost as manifest is the same fact in the case of taste. A flavor has no likeness to any form of matter ; no power directly to disclose matter. We learn to refer distinct flavors to their several material sources ; but we do this only by protracted trial, and then may find a decided taste on the tongue induced by disease, or by an electric current, not referable to any object. So far does this sense fail to disclose real outside existence. On sound, we need not pause. Obviously, the thing heard, the source of the sound, is remote and inferred. In the case of touch, the object lies wholly outside the organ, in no way penetrates it, and can constitute no part, much less one-half part, of the sensation, which consciousness permeates, and, by permeation, reveals. Close all other senses and deal with this alone, and the inferential nature of the results are quite obvious. We cannot certainly say in every tactile sensation, that anything has touched the organ. Some prickling of the finger-ends themselves may explain it ; or, the fact of contact being settled, how explorative and protracted must be the touch to lead us to a tolerably safe conclusion as to the real object which has occasioned the impression. How many things are smooth, how many hard, how many tickle or burn the skin ! If, now, we infer that the fabric in our hand is velvet, because of its softness, is it not equally obvious that it is to us a fabric, a something, because it responds to a sensation ? What is the particular inference but a specific form of the general inference ? If we

reach the idea of velvet through softness, do we not the general notion of matter, through the general fact of sensation ? Most obviously we do.

Passing to sight, the most difficult to analyze, as it is the most complex of perceptive processes, we ask, What is it that we see ? As we commonly use language, undoubtedly, the remote objects, the moon and the stars, the fields and the trees, the walls and the windows. Popular speech includes in the word, see, all that amplifies and completes vision. We say, confidently say, that we have seen a man, when the eye has actually fallen on no part of his person, but he has been recognized by his garments and walk simply. That portion of the complete act of sight to which Hamilton wishes to draw attention, and to affirm in it a direct knowledge of matter, is the purely organic part occasioned by the light. "But in the second place, what is meant by the external object perceived ? Nothing can be conceived more ridiculous than the opinion of philosophers in regard to this. For example, it has been curiously held—and Reid is no exception—that, in looking at the sun, moon, or any other object of sight, we are, on the one doctrine, actually conscious of these distant objects ; or, on the other, that these distant objects are those really represented in the mind. Nothing can be more absurd : we perceive, through no sense, aught external but what is in immediate relation and in immediate contact with its organ ; and that is true which Democritus of old asserted, that all our senses are only modifications of touch. Through the eye we perceive nothing but the rays of light in relation to, and

in contact with, the retina ; what we add to this perception must not be taken into account."

Do we then directly know the retina, and the image on it in vision ? Not at all. Our entire knowledge of the structure and relations of the eye is an after-knowledge, picked up itself through independent perception, not disclosed primitively in those very perceptions of which this organ is, from the outset, a means. We know nothing of the ear, through hearing ; of the eye, through seeing ; of the brain, through thinking. The brain must be seen to understand its structure, and the eye disclosed to a second eye before even the existence of the retina and the image it holds can be known. In all this discussion, the body is just as much outside of the mind, its existence, form and functions to be learned by the mind, our senses in turn exploring each other, as any portion of matter whatever. We may say, that the likeness between the picture on the retina and the external objects it presents, is philosophically unfortunate, as it leads us to think that the mind knows this image in some way, for what it is in itself, and is thus easily united by it to the corresponding external fact. We suppose that the connection between the state of the retina and what is sight to the mind, is just as inscrutable, and, so to speak, arbitrary, as between odor and the contact of the floating effluvia with the lining of the nostril. If it should be shown, as has been suggested, that the optic nerve is actually affected in vision by the different degrees of heat which belong to the different shades of color and light on the retina, that the perceptive surface is

below the screen which receives the images; and not identical with it, we do not imagine that the philosophical bearings of the question would be the least altered; though this immediate knowledge of the image on the retina would thereby become a palpable absurdity. Even now it is scarcely less. Double and inverted images render to the mind a single and correct impression; because these images are not the direct objects, but the indirect means, of vision. Press aside the axis of one eye, and without altering the image, sight becomes double.

The extent to which vision is made up of judgments has become more and more evident. The form, distance, and size of an object are matters of immediate and rapid inference from the data given by the eye. Hence it is, that the mind supplies, in the recesses of a mirror, the exact position and relations of objects which do not directly meet the eye; and it sometimes fails, when the reflection is very perfect, to distinguish the image as an image, from that which it represents. If, then, the size and forms of things are matters of judgment in this sense, how plain is it, that the objects themselves, known only under these essential features, are also a thing inferred. Nor do we, any the more, know directly the light, the intervening agent between us and visible objects. Indeed, that color is due to the light, and not inherent in the flower, the cloud, the shell is a scientific discovery consequent upon the resolution of light in the prism. The method in which the mind employs the organs of vision is evident from many illustrations. Take, as an example, the following: A

portion of the landscape, somewhat remote, is caught sight of through a seam or crevice, like that which separates the inner edge of a half-open door from its casement. The eyes, at the distance of a few feet from the opening, view each a distinct portion of the remote objects. The two parts of the view are thus separated by an invisible interval. If one eye is now closed, and the sight concentrated through the other, this portion will still remain distinct on the re-opening of the eye, while the part which this eye is ready to add, will scarcely, if at all, be discerned. By reversing the process, a like prominence may be given to the objects seen through the eye, before closed. If now we strive to look equally through both eyes at once, we shall see two crevices separated by a narrow strip of wood, made up of the opposite edges of the door and of the casement, meeting in the middle. This and like examples show, first, that the mind uses the eyes, and is not mechanically subject to their impressions; since it subordinates one to the other, and unites visible objects as suits its convenience, around a centre of its own selection. It also shows, that when it submits itself simply to the impressions on the organs, these often distort the facts, are emphatically fictions, and wait the correction of varied conditions of judgment. Not even mere color can be shown to be exclusively of external origin. Before the closed eyes there is oftentimes a play of distinct colors which have no connection with outside objects. The centre of the now obscure field of vision is occupied by colors which come and go in distinct succession.

This doctrine of direct perception seems also to be untenable, when we contemplate the movement in the organs of sense, which is the condition of the mind's action, which calls it forth. This movement is inward rather than outward, while the activity of the thoughts seems to be expended purely in inferences. The sound—that is the motion which is its condition—enters the ear, passes through its various media of communication, affects the nerve, and by it, as a modified impression, reaches the brain, where it seems to find arrest, and to wait that use and interpretation which the mind makes of it. Thus is it also with the light. It creeps in with modified movement to this centre of sensibility. Every portion of the chain is essential, and it finds attachment and completion in the cerebrum alone. Of any outer movement of comprehension along the organs of sense consequent on this in-going impression, we have no proof whatever. The point of final solution and transition, therefore, seems to be found in the brain, and the ultimate thing apprehended and interpreted is a nervous affection, a modified state of a nerve centre.

Two things, then, are evident : first, from our own consciousness, that the mind does not, in sight, in hearing, directly know those nerve conditions which are the final occasions of perception : and, moreover, that if it did, it could not by them directly discern an external world. If we affirm the whole nervous system to be an organ of perception, the argument is not essentially altered, it is still dealing with its own subjective impressions. The motion is inward, becoming as its latest form, the form in which it is a

condition of perception, a play of nerve matter. This last step is the connecting link with mind, and is utterly unlike the object which occasions it. We reach the same conclusion also from the surprising way in which the mind substitutes, under protracted trial, one sense for another. Ordinarily, the eye is the great portal of knowledge. Its double leaves stand wide in all our waking hours, and the pomp of earth, and the glory of the heavens, find ample entrance there. Indeed, compared with it, any other sense is a bastion wicket, turning reluctantly on rusty hinges to admit a single messenger on some odd occasion. Let, however, these front gates of the soul be swung shut forever, and the clamorous thoughts be forced to seek another exit, and, with strange skill, they explore the forgotten, over-grown path of touch ; soon make of it a highway, till half the facts that had trooped daily up to the entrance of vision find easy access here. Engineering, generalship, the most difficult and ranging of out-door employments, have been brought within the scope of those perfectly blind. Now, this sudden elevation of a sense into a new position, shows at once how much our perceptions are dependent on the mind's cultivation, and how feeble and barren they are in themselves. How we grope and sink into an attitude of helpless, almost hopeless, inquiry, when suddenly blinded, yet, how this passes away under familiarity, till in rare instances the unfortunate one seems marvellously endowed again, penetrating the outside world with an astonishing keenness of perception !

Forms of delirium and mental aberration show

also in a striking way the method of the mind's action. A physical derangement of the nervous media of thought and perception is attended, in these cases, with a firm belief in the immediate, visible existence of objects wholly unreal. This fact shows that the mind does not directly know the character of the nervous states that condition its action, and that it projects and constructs the impressions consequent thereon, into a world so real, that it does not for a moment doubt its existence. If, then, the visionary conceptions, evoked by abnormal nervous states, are apparently valid to the perceptions, how plain is it that the normal, perceptive act turns equally on physical conditions unknown to it as such, and made the grounds of a construction purely mental? Subjective states, every way unlike the material objects and media which occasion them, are used by the mind as the conditions of its perceptions, and it is so governed by these that it cannot go back of them, even when they contradict its healthy, daily experience.

Moreover, if we reflect on the relation of mental phenomena to consciousness, we shall come to the same conclusion, that perception is an indirect, not a direct, process. From this source has come the burden of that general conviction among philosophers, that the mind cannot directly know matter. All the states and activities of mind have one invariable condition, consciousness. We are alike conscious of an inference and of a sensation. Therefore, so far as direct knowledge extends, consciousness must extend, since nothing can be in the mind's states and

activities which is not permeated by consciousness ; and nothing which is not of its own states and acts can be otherwise than indirectly, inferentially known. Indeed, this is precisely what is meant by indirect, as contrasted with direct, primitive knowledge ; that the last lies wholly within the mind, while the former inferentially, in thought, transcends the mind by virtue of premises present to it. If it be said, that we are simply begging the question, in saying that perception is not direct knowledge, we answer, What other definition are you prepared to give of direct and indirect knowledge than that the one does not transcend the mind, and the other does ? And, if you affirm that in this sense, perception is still direct knowledge, we ask, How can it be unless the phenomena of matter as perceived, are then and there, phenomena of mind, permeated by consciousness, taken within the precincts of the soul ? Thus the very desire to establish an outside world in direct perception, identifies its phenomena with those of the mind, issues in idealism, and abolishes matter altogether. Matter only remains matter, with which to make an outside world, on condition of leaving it, in all its forms and forces beyond the mind, beyond consciousness, there to be reached in a secondary, inferential way. When we speak of perception, in popular language, as direct knowledge, we do so on the ground of its ruling, initial, characteristic element, not as excluding from it all inferences.

Having now established, as we believe, the proof of the existence of matter as resting on the causal action of the mind, leading it to distinguish its vari-

ous states from one another, and to refer them to distinct sources, we pass to the second question, What is matter? We answer, It is in its distinct elements, permanent forms of force ; it is force. Here we shall fortunately agree with many physicists, whose society we seem scarcely to have cultivated. The conclusion that matter is force, is pressed upon us, as the simplest one open to us, as the one that rests without redundancy of supposition on the proof. All that we know of matter, is its power to effect changes ; are its phenomena, the appearances to which it gives rise. These, therefore, must be referred to a source or cause : and as to us, they only evince force, force becomes their sufficient explanation. We are to bear in mind that this force, the constant source of phenomena, is, in itself, perfectly unphenomenal, and, therefore, cannot be handled by the imagination. We cannot conceive it, and striving to conceive it, we immediately transcend it by investing it with some of those appearances to which it gives rise, as effects, but which are not of its very essence. When, therefore, the mind gives to each molecule a material centre, it is only a trick of the imagination, striving to restore in minutiae what it has lost in mass, likening the infinitesimal part to the whole of which it is a portion, and presenting it under the same phenomenal dress. The imagination is the faculty that chiefly embarrasses us in accepting matter as pure force, and it is the eye that principally rules the imagination in its belief in a stubborn, material centre, as an ultimate product of analysis. The words, green, brown, black, have a meaning for

the imagination : the words, pure force, that is, force aside from any visible appearance, any motion it is occasioning, any work it is doing, have no meaning to the imagination ; that is, can be handled by it under no image. Hence, it is uneasy and restless under so thin, visionary a conception, and wishes a world of more palpable imagery. This it gives to itself when it re-habilitates molecules in sensible properties, and says that the centres of matter, that is visible, stubborn outside matter, are also material, that is, visible, tangible, unconcessive, under the senses. This they, doubtless, would be under organs sufficiently acute to reach them, since, to such organs, they would give rise to new phenomena, revealing, indeed, their existence, but not disclosing their nature, as simple centres of force. Thus, exactly, the child's ball is known to him by hardness and color, though the very nature and force of its being are still hidden and invisible. What we say, then, is, that to the reason, which can alone deal with the ultimate nature of matter, and not to the senses, or to their echo in the second degree, the imagination, matter is force—the permanent power to do what it does, to make the impressions which belong to it. Nothing can be simpler, or more unavoidable, than this conclusion. It is axiomatic under the notion of causation. Any other conclusion gives to matter more than the phenomena require.

What, then, do we know of the nature of this force, with which the mind sustains as a substance, a permanent existence, equally the changeable appearances, and the more abiding forms of matter ? Plainly,

nothing, save the naked fact that it gives rise in each case to a given class of phenomena. Its effects precisely measure and express it. They are the form of its being, and the whole of its phenomenal being, at least so far as we are concerned. They are as essential to it as it is to them. To know all that a force can do, is to know the force, since this is what makes it to be a force, and defines it as one. We may, indeed, assert the possibility of other kinds of sensations in addition to those known to us, and imagine new impressions made by the various forms of matter in other organs of perception, but we thereby get no new view of the nature of force, since, if we were possessed of a half thousand, instead of a half dozen, senses, they would all only render phenomena, and leave the essential nature and being of matter unapproached. Indeed, it may be questioned whether this asking after the quality and essence of matter is not to us an essentially deceptive inquiry, since the only possible answer we can conceive of, would be the giving of further phenomena attendant upon it, and these, however multiplied, would still leave the very force unknown. Every form of force is defined to us in the senses to which it appeals, and the effects wrought in them are necessarily its final definition. To one who should have eyes only, color would be the entire result which force could compass in making itself known, in declaring the nature of its being. If one sense after another were added, hearing, taste, touch, new circles of presentation would be present, and a given kind of matter or force would show itself as that capable of accomplishing a certain aggregate

of results. That is to say, the force is in the effects, and the effects are so of, and over, the force; that we know all that is to be known of it, both in the mode and measure of its being, in knowing these. It is an impractical, if not an absurd, inquiry, to ask for anything more. Our senses are present for the precise purpose of disclosing the material world; that is, the effects of that world, not its intrinsic, unphenomenal nature. We may fancy as an illustration of the attitude of matter toward mind, the presence of a spirit seeking to make itself known. It strives to assail the senses, affect the touch, make a noise, to startle the eye. On no other condition can it disclose itself, and the phenomena it is thought to occasion become immediately our notion of it—a sheeted ghost, usurping the midnight hour.

If now the mind seems ready to revert to the position of the materialist, and to inquire, Why have any force at all, any cause, if we only know it in and by its effects, and these are its entire measure? we can only answer, Because the mind persists in assuming it, and if we check its reasoning, dissolve into nothing its connections here, we loosen the bonds of all thought, and find ourselves afloat on liquid, facile, fickle appearances, with no harbor nor anchorage. If we are to deny the chain of connection at its conclusion, deny it at the outset, and ceasing at once to seek for causes, cease to either ask or to render the reasons dependent on them. Forego all discussion on physical things; as a mere repetition of consecutive facts can be no ground on which to infer a future sequence, unless one cause is at least granted, to wit:

that the often-renewed experiences of the mind incline it to the expectation of like relations. In brief, we must accept this intangible cause, or the locks of the head are shorn, and our rational strength departs from us.

If such be the only possible knowledge of forces, and yet such also the absolute necessity of admitting them, it is further plain, that the physicist, in generalizing all things into force, has reached a verbal, rather than an actual, unity. Many forces, not one force, is the just conception of matter. We have, so far as now appears, at least as many distinct, permanently diverse forms of force as we have elements, or kinds of matter. Sixty-three irresolvable elements—elements that present specific and unchangeable properties, necessitate the belief in as many forms of force, of which these are the ultimate expression. To say that all matter is force, therefore, is not to say that it is identical in being, nor in the least to wipe away those distinctions in kind, which stubbornly linger in experience, no matter how trying the processes of dissolution which mechanical force, heat, electricity and chemical affinity supply. Moreover, force has other peculiar forms of existence more detached, general and independent than those which pertain to the very essence of matter, and give it a separate, ultimate, uniform, molecular character in each of its elements. Mechanical force, the forces of cohesion, of attraction, of crystallization and of chemical affinity, electric, thermal and vital forces are of this nature. It has been shown, under what is called the correlation of forces, that some of these are intimately united ; a further correspondence and

equivalence may be revealed, but their entire identity is far from yet appearing. A portion of them at least replace each other in definite quantities. A given amount of chemical affinity or force, disappears on the production of a given amount of galvanic force; this, in turn, replaces a fixed equivalent of mechanical force, itself capable of a further exchange in heat. Reversing the process, heat, as in the engine, may be turned into power; power by friction may be replaced with electricity, and electricity may break in on chemical compounds, securing new adjustments of chemical force. Experiments in the correspondence of forces, however interesting in themselves, by no means establish their identity of being. Differences still remain; for instance, between mechanical and thermal and chemical forces in their manifestations; and till these are removed or explained, we must recognize a corresponding difference in the forces themselves. If mechanical forces act on masses, thermal forces on molecules, and chemical forces on atoms, this, nevertheless, is a difference, and the ground of it must be referred in each case to the force itself, till further knowledge gives us another explanation. The fact that mechanical force calls forth heat and disappears in doing it, no more identifies the two, than does the fact that volition issues, first in muscular motion and then in sound, establish the oneness of the three. Indeed, the permanent fact of their constant, separable manifestation, even to the senses, still remains, and is a sufficient ground, both in language and thought, for their distinction. Either in the very forces themselves, or in some other

forces that condition their action, there is a reason for this difference of results, and therefore at some point, somewhere, diversity of agencies must be accepted so long as diversity of effects appears. We shall not reach identical, uniform force, till we reach identical, uniform results. Disagreements demand explanation as much as agreements, and an absolute oneness of causes would preclude all variety in the products, would shut us off from creation. Take such a force as that of the attraction of gravitation, and how peculiar are its manifestations. It is omnipresent, yet varies in intensity everywhere according to a fixed rule. It needs no media apparently for its diffusion or action, but seizes its object with a specified power everywhere. It is a vacuum to itself, sending cross-lines of force from planet to planet which do not in the least collide with each other. It suffers no exhaustion by exercise. The weight that has plunged down in headlong descent, leaves a path behind it unswept of power, capable instantly, along its whole extent, of presenting like action on every other body. The momentum, which it itself has acquired, seems unsubtracted from the great atmosphere of force which has closed up around it. The motion of masses, mainly secured by the attraction of gravitation, does not in the least modify or abate the force which gives rise to it, no matter how much is lost by friction or expended in collision. It is penetrable in all directions, yet puts its tariff, its additions and subtractions, its variable scale of conditions, on every force expended in space. At least, these are some of the properties of this attraction, if

we conceive it as emanating equally at all times from the body which is its centre. If we regard it as called forth only by the actual presence of another body, its features are scarcely less striking. Its quantity, on this supposition, is variable every instant, and is capable within itself of indefinite increase or diminution, according as the objects which exert it are near to, or remote from, each other. The approach of the earth to the sun would rapidly increase the absolute quantity of this force ; its departure, correspondingly reduce it. On any supposition, it is sufficiently plain—the point we wish to make—that forces are far from identical, are the lodgments of diverse forms of power, and that the universe is no more a unit to the understanding than to the senses.

What are the possibilities, the suggestions of this theory of matter in its relations to God, to a Creative and Providential Agent ? The nature of these forces, and their relations to each other, by which they unite to make up a harmonious universe, would still remain as the first obvious proof of an All-wise and Efficient Disposer of them ; but the inquiry now urged is, whether there is anything in the very idea of force as the substratum of matter which effects the argument for the being of a God. If there is anything in the notion of force that favors the idea of self-existence, of the eternity of matter, so far forth, the proof of the existence of God is weakened ; and the more so as these material forces have their own law in them, and once granted in kind and quantity, themselves construct and maintain the world. The notion of force, physical force, is not of passivity, but of activity ; not

of quiet endurance, but of permanent power. So far as forces are interchangeable, there is consumption on the one side, and increase on the other. There is change and transition between them, according to a definite law. This fact is not suggestive of extended, immutable, indestructible, physical being, perfectly finite and perfectly fixed ; tough and intractable in its own narrow, stubborn, independent powers ; but rather of a free, facile agency, the force of a spiritual, rational being, that is put forth, indeed, according to a measure, but shifts and varies its applications according to the exigency. In the fact that force is action, a constant expenditure, and not a silent endurance, we have suggestion of a Personal Source ; in the fact, that it is measured out in fixed proportions for intelligible ends, we have a still more certain indication of its reference ; and in the shifting, flexible methods of its applications, a further hint of its origin. If constant, yet variable, exertion toward intelligible ends does not give the mind a strong intimation of a Personal Being as its source, it is difficult to say what would do this ; yet, this is the nature of the forces which make up the material world about us. Fixed in elements, assuming new forms in every compound, exchangeable in part for each other, yet, accepting a new shape at every transfer, they exhibit the precise, pliant power of a rational spirit, seeking the ends prescribed to itself in settled, yet flexible, methods.

Moreover, a further suggestion of a Personal Being is found in the relation which force, in our own experience, sustains to us. We are constantly controlling events, through force due in its form and des-

tion to our own will. Our relation to matter is, indeed, very different from that of the creative mind; yet it is such, nevertheless, as to carry the thoughts strongly over, in a reference of the activities about it, to God. Mechanical force alone is open to man. This he constantly generates. To be sure, he does it by the consumption of other forces, but this does not alter the significance of the fact, that he enters himself the world of force, and learns to attribute it to mind. Mechanical force is conditioned on the existence of the forces of gravitation and cohesion. Without these there are no firm, stable bodies to receive or impart force. Moreover, mechanical force is always the product of some other force. Some chemical, or thermal, or electric, changes, as in the human body, or the steam-engine, or the telegraph have preceded it; or the force of gravitation, as in falling bodies, has called it forth. This secondary force alone is directly reached by human volition; but in this fact, of the exertion by us of force, and in the familiar one, that the mechanical power so generated may be momentarily modified, and seems to come forth in a fresh, creative way, we receive from our daily experience a new impulse in ascribing all force to God. When science discloses to us the fact, that the muscular force which we put forth, is attended with a consumption either in the blood, or in the muscle of other more concealed forces, embraced in chemical affinities, the strictly creative nature of the force-act disappears, and a wide chasm is thus revealed between our physical activities and those of God. We, indeed, see that

the relation of forces to the finite spirit is quite different from their relation to the Infinite Spirit ; that the one only modifies what the other originates, yet the affinity of the two, spirit and force, remains unshaken ; and the more so, as the inscrutable touch of the human will, by which it does reach physical forces, and does work among them, by which they become to it a perennial spring of potency in the world, is still ours, escaping the scrutiny of the vexed physicist.

Force, then, by its own active, well-ordered, pliant nature, and by its close connection with the human will, bears with it an immediate suggestion of a Personal Source. There have long been two theories on the part of those who refer matter to God : one of second causes, another of immediate, direct causation. The one gives a quasi independence to matter ; the other refers it in momentary generation to God. This notion of force, on which physicists are so happily and generally uniting, seems to us quite to favor the second as contrasted with the first, and, if rightly interpreted, to bring God much nearer to us, than some have thought him to be ; I may almost say, nearer than some have wished him to be. One of the most recently uttered creeds of an atheistic faith contained this doctrine of force, which, to us at least, would seem to be the very water-gate whereat God pours his being into the universe ; the very method and act of the letting down of his power upon it. If the swing of faith, in the case referred to, had been over to pantheism, it would have had plausibility, but towards atheism, it lacks even the color of argument.

We have in the world, inexhaustible, variable, marvellously combined forces, that thread their way onward with infinite wisdom and unerring adaptations. What is this but the very presence of a rational spirit with us? Matter as an indestructible, self-sufficient, stolid form of being, disappears, and a living power takes its place, coming forth instantly from the source of life; momentarily flexible to the thought of the Great Being, from whose purposes it springs, the breath of whose volition it is to us. This pulsation of the life of God through his entire creation, by which every force rests back instantly on his volition, and would vanish, as easily as thought when the mind ceases to think, did he but call in again his powers, is at once the most adequate and sublime conception of the universe, and of its Infinite Source. Certainly, the poet, science full in view, can as well say to day as in the days that have preceded:

Some say that in the origin of things,
When all creation started into birth,
The infant elements received a law,
From which they swerved not since. That under force
Of that controlling ordinance they move,
And need not his immediate hand, who first
Prescribed their course, to regulate it now.
Thus dream they, and contrive to save a God
Th' encumbrance of his own concerns, and spare
The great Artificer of all that moves
The stress of a continual act, the pain
Of unremitted vigilance and care,
As too laborious and severe a task.
So man, the moth, is not afraid, it seems,
To span omnipotence, and measure might,
That knows no measure, by the scanty rule
And standard of his own, that is to-day,
And is not ere to-morrow's sun go down.
But how should matter occupy a charge,
Dull as it is, and satisfy a law
So vast in its demands, unless impelled

To ceaseless service by a ceaseless force,
And under pressure of some conscious cause?
The Lord of all, himself through all diffused,
Sustains, and is the life of all that lives.
Nature is but a name for an effect,
Whose cause is God. He feeds the sacred fire,
By which the mighty process is maintained ·
Who sleeps not, is not weary ; in whose sight
Slow circling ages are as transient days ;
Whose work is without labor ; whose designs
No flaw deforms, no difficulty thwarts ;
And whose beneficence no change exhausts.

LECTURE VI.

CONSCIOUSNESS, THE FIELD OF MENTAL FACTS.

HAVING traced in outline the department of physical inquiry—that is, the general ideas under which the mind traverses it, we turn to the correlative and independent branch of investigation, and the notions which control it, to wit: mental phenomena—consciousness, right, liberty. There are two preliminary inquiries concerning this field: Where is it located—where are its facts to be sought? and, What is the authority or validity of these facts—their test of certainty? Till comparatively recently there has been but one answer to the first question. No one thought of looking elsewhere for the facts of mind than to the mind itself, than to consciousness. Several causes have concurred to give inquiry, in later years, in large part, a new direction. The dogma found entrance in metaphysics themselves, that the senses furnish the entire, original material of thought, and thus the weight and importance of outside influences were greatly enhanced. The general success of physical inquiries, and the striking discoveries in anatomy and physiology, greatly aided this tendency; till now there are many and able thinkers who would give a very different answer to the above inquiry; who would turn the attention, some to the brain and nervous system—some to these, and the physical organization generally; some to the cranium—the outside look of

the head and face ; some to the historical development of animal life, and, as included therein, the intellectual life of the world. This inclination to remove attention from the phenomena of mind as previously understood, and direct it to what had been either overlooked altogether, or regarded as a very secondary adjunct, is what may be called, in a general way, the materialistic tendency. We would not wish to use, or to seem to use, the words, materialism and materialistic, as blind, cant phraseology of reprobation and reproach. Indeed, they are applicable to the philosophical products of many of the most able minds of the day, and range with greater or less fitness, through various and diverse classes of thinkers, who have little in common, either in method or mental power. From Mill on the one extreme, to Maudsley on the other, we speak of the drift of the included philosophy as being that of materialism ; though the movement is hardly discernible at one point, and very decisive at another. Every stream has its centre where the waters glide rapidly to their destination. When Mill, whose philosophy makes no provision even for the valid being of matter, and whose inquiries are carried on almost exclusively within the recognized field of philosophy under its common and familiar methods, is spoken of as a materialist, it is because of the under flow of his belief, drawing those who feel it, and who have less power than himself to resist it, at once into the vortex of material forces. The cardinal step is taken by him, that step in philosophy which leaves the mind, bereft of primitive data of thought, to suffer the activities of matter, and

receive its shape from them. Sensations, perceptions, are thus the seats of efficiency, and forestall every intellectual product. This—though it tends to it—is indeed a very different attitude from that of Maudsley, who seems to diffuse the mind evenly through the body, to identify the action of the two, and to be as guiltless of philosophy proper as it is possible that any one should be. Indeed, his intelligence and ability are a great surprise to us, achieved under such conditions.

Materialism, with a oneness of tendency, but with this great range and incongruity of results, shows its character, especially in its declared forms, by the answer it gives to this inquiry after the field of philosophy. More frequently it totally misses it, and always gives foremost position to much that is secondary. Let us not fail to say, however, that materialism, amid all the intellectual and moral mischief it is sure to work, has brought compensation in the secondary investigations it has carried on, and in the light that these have sometimes cast on the chief points of discussion. Thus, a right apprehension of volition, of the relation of voluntary and involuntary acts, and of the nature of the acquisition of skill by practice, are greatly aided by a study of the nervous and muscular systems. In our response to the first question, we adhere to the general conviction of philosophy, before it suffered the passing bias of the present, intense form of physical pursuits, and say, that consciousness is the exclusive field of the facts of mental science. We may, however, often be assisted, both in our knowledge of these, and in our interpre-

tation of them, by a study of the things directly associated with them ; as history, laying open the human soul in the activities of daily life ; as language, accurately and exhaustively distinguishing and designating its states and acts ; as physiology, exposing the mechanism through which, and restricted by which, it reaches the physical world ; as animal life, which also includes a portion of our powers, and adumbrates those which are higher than its own. This primary and inapproachable nature of the facts of consciousness, needs to be distinctly seen and accepted. Only thus can we initiate successfully and safely that independent movement of which true philosophy is the offspring. In the first place, we affirm, that no physical fact, whatever its intellectual bearings, can be understood in them without an explanation, an illumination derived from consciousness itself. The real key of the connection, forever and exclusively, comes therefrom. The physicist who is undertaking to account for a mental fact on a physical basis, and to identify the two states, never found the mental *in* the physical phenomena, but stole the first from consciousness, and then came and carefully covered it up with the second. The physical inquirer, with his group of admirers, is like one who is to show his skill in putting together a complex machine. He has a key whose possession he is unwilling to acknowledge, but which he is compelled to consult from time to time. This he accomplishes in so furtive a way as not to mar his visible success, though his independent skill is an entire delusion. Thus Maudsley, when he identifies association with

the successive assimilations of like material by the nerve-cells, takes a knowledge of this fact of association out of consciousness, and in a fanciful way fastens it upon another fact, obtained from a very different source, between which and it, he imagines there is a resemblance. Had he been shut out of consciousness, that is, from consulting consciousness in the ordinary routine of the metaphysical method ; if he could not have glanced at the key in the crown of his hat, he would not have been able so neatly to unite these two facts. Cells and the secretions of cells, might be looked at a long while, and very intently, before there would be seen in them, as physical facts, the fact of association. With another glance at the conveniently located hat, he begins to talk of "*ideational*" cells ; that is, cells whose secretions or changes are ideas. Whence come these ideas ? Evidently, they are a second escape from the mind itself, occasioned by a furtive opening of the door of consciousness. An equally absurd and deceptive work does the phrenologist do in labeling the projections of the head, as if he read language, benevolence, ideality on them from the outside, and not from the inside ; as if he got his theories by neglecting consciousness, and looking at craniums. The follies and errors of them he, doubtless, does thus obtain, but the foundations of them, not at all. We must know what the powers of the mind are, before we can enter on an intelligible discussion of their location. We cannot locate powers we have not got, nor those whose existence we have not recognized. The absurd divisions of the phrenologists—as benevolence, combative-

ness, philoprogenitiveness arise from the haste with which this first work has been done, from the unanalyzed and mixed way in which they have accepted the phenomena of consciousness. Their method has been much as if one should take a dozen murderers, search their heads for a projection, and label it, in happy assurance, the power of homicide, to be complemented later by the power of infanticide, the power of suicide, the power of regicide. Combative-ness is the fruit of a variety of causes and temperaments, as is murder of a variety of motives and passions. What these first elements of action are, must be known, before we can assign them a position. If we are to give every unanalyzed state or condition of the mind a locality, we must either overlook many, or soon find ourselves at fault for new spaces whereon to map down our growing powers. If the love of children is one faculty, the love of parents, or old people, should be a second; of one's wife, a third; of a friend, a fourth, and so on, through horse and dog and gun, till we have reached the margin of our regards. We might much more hopefully study the saintly devices of a cathedral window from the outside, than search the human soul by means of any dim shadow it may cast of its spiritual substance on the external world. Nay, the thing is absolutely impossible, unless we bring to our labor some quick, furtive glances upon the surface play of our own minds. We cannot even call murder, murder, unless we believe in the malice of the agent, and it is a foolishly difficult and hopeless undertaking to locate our powers, unless we bring to it,

as its first condition, a complete and systematic survey of those powers whose external signs and forms of existence we are to trace. If, then, all knowledge of the mind by external, physical facts is conditioned on a previous knowledge of internal states or acts, and if all thorough knowledge, so aided in its acquisition, implies a complete, previous analysis of our faculties, then it is evident, that the field of philosophy is consciousness, and that all other inquiries are secondary ; that this, at least, is the source, the centre, and origin of the facts under discussion.

A second consideration, showing consciousness to be the field, in a very important sense, the exclusive field of mental science, is the absolute separation of its phenomena from all others. They do not, as in the natural sciences, shade off, by insensible degrees, into those of kindred departments, but are cut short with an astonishingly abrupt and decided stroke, by a clean and impassible boundary. No acts can be more distinct, can be as distinct, as an act, or state of mind, and a physical act or state : for instance, the movement of one's hand and the feeling which gives rise to it. There is no ground of likeness or unlikeness between them whatsoever. They are simply, totally diverse, parted by the entire diameter of being. It would be a hopeless task to explain the sensation from the motion, or to understand the motion through the sensation simply. No points of observation, therefore, are more perfectly distinct, than that from which we overlook, through the senses, the external world, and that from which we command the facts, the states of mind. To withdraw into consciousness,

to let drop the curtains of the mind about us, puts us in a most peculiar and private attitude ; and we often instinctively close the eyes as marking our seclusion and retreat from all sensible things. So absolutely sacred are these penetralia of the mind, that every man, of necessity, is his own high-priest, and enters there alone for its ordinary and sacred duties alike. The materialist who identifies any physical state or action whatsoever with any spiritual state or action whatsoever—the one explained to the senses, the other found in consciousness—confounds things between which he can show no agreement whatsoever ; and to a knowledge of both of which, he cannot possibly arrive by the same form of inquiry. No identification, therefore, can be more ungrounded than this identification ; no confusion more complete than this confusion. There would seem to be, according to such a view, no inherent impossibility of a man's seeing his own thinking, and making an act of mind, exist in the mind itself, whose it is in a double form. If the brain were laid open, and its states made visible, these might be returned by reflection into the eye of the still living agent, and he might enjoy the satisfaction, at least for a brief interval, of catching his own soul at work. So absurd is the conclusion which attaches to the idea, that the physicist at all penetrates the mind by a scrutiny of the cerebrum, cerebellum, and spinal cord. Let him be assured, that even if it were true that a nervous state is identical with an idea, such a state could not be known or seen as an idea from without. The transparency must be interpreted, looking towards the light. This

is the soul's attitude, in catching thoughts and feelings, as thoughts and feelings. An inequality of thickness may, in translucent material, occasion, when held to the sun, a beautiful image, but allowed to drop into the shadow, and regarded only as an opaque, uneven surface, it loses, at once, its significance. Believe what you will about the brain, you must go in and look out through it, if you wish to see "those nimble fiery, and delectable shapes" with which the mind amuses and engages itself. You may study a telescope, by taking apart its lenses, and inquiring into their focal distances, but if you wish to study astronomy, put them together again in the best possible order, and look through them at the heavens. If you wish to study the brain, cut away at your subject; if you wish to study the mind, catch the images of that spiritual light which filters through your own living brain into the quiet seats of consciousness.

In two marked ways has this separation and seclusion of mental phenomena been broken in upon. Lewes, in his *Physiology of Common Life*, undertakes to establish the assertion, that all action in the human body that is connected with gray, nervous centres, whether of the spinal column, or nether or upper brain, enters consciousness, is known in consciousness. Thus the motion of the heart, the lungs, and the digestive channel, would all be facts of consciousness. With such boldness, does this physicist confront consciousness, and tell it what is in it, as if the very fact of being in consciousness were not the fact of being known to be in consciousness; and as if a thing could be in consciousness which is not there

to the apprehension of the party under consideration. Like some over-eager tradesman who tells his customer what he wants, Lewes takes the mind under his tutelage, and indicates to it what it is expected to report, and intimates, that if it fails to fill the schedule, it will only reflect discredit on its own veracity. Surely, here is a chance for any theory whatsoever in philosophy, if we can infer facts into consciousness, of which consciousness itself knows nothing. An opponent's ledger will, doubtless, report what we wish it to report, if we are left to make the entries. The grounds on which this strange assertion is made and protractedly enforced, are chiefly a-priori. Likeness of structure, it is affirmed, implies likeness of office. Gray, nervous centres are like in structure, hence all, or no part, of that which enters them, which affects them, should appear in consciousness. I never read a physicist that had any disrelish for a-priori arguments except when employed by metaphysicians: then, they are thought to be peculiarly treacherous and dangerous. It may be possible that like structure in unlike relations may be attended with a modification of offices; and that different portions, therefore, of the gray ganglia may render different services to the vital and the spiritual forces concerned. The argument of Lewes proceeds on the purely physical basis, that like nervous currents, or influences, terminating in nervous seats, structurally alike, must produce like results, and when consciousness steps in to arrest this reasoning, he composedly gives it the lie. This view might be just were we dealing with simple, physical forces;

but the way in which the vital and intellectual elements respectively touch these, and are touched by them, is not so to be treated. It would be very difficult, we apprehend, to distinguish between sound and sight, by a difference in the very structure of the nerves employed. Variety of relation, as well as variety of structure, may give variety of office.

But the effort to break down the testimony of consciousness at this point, is not of more grave import than a like effort, generally made by entirely other parties, less aware of the results of their action, to introduce facts into mental science, which have not the testimony of consciousness. Hamilton, in harmony with many other metaphysicians, is full of what he terms subconscious phenomena. Professor Porter, in his recent book, speaks of "unconscious acts of the soul," in the most assured way, and seems to regard them as especially present in our earlier and more instinctive activities. Indeed, this scaffolding of latent states and subconscious acts has been so generally built up about all mental structures, that most accept them as a matter of course, and scarcely stop to challenge the occasion or the proof of the most obtrusive of them. This we now do, from beginning to end, and are not prepared to accept any phenomena as mental which are not witnessed to the mind in consciousness. We are to remember that intellectual facts are closely associated with physical and vital ones, and are, therefore, easily to be confounded with them. We believe the exact line between the two, to be found here: that those, all of those, and only those which appear in consciousness, are mental;

and, that all others, if they are phenomena at all, are so in space, and are possessed, therefore, of a physical character. In this belief of subconscious mental states, we find proof of two things: of the ease with which pure assumptions for a long time find place unquestioned in science and philosophy; and of the certainty with which physical imagery creeps into spiritual facts. Matter undergoes both obvious and recondite changes; the former often follow, as effects, the latter. Thus the mind is conceived as possessed of some sort of substantial being, wherein concealed phenomena can occur, strongly influencing those which come to light in consciousness.

Now, the simplest, possible statement of facts, with the fewest assumed causes, is the most philosophical. This, we believe to be, that all phenomena—mark the word, phenomena—of mind are in consciousness; that any other phenomena of mind would, from the very nature of the case, be unknowable, undeterminable, and, therefore, not to be believed in, except on the best of proof; and, that if they were actually shown to exist as phenomena anywhere, it must be in space, and thus they would sink to physical facts. Physical facts—facts in space, mental facts—facts in consciousness, are all the facts of which we have any direct knowledge, and we excuse ourselves from believing in any other, till the proof is forthcoming and unmistakable. This, we think it very far from being. As we have examined it elsewhere, we shall not enter on the refutation. The burden of proof lies with those who affirm such phenomena: it is for them to establish them by the most

undeniable arguments, since the very existence of so many phenomena in an unlocated, unapproachable, inconceivable region,—mark again the word, phenomena, things, that do in some way, or somewhere transpire—is a most weighty presumption against them. All is simplicity, verified, verifiable facts, if we believe in physical facts, and mental facts, each in their own field, and knock away all supposititious facts, transpiring on some midway ground. We insist on this, as a first and essential step, in making our defence against materialism. Plant the physicist on the farther physical side of the gulf; maintain ourselves on the nearer, spiritual shore; strike off those mongrel notions and conceptions by which he would link the two, those bridges of the imagination which have enough lightness in them to lie in the air, and enough matter in them to give footing to a harpy throng from below—consign these to the limbo of dreams in which they belong, and our position is unassailable, unapproachable. In affirming that the mind has its complete, phenomenal existence in consciousness, we do not lose sight of, or deny the ultimate fact of the growth of mind, an increase in power. We only say, that this is not to be imaged under a material form, as a material change in the mind itself. This growth appears, phenomenally, in the states of consciousness, consequent upon it; unphenomenally, it is as inapproachable as the nature of the mind itself.

Having shown these two things: first, that no outside physical fact can be understood in its philosophical bearings, except by means of a previous knowl-

edge of a correlative, inside, mental fact ; and second, that the two facts and classes of facts are perfectly distinct from each other ; we are ready to give the deep grounds and reasons of this in the mind itself. Our regulative ideas mark out the lines of thought ; the chief impassable boundary between things. These conceptions are as incommunicable, in reference to the points at which they apply, as are the several senses in regard to the peculiar impressions they make. The beauty of a landscape and the delight of music, the perfume of a rose and the flavor of a pear, have nothing in common. They are as distinct as things can be, entering the mind by diverse avenues, and reported under different types of sensibility. Thus the notion of time, and that of space have no real resemblance to each other. There is nothing in the one which is in the other, and though they apply to the same things, they pertain to them in entirely distinct relations. They still remain, like the blush on the cheek of a peach and the flavor of its dissolving pulp, adhering in one thing, indeed, yet alien in the conditions of knowledge. Consciousness is such a regulative idea, one that sets apart to a peculiar mode of being an entire class of facts ; moreover, facts that nowhere overlap those that transpire in space. The two together cover all phenomena, and under this first central division, events fall to the right and to the left, as those of matter and those of mind, with an unmistakable and unchangeable boundary between them.

Looking at the incommunicable nature of consciousness and space, we should have no suggestion even of

the way in which these two phenomenal worlds touch each other. There is, however, a third idea, which in one and the same application covers them both. It is that of time. A series of thoughts synchronize with a series of physical transactions ; and the inner experience runs on *pari passu* with the outer. We see thus how Leibnitz was led to look on the two worlds as independent, parallel lines, whose coincidences are secured by a "pre-established harmony." Thus two clocks, each wound up by itself, travel with exact correspondence through the hours and minutes of the day. It is our notion of causation which prevents our accepting this independent parallelism of the spiritual and physical worlds, and to believe in a perpetual, though unexplained, reaction between them, of which the body is the inscrutable instrument, as the sunken cable is the unsearchable tie of remote continents. The assertions, then, that no physical fact can put us in connection with a mental fact, save through a previous knowledge of this fact, as no word can give us an idea, till we have attached the idea to it ; and that the two facts remain perfectly and forever separable, are explained and enforced in this further assertion, that consciousness is to space a contrasted, regulative idea, dividing the facts of the world with it, and setting them apart in a most radical, inerasable distinction of nature.

We need further to explain and enforce this assertion, that consciousness is a regulative idea. What, then, is a primitive notion, a regulative idea? One that gives some inseparable form, or mode of existence, yet cannot be found by the senses in the ob-

jects to which it pertains. Thus time is not seen, felt, or heard by us, is no property of the distinct events that transpire in it, yet is ready in the mind as the condition of understanding every transaction. So, space is the regulative idea to the facts which it explains; is so in each of them, so permeative of their very being, that it assumes a variety of most intimate relations to them as we contemplate it. Space seems an antecedent condition to matter, that in which the physical object is found, a very mode of existence to matter, since the extended body grasps it in its own extension. Yet, after all, none of these primitive conceptions are given with the very getting in the senses of the objects to which they belong. Space is no more seen than tasted, felt than smelt. Color is beheld, but the actual extension of that color we saw was arrived at indirectly. Now, to these characteristics of a regulative idea, consciousness responds. First, it is not a part of the phenomena to which it belongs, as the hardness of iron is a portion of its qualities. Some have striven so to regard it, and, like Prof. Porter, have spoken of it as an act of mind; that is, itself a phenomenon, among mental phenomena. This opinion is obviously untenable. There can be no act of knowledge, which is not a conscious act of knowledge. For a knowing that is not knowing, would be an odd knowing indeed. But if an act of knowledge is made up of two acts, the first of knowing proper, and the second of consciousness proper, this first act of knowing comes to nothing, since we know without being conscious of it, that is, we do not know. If, then, we allow consciousness to

come in as an act, it steals away the whole marrow and pith of every other act, and, to be conscious that we know, is to know; to be conscious that we feel, is to feel; to be conscious that we will, is to will. Hence, some, like Hamilton, have seemed to shift on to this ground, and to say that consciousness is the inclusive, generic act, of which each individual act of knowledge is an example. But this position is no more tenable, since the genus is no other than the collective species; and if each specific act of knowing, and equally of feeling and volition, is one of consciousness, the distinction between them disappears, and all mental activities are resolved into a single activity called consciousness. We saw that if consciousness does any of the knowing, it does the whole; thus also, if it does any of the feeling it does the whole, since every part is equally pervaded with it, and thus thought, feeling and volition in their differences are lost, swallowed up in this very centre and substratum of their being. On the other hand, regard an act of knowing as simple and complete in itself; one of feeling, or one of volition as equally so; and that their common condition or characteristic is consciousness, and all is clear, consistent. Now, however, consciousness has become a condition, a mode of being, something inseparable from mental acts, that by which and through which we understand them, that which determines them to be what they are, and this is to be a regulative idea. All perplexity, therefore, met with, in making consciousness any distinct portion of mental phenomena, in regarding that as phenomenal which accompanies every phe-

nomenon, goes to show that the true key of the solution is to be found in the antecedent and necessary relation of the mind to its own states and activities, by which they are known to it, in and by the fact of being its activities. A state of knowing, or of feeling, includes, as its condition or complement, this notion of consciousness, thus revealing it as the regulative idea of the department. The above discussion may seem to you remote and abstruse, but it is of the last degree of importance. If its conclusions are correct, not only are all present identifications of mental and physical phenomena shown to be false, the very effort to make them is disclosed as intrinsically absurd, as much so as to resolve colors into odors.

We have now answered the question, Where are the facts of philosophy to be found? and come to our second inquiry, What is the test of their validity? What is sufficient proof of the existence of a faculty, and, therefore, of the correctness, the certainty of the things reported by it? Before, we had to deal chiefly with materialists as adversaries, now we have to deal with idealists as well. The idealist magnifies mind; indeed, he makes it the whole circle of being. Yet, he nevertheless assigns an illusory and deceptive character to some of its conclusions, a portion of its powers, to wit: those by which it reaches or fancies it reaches the exterior world. He overlooks, in its sufficient, solid character, all that reasoning from causation by which we have shown the existence and nature of matter to be established. With these startling inconsistencies, idealism may be a very brilliant,

logical, consistent system, tracing with astonishing subtlety the interdependence of thought, the inherent laws of its connections. The idealist uses the facts of the mind, much as the naturalist might use the images cast, in a darkened room, on the screen of a solar microscope. Let all the minute life of the outer world find its way to the focus of the instrument, and thus to the screen, and he is prepared to point out resemblances, establish classes, and develop the creative plan, and this without any reference to the real, out-door world. To the instrument of the idealist, our wonderfully organized bodies, every fact does come, and is cast upon the inner canvas as thoughts, sensations, emotions, volitions. On these, the philosopher does work with marvellous manipulations, evolving one from another, till the lofty universe of thought is piled up in proud, airy fashion, transparent and crystalline to the eye of the intellect in all directions.

We may be delighted with these products of speculation, but when we wish, in a modest, reliable way, to know, as against idealist or materialist, what is, we come back to this inquiry, What are our faculties, what their proof? Spencer starts his *Psychology* with this discussion in another form, and with his usual power and perspicuity, reaches some conclusions valuable for us. He says, "The existence of beliefs is the fundamental fact, and those beliefs, which invariably exist, are those which, both rationally and of necessity, we must adopt. Its invariable existence is the ultimate authority for any belief." I am glad to avail myself of this statement—the gist of a careful discussion, though the use to be m.

of it is very different from that for which Spencer was preparing it. There is no sword that does quite as agreeable a service as one captured from an enemy. The mind can, evidently, do no otherwise, and do no better, than to accept those conclusions, those sensations, those beliefs, which return perpetually upon it. Spencer may look upon this as an ultimate fact. We assign, as its ground and reason, that a persistent repetition of impressions indicates a power whose normal product they are, and whose assertions are to be accepted. The proof in the human constitution of a given power to do, is the doing of the action ; of a power to know, is the actual presence in the mind of the specified knowledge. To this, there is only one limitation, that the action of the mind is general and uniform. Certain hallucinations may occupy fixedly one mind, or may be present with us for a limited period. These, though necessarily carrying to the patient a firm conviction of their truth, though filling his whole horizon with the absurd, the fantastic, or the terrible, are, to the consistent whole of human experience, trivial exceptions, a breaking in at a single point of foreign, abnormal, unexplained forces. We believe that we see, simply because we see, see constantly, see consistently, on each new occasion the same things. These uniform, well-ordered results, pertaining to ourselves and to all about us, are undeniable proof to us, of the existence and validity of the sense of sight ; whose data are to be accepted on the simple testimony of the eye.

Thus is it with our judgments, our reasonings. We confirm them by simple repetition, by assuring our-

selves that they are the normal, corrected products of the mind. Though the grounds of opinion are so various, that there is no general agreement among men as to many of their conclusions, yet we rarely lose faith in our own carefully-formed judgments, and if we do, do it with great loss and detriment to ourselves. The same principle evidently must cover the mind's entire action. If the ascription of a cause to every effect is as general among men as the sense of touch, then it has, as a power of mind, exactly the same authority. All the agreement and universality that we require is, that fitting conditions shall be attended with certain, uniform results ; that when men's eyes are open in the light, they shall see ; that when a complete, geometric proof is understood by one, he shall not fail to accept its conclusions ; that when events are transpiring before any parties, they shall explain their sequence by the notion of time. When careful analysis has yielded all the uniformities of action, all the distinct grounds of conviction in our intellectual constitution, there is therein disclosed the number of our faculties ; each of which, in its normal state, has equal authority with every other, and exclusive authority in its own field. That one finds less frequent application than another, that we see oftener than we taste, or taste oftener than we turn to Euclid, is immaterial, provided that the uniformities are firm and established under given conditions. Probably, there are no more discrepancies in the action of any faculty, than in that of judgment—so great is the variety of circumstances in which it is brought into play—yet judgment holds undisputed

authority with us. That the mind cannot rationally resist its own uniformities is most plain. If its action is to be trusted at all, evidently, that portion of it is to be believed which is most consistent and stable. Its desultory and distrustful action, intrinsically weak, cannot withstand its habitual and confirmed action, constitutionally strong. If our convictions were the mere result of habit, these ordinary ones must be good as against those extraordinary ones. In fact, under the one set of conclusions, lies our entire faith in ourselves, in the soundness of our powers ; and under the other, those fitful impulses of fear, of distrust, which are, to our familiar thoughts, much what a transient shock of an earthquake is to the abiding phenomena of land and water. Rationally, a distrust of faculties, established by these uniformities, finds no basis ; as the action of mind by which we are led to doubt all or any one of our powers can claim no firmer ground than that disputed by it ; nay, must, in its rare occurrence and partial prevalence, rest on ground every way weaker. The faculties are all peers ; they all have the same chart of nobility, and for one to invalidate the claim of another, is to cast down its own claim.

Such is the human mind, ultimate to itself, through all its faculties ; aiding, indeed, one power by another ; shifting the conditions under which a power acts ; holding faith for awhile in abeyance, but finally standing within itself, resting back on its own resolved and well-ordered action as the only rock of belief, the only foothold of knowledge. Even when we attach ourselves weakly to another, we must decide who

that other shall be, and repose faith in those same faculties in him, which we have discarded in ourselves. So firm and necessary is this poise of the mind on its own pivot, that the unfortunate maniac is bound fast by his conceptions, and is far less frantic than would be one, who should cut wholly loose from these conceptions. Vigor and health of mind always show themselves in a wholesome confidence in one's faculties ; while distrust and fear in thought, are among the first signals of weakness and overthrow. Like genuine kings, we rule the world from within : masters of thought, we rule it, by a central faith in our own faculties, in overpowering convictions that go forth from us like a flood, expending that momentum which they gathered from the soul itself in their very conception, on every external obstacle, till they have swallowed it up. The mind, then, looks to itself, for the facts of philosophy ; looks to itself for its belief in those facts ; knows its own powers so as to trust them, be satisfied with them, to prefer them to all other powers. It finds itself complete, because it is complete within the circle of its own being ; able to believe, because it waits only on the signature of its own faculties, and not on the testimony of another ; novel, unsearchable, and powerful, because the laws of its activity spring from itself, because it is sufficient unto itself.

LECTURE VII.

RIGHT, THE LAW OF INTELLECTUAL LIFE.

WE have spoken of the two fields of phenomena ; the one in space, whose objects come under the idea of resemblance, and the law of whose events is that of cause and effect ; the other in consciousness. It is now our purpose to inquire into the law, the peculiar connections of these mental states and acts, whose location we have sought for and found. It does not present itself, as in the case of causation, under a simple form—one movement of force threading together all facts—but under a double, or even more complex, aspect. The mind forecasts lines of effort, laws of action, and then, from the resources of its own liberty, chooses between them. The primary law of rational life is, on the perceptive side, that of right ; and the primary principle, on the side of power, by which our faculties play into and under this law, is that of liberty. Neither has significance without the other. Liberty is nothing, if it finds no occasion of choice between evil and good. A law of obligation is absurd, monstrous, without the liberty which renders obedience possible.

We devote the present lecture to right, the perceptive half of the complex law. This is a dusty, well-travelled field, with many by-ways. It will neither be pleasant nor profitable to wander through them all : and the indispensable condition of success

with us will be to rise to a point, at which a clear, rapid, bird's-eye view can be taken of the entire ground. The facts which seek explanation are very patent, very undeniable, and though occasionally perverted in the statement, are, for the most part, well agreed upon. One cannot enter civilized society without at once observing, that men are momentarily, in many forms, instituting, conceding and repelling claims on each other; claims which repose on what they call moral grounds, or grounds of right. The family, the school, the community, the state, and states as between themselves, are organized by means of them; and we have, in each of these relations, those who do right, and those who do wrong; those to be praised, and those to be censured; things to be claimed, and things to be refused; parties to be punished, and parties to be rewarded. No man is ever so vile, but that he will complain of personal wrong in another, nor so blind that he cannot see sin that militates against himself. No excuses are so perverse as not to take for granted a right somewhere; or so careless as not to strive, in part at least, to attach themselves to it. Now this virtue, whose virtue every man concedes, in whose presence every man is abashed, or if he breaks out into scorn, by the intensity of his passion, betrays the greatness of the power he casts off; this virtue that walks everywhere with authority among men, that gathers to itself hate and love, like a Christ; this invisible spirit that springs from the depths of the human soul, to vex and rule society, and toss it, like a pervasive tide, on its angry and its peaceful waves, demands of philosophy its

occasion and ground. The facts are so palpable, that no thoughtful mind can escape their perplexity, and must perforce cast about for a reason.

The central fact in our moral nature, using current language, is the perception of right. This notion has a double bearing, an emotional and an intellectual side. The two are inseparable ; we perceive and we feel at the same instant, the perception being the ground and occasion of the feeling. The feeling is one of obligation ; the perception is of that quality of action which we term its moral quality. The two together, the intuition and the emotion, constitute our notion of right. The indissoluble nature of the two is important in this discussion, since an effort has been made to part them. Obligation has been spoken of as ultimate, while right has been derived from the ends pursued. They both must share the same fortune. Our feelings all have some ground or occasion, some object, or some consideration that calls them forth. They are all ultimate in this sense, that they can only be known by being experienced, that each furnishes its own peculiar phase of emotion. Some of them, however, are called forth directly by an object, as pain by the thrust of a sword ; others are occasioned indirectly by the intellectual contemplation of certain things, as anger by an unkind act. Every feeling must have its attachment or occasion ; and to say that the feeling of obligation is ultimate, can mean nothing of moment, unless it is thereby asserted, that the perception which calls it forth is primary or ultimate. The sense of obligation must be a secondary feeling, if it rests on a calcula-

tion of results, since all that can be meant by a primary, as opposed to a secondary, feeling is one that springs directly from an object ; not indirectly from a presentation of the relations of actions. If right is a primary perception, and the feeling of obligation follows immediately upon it, then obligation is primary ; if right is derived and secondary, so also is obligation. They are the two sides of the same act, lying at once athwart our intellectual and our emotional natures, striking into them both, like beauty and the pleasure of beauty ; like the odor and flavor of ripe fruit ; the light and the heat of a sunbeam.

A sense of obligation not attached to some act, some line of conduct, something in that act and line of conduct perceived by us to draw it forth, is as unintelligible as would be acidity with no acid, hardness with no solid body ; while the quality of action which we designate as right, without the feeling of obligation, would be emasculate and impotent, as fire without heat, light without its chemical power. The philosopher, therefore, is called upon to account for these two, the source of all moral phenomena, and that, not separately, but jointly, as one double-headed act, or state of mind : an act that pushes forward in perception and backward in obligation ; as a trumpeter presses on, and sends ringing behind him the word of command.

Materialists, physicists, of course reject the primitive nature of the idea, and in looking about for a source from which to derive it, find one, and only one open to them—the obvious advantages which belong to some lines of action over others. We have various

appetites, desires, sensibilities. These cannot all be gratified by every line of effort. A choice must be made between them, and that action becomes best which brings the most pleasure and the least suffering. The task which falls to wisdom is so to plan and arrange effort ; so to direct, check and quicken it, that it shall secure the highest results in enjoyment ; and that line of action which does this is said to be right. This is utilitarianism ; a derivation of right from the notion of pleasure, of good found in the best, the most balanced gratification of our sensibilities. This view is often broadly and skilfully taken, and meets exceedingly well a portion of the difficulties of the problem. It fails, however, partially in explaining the perceptive side of the moral act, and almost wholly in expounding its emotional side. It is not plain why a martyr should, on this view, lay down his life for his faith ; since if you overlook the moral nature as itself an independent source of pleasure and pain—as of course you must, if it is only of a derived, secondary character—you can give no sufficient reason for sacrificing all happiness, yea, and its very possibility, simply for the sake of happiness. Evidently, the pursuit of good must stop somewhere short of extinction, and the command even of God which should enjoin this, must be immoral ; that is, subversive of the law of utility, which is completely cut short by death. If another life is to take up the train of enjoyments, it must do it on a different principle from this, and not insist, under any circumstances, on the extinction of pleasures in the pursuit of them.

On the emotional side the failure is more signal. Indeed, there has been vacillation and division just here among utilitarians as to the best way of accounting for the feeling of obligation. Some have been willing to refer it to the very idea of good, of pleasures ; and to say, that these when offered to us, call forth this emotion ; while others have insisted that society has, by a process of education, imposed the feeling upon us ; has attached it as a sanction to the things enjoined by it. The first view comes squarely in collision with the fact, that we do not feel under obligation to pursue pleasure ; indeed, that such an obligation would be very superfluous as pleasure is in and of itself a very sufficient incentive, and more often requires the restraint than the incitement of our moral nature. If pleasure, good, does excite this feeling, it should of course do it most obviously in its strongest forms, and our own pleasures, our immediate pleasures, our appetitive pleasures, as opposed to the enjoyments of others, or those more remote and intellectual, would at once win the field, and that under the lead of conscience. The reverse of this is true. Conscience, with unsheathed sword, walks up and down these mutinous lines, where importunate appetites, and impetuous passions, are ready to break rank, overawes them, thrusts them back, buffets them flatly, and assents to no intrinsic claim they may set up. Evidently, then, it does not draw its authority from pleasure, since here is pleasure, utterly put down by it, and that, too, in those who know no other pleasure ; who are not shrewdly playing off the present against the future, the worn

sixpence of to-day against the new-coined shilling of to-morrow. A magistrate, elected by the mob, rules the mob feebly. A conscience which was but the voice of our pleasures, could hold but a light rein over them. The stubborn fact is, the good, the pleasurable good, does not enjoin its pursuit upon us.

Nor does the alternative explanation better prosper. The most striking manifestations of our moral nature are those which arise in the very face of society, in flat contradiction of all it affirms. Of this nature is every reform, thrown back for its support on the plucky conscience of the individual; supporting itself and forcing support from others, against the solid, uniform, persistent opinion of the community. We should look for the characteristic features of any phenomena, where these appear in their most declared, not in their weakest, form. The salient facts in the moral and religious history of the world, are those in which the few have resisted the many, and the moral victory has been won against majorities.

One other explanation, sufficiently answered, has been the affirmation, that the sense of obligation is ultimate, while the right is derivable from the good. The two, as we have shown, are inseparable, and share the same fate. Moreover, this view almost always tacitly includes in the highest end, the good, the moral sensibilities themselves, which it cannot consistently do. While we are discussing what is the source of our moral nature, and are about to derive it from the general, emotional character of our constitution, we cannot inclose therein those very affections which are seeking explanation. If the moral nature

can be derived from itself, if we have gold out of which to make gold, the manufacture will doubtless be easy. The question is, can lead, tin, platinum, be changed into gold : can appetites, natural sensibilities, intellectual pleasures, be transmuted into moral affections ? Can good, which is the product of these, be made the ground and source of the right ? The effort to do this is that of utilitarianism, and it is the only plausible, if not the only possible, line of argument open to them, who reject the idea of right as ultimate. No selfishness is charged on utilitarianism, no opposition of happiness to duty, but an effort to derive duty from happiness, from pleasure, good, blessedness—all synonymous in this connection, because they, one and all, can only mean the emotional returns of native sensibilities other than moral—an effort which wholly fails to account for the sense of obligation. Philosophers of this school, when asked, Why are we bound to do right ; must answer, Because it confers good, and, then, commences that hopeless evocation of duties out of pleasures, philosophy struggling in vain to over-rule the self-indulgent and lascivious crowd with its own notions of enjoyment ; to exorcise a ravenous appetite, an insatiate passion, to put down fierce revenge and stubborn will with a pleasant song of the relations of pleasures one to another ; and the method in which they rank and out-rank each other in the etiquette and court of philosophy. The command, the strong sword-stroke of conscience are all gone, and we sit down to reason with the debauchee. We bring before him our moral diagram, and strive to convince him that this column,

in which are his enjoyments, does not foot-up as he supposes, and that this other column is greater than he imagines. With one dash, he strikes out our figures, puts down his own glowing estimates of the pleasures of lust, and sneeringly asks us to add again, and cast anew our remainders. Utilitarianism would do well for a moral man, but for an immoral one, it is of no service. Prizes answer with honest citizens ; but with a mob, gunpowder is better. Says Martineau, " To look first to its benefits, and then to its sanctity, is to invert the true order of our moral life, and set the pyramid of duty upon its point rather than its base. . . . It is the tendency of our times to place as implicit a faith in the omnipotence of self-interest in morals, as of steam in the arts ; forgetting that between the grossest and the most refined form of this principle, there can only be the difference between the cannibal and the epicure."

The opposite view is concisely this : the mind itself, by direct instinctive, intuitive action, furnishes for itself a law of life, the right. This quality it sees, this obligation it feels, as a final, inexplicable, inescapable fact in certain lines of conduct, making it the last and sufficient reason for all action, that it is right. The right, however, is only seen in action possessed of certain qualities, and standing in certain relations. The action must be one of a free, intelligent being, and must have reference to the well-being of all parties. Those facts do not constitute the very rightness of the action, but are its grounds, that which leads the moral nature to see and affirm this quality or relation of it. The act, however much hap-

piness might flow from it, was not obligatory till the moral nature pronounced it so ; and this is an additional, ultimate fact in our constitution, making us moral, responsible beings. A reason can be rendered for the right in an action in this sense ; its motives and consequences can be given, the qualities which led the conscience, the mind in its intuitive, moral effort, to make the affirmation : not in this sense, that those motives and consequences are the sufficient and sole source of the quality, right, that right is but another name for them. The nature of this view will be further developed in answering objections to it, and in stating its bearings. It is evident, at the outset, that it accounts for the union of perception and emotion in one indivisible, moral act ; and for the riddle and puzzle this act has always been ; the stubborn residuum it has always shown under intellectual analysis. The necessity of a reference of right—the central idea of our moral nature—to a primitive, simple act of the mind, is found in the failure of every other effort to fully explain it.

The first objection we shall consider against this view of the right as a primary idea, is that so sharply urged by Bentham, an Englishman above Englishmen, a race and nationality that have always inclined to make public morality a quick distillation, an easy extract of public advantage. Bentham fairly scorns duty. "A moralist," says he, "gets into an elbow-chair, and pours forth pompous dogmatisms about *duty* and duties. Why is he not listened to ? Because every man is thinking about *interests*. It is a part of his very nature to think first about interests, and

with these, the well-judging moralist will find it for *his* interest to begin." His objection to the intuitive view of morals is its arbitrary character : that it allows every dogmatist and self-constituted teacher to say this is right, because it is right, and there is no appeal. Let us give his language : " He who on any other occasion should say, ' It is as I say because I say it is so,' would not be thought to have said any great matter ; but on the question concerning the standard of morality, men have written great books, wherein from beginning to end, they are employed in saying this and nothing else. What these books have to depend on for their efficacy, and for their being thought to have proved anything, is the stock of self-sufficiency in the writer, and of implicit deference in the readers ; by the help of a proper dose of which, one thing may be made to go down as well as another." Whatever may have been the assumption of his adversaries, this man also is evidently not suffering from timidity. But what foundation is there for this accusation against intuitive morals, of an arbitrary, irrational character, urged again in these words : " ' You ought, you ought not,' cries the dogmatist. ' Why?' retorts the inquirer. ' Why ought I?' ' Because you ought,' is the not unfrequent reply ; on which the Why? comes back again with the added advantage of a victory."

Doubtless, some presentations of the theory of morals are open to this objection ; not, we trust, the one now given. The reason why we pronounce an act to be right is rendered before the affirmation that it is right, is furnished in the motives, relations, con-

sequences of the act. These are the grounds and basis of the intuition, and if they can be removed or modified, then the assertion fails, and our estimate of the act changes. If, however, these reasons remaining the same, we are asked why an action is right, we can only respond by re-alleging them; and if this is not thought to close the question, we must answer again by saying, Because it is right. That is, taking a concrete case, my moral nature affirms kindness to a suffering child to be right; and if you ask me, Why? I can only say, Because it does. There is nothing singular or assumptive about this. If I am asked why I regard the apple as red, I must needs say, My eyes so show it. If you regard it as green, very well. I leave you with your affirmation, but must needs myself adhere to my own. The intuitive view of morals is not dictatorial and arbitrary. First, because it gives grounds or reasons for its intuitions; second, because it grants no right in one party to overbear the conclusions of another. Utility can do no more nor better than this—to give reasons and let reasons have their way.

A second objection following close on the above conclusion, is, that there is thus left with men a hopeless variety of opinions; each urging his own view as right. Now, we do not believe variety to be such a radical evil as some think it, nor, that if it is, that it can in any way be escaped. The intuitive system does all that can be done. It shows the grounds of the variety of moral judgments that now exist, and gives the methods in which alone any real unity can be secured. The right is affirmed, by the

moral nature, of actions as having certain bearings on human good, as productive of certain results. As, therefore, the consequences, immediate and remote, of an action, present themselves very differently to us, there is necessarily a want of agreement in our estimate of its moral character. We might as well complain of sight for not, in every position, revealing the same colors in a changeable silk, or a changeable leaf, as of our moral sense, for not disclosing acts, subject to the most shifting of all lights, in the same precise character. The possibility of increasing unity is found in a faithful effort to exhaust at least the leading features of conduct ; to view it from all sides, and to discover its full bearings.

An allied difficulty, that moral precepts, as dogmatic and dictatorial, suffer no growth, finds full answer. There is nothing so unites authority and reason as moral law. It gives a reason, an adequate reason, one that it will discuss with you at length. If, in the end, however, you show yourself unreasonable, and ask, Why should I do right, why love my neighbor ? it puts the ictus of authority on the word, and retorts, Because it is *right*. There is an opportunity for unending progress in morals ; the same opportunity that there is for an increasing knowledge of human nature, human society, and of those lines of relation by which we are linked to each other and to God. Reasoning may moil there, and mount here, as it is able ; may search foundations and climb to cap-stones, and our moral sentiments shall expand with every step of the process ; shall cast a new and more mellow light on things near and remote ; shall

lift and spread for us the harsh, hard, concentrate commands of the two tablets, that strike down hot and heavy upon us, like beams direct from the sun, over the whole landscape of human contemplation, breaking out in brilliant hues everywhere : yet, after all, there shall be an underlying tone of strength, that shall put us as certainly on the track of authority in the moral law of God, as of personal power in the voice of the musician, pouring his soul through the vaulted chambers of sound, and bringing his sentiments to the birth of harmony. Growth there is in morals, but growth within the circuit of law, growth that carries law higher and higher, and sheds it with increasing benignity along the whole horizon of events. Says Martineau : " And *once* at least there has been a *Christ* ; not seeking to thrust up human nature from below, but to raise it from above ; knowing that its earth could produce nothing, except for its pure and spreading heaven ; and so, coming down upon it, as an angel-soul from the highest regions of the spirit ; speaking seldom to it of its happiness, constantly of its holiness ; dwelling little on the arrangements, and much upon the responsibilities, of life ; pitying its woes, as it pities them itself in moments of truest aspirations, not with mere nervous sympathy, but with god-like and healing mercy ; assuming its place in the midst of God, and on the surface of eternity, and from this sublime position as a base computing its obligations, and uttering oracles of its destiny."

A last objection of which we shall speak is that frequently found in the writings of the distinguished

moralist, who has more than once enforced his views from this place—Dr. Hopkins. It is this: the notion of an ultimate right is not rational. It makes an act, and not an end, the aim of effort. He says, "In all rational action, the central conception is that of an end, activity in itself cannot be a good. If it had no results, it would be good for nothing. . . . No man can adopt right as an ultimate end with no regard to good." With this, Bentham quite agrees. He says, "Only in so far, then, as it produces happiness or misery, can an act be properly called virtuous or vicious. Virtue and vice are but useless qualities, unless estimated by their influences on the creation of pleasure and pain." There is so much truth in these assertions, and yet they involve such subtle error, that we need to proceed with caution, lest we lose a portion of the one, or admit a part of the other. The alleged objection is this: all rational effort makes an end, makes some form of good, the object of its exertion. This system imposes an action, a line of conduct on man, without referring him to the good to be obtained by it; therein, it is not rational, it overlooks the open or disguised purpose which the human mind always has in view. To the premises we assent. All *rational* acts, that is, all acts which spring from, and rest back upon, reasoning processes, the independent, intellectual movements of the mind, find their impulse in some good to be obtained, some sensibility to be gratified. We further accept the assertion, that a sensibility is the condition to all good, and indirectly to all right action, since action becomes right by its relation to human well-being.

But these premises do not involve the two consequences that are drawn from them. First, that to perform an action because it is right, is irrational; second, that the action is simply right, because of the good consequent upon it. They involve this conclusion: that to do an act as right merely, is so far in oversight of the end of the act, and is obedience rather than reasoning. The word, irrational, properly means absurd, opposed to reason. All that it can justly mean in the syllogism: A rational act involves an end; to do right as right involves no end; therefore, to do right is irrational, is an act which is not the product of, or guided by, reasoning. This conclusion is quite barren and harmless. So is an act of sight in this sense irrational; that is, one that does not ground itself on reason. This, in reference to the right, is exactly what we claim; that it is something more than mere reasoning, sending forth efforts towards pleasures, and assigning these pleasures in turn as their ground or reason. There is authority, command, in the right, and obedience to a command comes in by way of arrest and suspension of a purely, self-poised activity, an activity which Dr. Hopkins would term a rational activity. Let us try to put apart, and keep apart in thought, these two aspects or bearings of an act; one of which he so clearly recognizes; both of which we accept. The same act in one view is wise, in another is right. As wise it rests upon reasons that can be given, ends that are pursued by it. But as wise, and because it is wise, it is something more than wise, to wit, right; that is our moral nature comes in with additional and

self-poised action to make this affirmation. Now, to perform it as right is obedience, and is in oversight of the end ; to do it as wise is rational, and is in view of the end. Let me illustrate. A father lays a command upon a son. The son sees the wisdom of the injunction, he also knows it to be authoritative. The wisdom of the act does not cover or conceal its authority. He may perform it independently, because it is well that it should be done, and so do a rational thing ; or he may perform it as enjoined, and thus show obedience. The last act is not rational in the sense that it springs from the mind's normal, unaided impulse ; it is rational in the sense that, to do the act as it was enjoined, and because it was enjoined, in ignorance or in oversight of its object, is yet well. What we object to exactly in the systems of Bentham, of Dr. Hopkins, and of many others is, that they lack authority ; they miss the moral precept as law.

No more is the second conclusion found in the premises, to wit : that the obligation of an action as right, springs wholly from the good it proposes. Says Dr. Hopkins, "No man is under obligation to do an act morally right for which there is not a reason besides its being right, and on the ground of which it is right." If this passage is meant to affirm that there are certain grounds or conditions on account of which every right action is right, we assent to it ; but if it is intended to affirm, as we suppose it is, that these grounds or reasons are all that is meant by right, we object to it, as absolutely destructive of morals in their independent, self-asserted authority. To recur to our illustration, it is easy to conceive of

the command of a parent, that is not wise, and thus to divide the two elements of fitness and authority. Conscience, on the other hand, the voice and authority of God in the soul of man, grounds its commands exclusively on wisdom ; at least, on that which is thought to be wise, and there is no actual division possible between the wisdom and the moral authority of an act : yet this does not make the first the sole ground and source of the last, since wisdom as wisdom, as the sagacious search after good, has, as we have carefully shown, no authority in our constitution, nor power of command over us. In other words, obligation, duty, will not hinge, cannot be made to hinge, on pleasure. Bentham is far more logical in insisting that interest, pleasure, good, are all with which we have to do ; and in scorning duty, ought, obligation as the mists and chimeras of the mind, than is one in striving to evoke these mighty shades of authority in the spiritual world, from the sensibilities which find play in our purely physical and intellectual constitution ; all that belong to us till we have recognized our independent, moral constitution, with its supporting emotions. One is not to hold fast to the fruits of a system, while rejecting the grounds on which they rest. If morality has not an independent, perceptive basis in the constitution, it can have no independent sensibilities with which to support and reward virtue. We beg leave to suggest, that Dr. Hopkins overlooks this fact, and while laying commendable stress on the rational element in ethics, goes further than he of right can, in supporting his view by the blessedness obedience confers. This he

is very willing to oppose to the happiness of the utilitarian, whereas it is of the same nature. Blessedness as a preëminent, ethical sentiment can be the fruit alone of a preëminent, ethical intuition. The theory of morals is so central in all questions of character, of social and of civil import; is so subtle in itself; and has been so perplexed by deficient and false presentations, that we shall be excusable in occupying a little time with it. We shall be without excuse if we fail to do all that we can to make it clear. We wish further, therefore, to point out some of the relations of this primitive, intuitive right which we have insisted on.

The first of them is its connection with happiness. We suppose that the highest happiness will always be secured by obedience to the right; and this for two reasons. The universe is under the government of God, and he has so constructed its natural and its moral laws, that they run parallel with each other. One of the surest ways, therefore, to reach good, physical, intellectual and social good in a broad and complete form, is to render obedience to the moral law. This law was inlaid in our constitution by our Heavenly Father, and has received from him the guidance of many direct precepts in reference to this very end of putting us in the lines of natural law, and of reaping the good under them which comes from obedience. Moreover, the moral nature itself involves powerful sensibilities. Inseparable from right, is the satisfaction of obedience, are our own approval and the approval of God. Hence the emotions immediately consequent on the independent nature of the right

so reward virtuous action, so augment the balance of pleasure in purely ethical conduct, as to cause this always to be the path of highest enjoyment, if not at once, yet finally. This last and highest form of good, coming always in overwhelming amount to settle the results as respects pleasure, can only flow from obedience to an independent law, since it is the sense of obedience that is the ground of it. The satisfaction of wisdom, of sagacity in selecting and pursuing enjoyments, is very different, and can itself constitute no ground of deciding between two lines of conduct, since, whichever we choose in view of their consequences, we shall commend the choice to ourselves as wise. A sense of sagacity accompanies the rogue as readily as the honest man.

For these two reasons, then, the government of God and the rewards of the moral nature itself, the highest happiness does always flow from obedience to the moral law. The happiness conferred, the consequences of an action in the good it bestows, are always a test, therefore, of its character as right or wrong. If we were sure of the entire results of an action, we should thereby be made sure of its moral quality. Yet this enjoyment conditioned on obedience is, much of it, not the ground of the law, nor the motive in obedience, but the consequence of obedience. When a distressed and perplexed Cranmer is striving to nerve himself up to the final effort, he does not anticipate the triumph and satisfaction which are to follow when the conflict is past, and the question finally and favorably settled. In an intense, moral struggle, there is always a fulfillment of those

remarkable words of Christ: "He that findeth his life shall lose it: and he that loseth his life for my sake shall find it." What Dr. Hopkins so well says in defence of the existence of disinterested affection, is, in exact form and with higher import, applicable to disinterested obedience to the moral precept. His language is explicit and strong: "The desire is for the happiness of others, and the moment it ceases to be that—that disinterestedly—the affection itself is gone, and with it, the very source of our happiness. The gold is become dim, or rather dross, and the most fine gold is changed." Thus the profound questions of obedience, the deep conflicts of our nature with sin, are usually settled in comparative darkness; are often won in deep discouragement, and the storm-clouds part only after the crisis has been passed, the moral victory gained. Then, for the first time, it is both seen and felt, that we yielded little or nothing in real good, and gained all.

There is also another relation of right to happiness, that portion of happiness which arises from our physical and intellectual constitution, aside from the moral element. It cannot be shown—nay, the reverse is in many cases obvious—that this portion of good, which alone the utilitarian is at liberty to consider, will always pronounce for virtue with an overplus of pleasure. Indeed, if our moral constitution could be gotten rid of, there would, at least, be a grave doubt whether many of the tasteful and intellectual forms of self-indulgence; or, indeed, some of the grosser forms, considering the native proclivities of the persons whose pleasures are involved, would

not, so far as our visible horizon extends, result in a balance of enjoyment, credited and paid to the parties who have sought their own ends. At least the moral problem, which this world is said to present, of disorder and maladjustment, and whose existence calls for another world of correction and redistribution, plainly implies this: that good, omitting the moral emotions themselves, does not seem uniformly to accompany virtue. Nevertheless, these secondary forms of good are admitted by us, as steadily entering into the consequences of moral actions, and constituting a portion—though only a portion—of those conditions or considerations, on the ground of which, the conscience pronounces it right. A poor man asks of me aid. He needs it. I can readily bestow it. Now this relation of my gift to his good or prosperity is what leads me to say, or at least my neighbors to say, that I should bestow it; that I ought to bestow it. The difference between the intuitive and the utilitarian philosopher lies in reference to such an act precisely here: both agree that the virtuous act finds its spring or occasion in the physical good; but the last adds, this covers the entire problem. The good given, and the good, under natural law, consequent thereon, are the entire motive and obligation of the act; the act as right, accepts this as a final and complete explanation. Nay, says the intuitive philosopher, had it not been for this physical good that I confer, there would, indeed, have been no virtuous act to perform; but on this opportunity or occasion, my moral nature steps in, lays the act on me as obligatory, and gives me the satisfaction in

performing it of having reached a higher end than that of pleasure in thus fulfilling the moral law of my being. The relation, then, of happiness to right is concisely this: the highest happiness always follows from obedience to it, because of God's government and our own moral nature. Happiness is thus a practical characteristic, and hence, often a test of right action. Again, good, under purely natural law, enters as that ground or condition in actions which leads us to call them right, but is not the measure or source of that right. The parent commands the child to share his playthings with his fellow. The act has now two reasons: the enjoyment of a brother, and the will of a father. Thus moral acts have two grounds; the good conferred, and the will of God, our Creator, expressed in the voice of conscience concerning that good.

The next relation of this notion of right is to practice, to daily conduct. Precepts, rules, laws, are the forms which the ethical element assumes, and must assume in practice. It is acts to be done that are enjoined upon us in the word of God. This is prohibited, and that is commanded, and through a series of separate considerations, the law finds its way slowly into our lives. The philosophy of a supreme end is philosophy, not practice. Who can wait to hunt up his supreme end before he begins to live! What were the relations of life to morality before the philosophy of a supreme end sprang up, or still are where it remains an unknown speculation? We live by details. Our duties and dangers are those of the hour, and require for the most part the solution of

specific precepts. Precepts do indeed rest back on principles, yet few grasp the principles ; most employ the rule closest at hand. Our lives are shaped under laws obeyed, acts performed, rather than under the abstract conception of a supreme end. Whatever may be the theory of morals, the real way-marks of life stand at the entrance of this and that line of conduct, this and that form of action.

Indeed, is there any such thing as a supreme good, to be pursued through light and darkness, in all the accidents and incidents of life ? We think not, unless we are content to mean thereby obedience to a moral law, which Dr. Hopkins so carefully excludes from, and contrasts with, the supreme good. A good cannot be a supreme good unless its pursuit is obligatory ; or unless, by its superiority of pleasures, it surpasses all other good. What good does this, except that good which arises from obedience to the moral law as a law ? Other forms of good than moral good are not supreme in either of these senses ; no one of them is obligatory over others ; no one of them uniformly surpasses every other. The life and the philosophy alike, therefore, which refuse to accept the moral law as ultimate, and start off in a pursuit of good, have no right to talk about a supreme good, unless this supreme pleasure is to arise from an action of all the powers, each in its own province. Goods, many goods, appetitive and intellectual, social and solitary, should be the watch-word of this philosophy, not a supreme good, since there is no such single good. Advantages of all sorts are to be sought for, sought where they are to be found, in any and every portion

of our constitution. The philosopher may make his list of pleasures as exhaustive as he pleases ; may go as high as he can—provided he does not assume an independent moral nature, whose existence he has denied—may go as deep as he can, may sort and parcel out his enjoyments with utmost skill, may cautiously establish a rank among them with its “law of limitations ;” and if others accept his conclusions, he and they will be guided as to what pleasures are to be sought, and when and where they are to be sought, but there must remain throughout divisibility and separation, many distinct forms of good, not a supreme good. How can such a one still say that blessedness is the supreme end, the blessedness of God and of his rational universe, and give thereby any more than a nominal, verbal unity to action ? I may say of a community, prosperity is its supreme end or aim ; but I do not thereby define any one object which is to be pursued by it in seeking this prosperity. These objects will remain many, and I can only mean to say, that they are all to be sought only so far as they minister to prosperity. The unity, therefore, so far as I have reached any, lies not in the objects aimed at—these may be the products of ten, twenty, an hundred branches of industry—but in the law or precept under which these are severally to be labored for, to wit : that they shall tend to the prosperity of all. Thus blessedness, as a compound of all pleasures, presents no single supreme end, and when so spoken of, looks vaguely towards some law or method by which a thousand separate pleasures or ends are to be gained. The practical test of the

wisdom of each action would be, Does it conform to those rules of judgment by which pleasures replace each other, by which now one, now another, is pursued? Thus, this philosophy of ends travels its entire circuit only to get back to a law, to escape which it first set out.

If, now, any choose to accept this result, and to say with Bentham, that the office of the moral guide is that of a "scout;" that it is his labor to scurry on and race around in pursuit of the results of action; to contemplate consequences, immediate and remote, and frame precepts upon them; these may ask, Since you have admitted that happiness is a test of moral action, why are we not at least practically safe and wise in shaping action in reference to it? The answer is easy and decisive. There is very much besides the consequences which flow from action, which helps us to decide on its character. These results are often very obscure and uncertain; and in their anticipation, suffer, above all other elements in the problem, perversion by our fears, our hopes, our desires. The moral judgment is quickened, corrected and sustained by the moral sensibilities, the affections which gather about it, and become the means of speedy and delicate analysis and interpretation of action. The ethical, like the esthetical sense, gives rise in its cultivation to peculiar and very sensitive states of emotion, and these respond with decisive and immediate power to the moral qualities of an action. Its concealment, its circumvention, its openness, its magnanimity are scented in the air by these watchful attendants of conscience,

quickly snuffing the trail of duty. To decide on the beauty of a painting, requires a sensitive heart, reflecting in on the intellect a just appreciation of its sentiments: to decide on the moral bearings of conduct requires a lively appreciation of its true, its intrinsic quality, and this is reached by the moral sensibilities quite as much as by a cold, logical development of its consequences. The prism, dissolving light into colors, discloses the beauty that is in it: the affections, the moral medium of the soul, separate conduct into its secret, its sweet currents of emotion, and thus lay open the good that is in it.

Again, moral principles are interdependent, are parts of a system, cast much light on each other, lend each other authority, and become, through the great inquiry that has been expended upon them, guides, far better than our ability, in any given case, to trace the results of action. They inspire a certain confidence, and lead us to feel, that they will, by their own moral power, bear down and defeat very probable, natural consequences, that are ready to confront them and force them back. I may say universally, those who ground their moral judgments on the results which they anticipate, in each exigency, from action, are trimmers, time-servers; and those who repose on moral principles in the face of predicted evils, are reformers and progressionists. Take such a controversy as that concerning slavery. How long was emancipation opposed by those who gave a weak assent, indeed, to purely ethical reasons, but always found in their horoscope such contingencies and

combinations as to indicate that the time had not come. Indeed, men usually fail of obedience in the hour of trial by a calculation of consequences, and by substituting the partial conclusions so arrived at for the clear decisions of the moral reason. Once more, most of the instructions of Revelation assume the form of precepts, while very little effort is made to trace the natural consequences of particular actions. Hence, it becomes an efficient guide only through obedience, an obedience which justifies itself as obedience without much foresight. The children of God go very often, not knowing whither they go. Thus practical ethics are ever assuming the form of rules laid down, rather than of reasons rendered under the natural consequences of conduct: not that the first excludes the last, but that those are more immediate, pertinent and efficient than these.

A third relation of an intrinsic right, is to the rational, intellectual element in our constitution. We suppose that conscience is meant to supplement this, not to displace it. Our reasoning processes are called forth to the full in unfolding those relations of conduct on which conscience pronounces; but the supreme authority in action, the last appeal is not made to the judgment. Inquiry, investigation, are the order of the day in the ethical court, but that which goes forth from it is certified with an authoritative seal. Conscience, in its stubborn command, is somewhat of the nature of an instinct, and yet it leads us constantly out of blind obedience into a rational comprehension of the consequences of virtuous action and satisfaction therein. The philosophy of

ends, when it comes, shows to us that that which we have obeyed as right has been truly right, and we may hence walk with open vision. The child who has been fortunate enough to fall under a truly wise government, grows up under, and thus into, the wisdom of that discipline, and, at length, finds its own view of good wholly consonant with that laid upon it. Thus obedience passes constantly from its servile form into one of freedom, into one of comprehension—an intelligent rendering of that which the soul gives with indescribable pleasure. It is as if the bee, building by instinct, should come, at length, to an apprehension of its work, and marvel at the perfect skill, the mathematical exactness of its labor. Thus with man; the instinctive, the authoritative element, is more and more taken up into the rational and the voluntary element, though these receive their bias and form from those. Our life becomes more spontaneous, without being less exact.

Again, we direct attention to the relation of the right to God. Dr. Hopkins writes, in his answer to Dr. McCosh, "It was said to me recently, 'we are to love God because we love virtue,' as if the love of God were not virtue. In the same way we are to love our fellow-men, not for their sakes, but for the sake of the right." And further on, "I have seen quite enough of this abstract, hard, godless, loveless love of right and virtue, instead of the love of God and of man." This passage is a good illustration of the difficulty often met with in understanding an argument preparatory to answering it. If we mean by the love of God, the love which flows from approval,

as the person above referred to plainly intended, then, I ask, On what is that satisfaction in God's character which calls forth affection based, save his virtue? If he were not virtuous above others, evidently he could not be loved above others. Character is the basis of love, and virtue is the basis of character. If God were vicious, it would be vicious to love him in this sense of the word. The same is equally true of our fellow-men. The above language becomes plausible when the word love is used in a different sense, and one not intended by the person who affirmed, "we love God because we love virtue." This second meaning is the love of benevolence, or good-will. Now we may have good-will toward a devil, and that we do will doubtless be a proof of our virtue. No man is beyond our commiseration, and the depth of our compassion shows how far our moral convictions have gone down into the soul. To love God with the love of good-will is, doubtless, virtue, and not the fruit of his virtue: but the form of love more frequently contemplated in speaking of God, is not this love, which may belong to a thief as well, but the love of approbation, of admiration, and this is based on virtue. It is this law of an infinitely glorious life, and his perfect obedience thereto, that calls forth our adorative love of God; and approximations towards a like perfection, that attract us toward our fellow-men. This does not put the right above God, it puts it in God. It is the law of his own uncreated, perfect nature that he follows, and so following is virtuous. The law is above us, because our natures are given us; it is within and of him, be-

cause he is from all eternity. The seat of the right is the moral health and hygiene of Heaven, a perfect nature, perfectly unfolded. This excellence we bow before ; this holiness we worship ; this love we love ; not because we bear God good-will, but because the atmosphere of the soul is luminous everywhere with his glory. God is a law to himself, and, making us in his image, that law has become a law to us ; and, through it, we go back to the comprehension and admiration and exaltation of his perfections.

One other relation we glance at, that of the law of an absolute right to the doctrine of immortality. We find great encouragement in our belief of the last, from our acceptance of the first. A law of prudence, of wisdom, if you prefer it, is fitted to this life, is needed even if this is the whole of life, is not too much for the state we are here in.

Not thus is it with an absolute right. Here is a wheel that strikes into the mechanism of our lives, but does not complete an entire revolution before us. It has a sweep of consequences and compensations which are not rounded to their beginning in this present existence. It is a law beyond what is required for this state of being.

Martyrdom is not a stroke of prudence. It surrenders all, either for nothing, or for immortality. Not for nothing says conscience, leading the soul to the sacrifice ; hence for immortality. Every rack, every stake, every cross, every eye that has caught the inspiration of their heroism, every heart that has responded to their faith, has given proof to immortality ; has disclosed its deep seats in the soul. In the

mouth of these many witnesses shall every word be established.

Fall from this wisdom, and you sink into perfect folly. Fail to establish this foot-hold on the invisible, and you go back to dust. Stumble on these heights of virtue, and you pass sheer down to the dead. Live by this law, and you have surrendered all, gained all; have cast that which now is into the shadow of that which shall be.

LECTURE VIII.

LIBERTY.

WE said in our last lecture, that the connections of the mental world are not of that simple, causative character which belong to those of matter, but bear a double aspect. A law runs before our rational acts, and these spring up in obedience to it. In matter, the law is in the force, and the disclosure of it and its existence are identical. In mind, the law goes before the activity, and this arises under it, is not conditioned to it. This antecedent law, the right, we have spoken of. We have glanced at its relations to reason, shown their increasing coalescence ; the steady adoption and sanction under the authority of virtue, of all the wise thoughts and plans of life ; the sending forth of thought by virtue, both to prepare her path and accomplish her labors. We should also add, that we may not seem to omit it, the supplementary, esthetical perception, by which all high effort becomes one of beauty, and gathers, from this fact, a peculiar exaltation and completeness. Let it be borne in mind, however, that these guides, of whom the royal one is virtue, run before the activity, propound themselves to the soul for its acceptance, and do not in any way accomplish their own counsels. We come, therefore, to the second portion of the law of connections in the mind—that which defines the nature of the executive force. Here, we encounter

liberty, instead of necessity ; a free and spontaneous, instead of a causal activity. This notion of a free-will has suffered many perverted and inadequate statements, and has encountered opposition from all classes of philosophers. The attack has been by no means confined to materialism, in its complete form, or incipient stages. Indeed, we are not dealing historically with our subject, and have made no effort to keep apart those many phases of belief which slowly ripen into materialism, or striven to define the transition point beyond which the word, materialist, ought to take effect.

To prosper in our inquiry, we must thoroughly understand ourselves, and this we do the more easily in keeping somewhat clear of others, and first running out our own lines of thought. Let us revert to our conception of a cause, as it is in contrast with this, that spontaneity and liberty are to be understood. Under all physical phenomena, the mind puts a force which is their occasion or cause. The cause coexists with the effect ; the two are inseparable, the visible and invisible sides of the same thing ; the phenomenon or outer form, the nomenon or inner essence, of the one being. These causes, strictly, are never in any way known to our senses, yet the mind conceives them as determined, fixed, measured forces, which are capable of certain results, and no others ; forces from which the specified effects must follow, in an invariable amount and order. Other external causes may be strong enough to reach and modify the causes contemplated, and thus vary the results, but the forces in these are shaped for certain effects, and are capable of no others. When we come to mind, we

see this conception of fixed forces is not applicable. Mind as mind is spontaneous in its action. By this we mean, that its activities spring from itself, and do not, as is the case with matter, exist in it, as definite realized forces. This is shown best by the variable, unequal, independent way in which they spring up. A clock runs for a certain length of time. It is conditioned from the outset to a fixed sequence, and a limited extent of activity. The same is true of the most complex, chemical and physical changes, is true of all events which do not come immediately under the influence and government of those spontaneous agents which have their seat in the invisible world. Not thus is it with the activities of mind. Take the same person, make external conditions as exactly alike as possible, and you do not secure at different times the same succession of internal states, nor any obvious approximation to it. A prisoner, within the narrow walls of his cell, with differences of external condition very trifling, differences that find and leave the body in a state almost identical, day by day, may, in successive days, present very diverse states of mind, and show no two periods in which the round of thought and feeling is, for any considerable time, the same. The mechanical precision, order and period of physical phenomena are all gone, and in place of them there are fitfulness, irregularity, every species of inequality. We explain this by the notion of the spontaneity of mind. It is not a measured force, gauged to certain facts, but from itself, and of itself, with fitful efficiency, evokes its thoughts and feelings.

Again, this is seen in the contrast between sensations and thoughts. The one are determinate, obey perfectly a law of sequence. We see and feel what are within the reach of the eye and hand, and can see and feel nothing else. Iron is never soft to us, or velvet hard. The sensations are the same in form and order under like external conditions. The mind from within itself has no power of varying them. This fact finds explanation in the entrance from without of true causation, and this causation stands, in the phenomena it occasions, distinguished from, and in contrast with, the pure activity of the mind. We do have the two classes of facts in our own intellectual experience, and find them so diverse, that the mind, for this reason, refers the one set—to wit, sensations—to outside, fixed forces; and the other set—to wit, thoughts—to inside, native, spontaneous power. The classification of mental phenomena turns on this very distinction between fixed and variable facts; causal and spontaneous force. The first carries with it all experiences physical in their origin; the other, all purely mental. Break down this distinction, and sensations and feelings are inseparable. All do so divide them, and in the division recognize spontaneous forces and causal forces.

Once more, observe the connections of mental acts, and see how these disclose their spontaneous character. Take thought; for instance, the successive steps of thinking involved in a theorem of Geometry. Is there any adhesion between one item of proof and the next; any link of force, compelling the mind to pass through the successive stages of

the argument? If there is, how happens it that all minds do not run alike through the entire circuit of proof, as all sleds slide down hill? Is it not plain that mind itself as mind, as rational power of a given grade, sees, evokes spontaneously the serial conclusions, compacts them, and carries them on to the goal of the reasoning. There is no external, no independent force, in the first half of a proposition, to call forth the last. The connection between the two halves lies in the mind itself, and that, too, in its variable, spontaneous power, which it may or may not put forth. What is attention but a calling out, by the mind itself, of its activity, and thus a clear disclosure of the variable force which is in it. So, too, the feelings are a changeable response of the mind to certain perceptions or intellectual states, and these states, though conditions of this emotional activity, are plainly not causes of it, do not create it in kind and quantity.

If it now be granted that physical phenomena are fixed, and mental phenomena variable, showing slight dependence on external conditions; that the sequence, in the one instance, flows firmly on to its completion, and, in the other, suffers constant arrest and change; then these become the accepted data on which we predicate, in the one case a connection through a fixed cause, or causation; in the other, a connection through a variable power, or spontaneity. A power that is variable within itself, is shown by its variability to be self-originating; since it so far assigns itself its own conditions, calls itself forth. A fixed force is a dependent, originated force, as the conditions, the limits that are assigned it, up to

which it is brought, within which it is compressed, are received from abroad. No one, indeed, can condition, can assign limits to a force, who cannot increase and diminish that force; who cannot put himself into and under it. And in assigning it limits, he actually does put himself into it and under it. Variability, then, the ability to increase and diminish action—the constant characteristic of the mind—has its seat in spontaneity, power; invariability, the inability to increase or diminish action, has its seat in causation, force: and these two conceptions must be kept forever apart, and the more so, since they are blended in us through our physical and spiritual constitutions, the interwoven parts of one fabric, or being.

We have not yet reached liberty, though we have taken a long stride toward it. If pure mental action is spontaneous, it is easy to believe that a portion of that action is free; that is, takes place in view of two distinct lines of conduct, either of which is equally open to it. Liberty is more than spontaneity in this, that it is the power of spontaneity consciously employed in a choice between two actions. Spontaneity finds exercise in thought, expends itself therein; but in choice, the mind first arrests its action, observes the ground before it, and then consciously, distinctly, redirects itself. This is liberty—a use of spontaneity under definitely realized conditions, involving an alternative. If the mind were not spontaneous in all of its action, it could not be free in any of it; or at least, if it had not spontaneous power to employ, it could not make this exact use of it known as liberty.

Liberty involves spontaneity, the ability to originate power, and is the exercise of it in view of an alternative, both branches of which are perfectly open to it. The necessitarian says, the mind, the will, is, under these circumstances conditioned to a certain act, to one only of the acts under consideration, by the conjoint effect of its own constitution, and the influences to which it is subject ; that is to say, the force to be expended by it is a causal one, established and fixed in its measure and form of being. Says the libertarian, the force conceived is spontaneous power, neither conditioned in itself, nor out of itself to fixed results.

What is the proof of liberty ? Many strive to derive it from consciousness. Herein, we think, they err. All that can be truly referred to consciousness, will hardly, under any circumstances, become a matter of discussion. We are, indeed, capable of great prevarication, and can surround almost any subject with uncertainty, but scarcely of denying the very thing that is in the mind itself. If liberty were a fact of mind, it would, no more than thought, or feeling, or volition, be open to doubt. Liberty is not a phenomenon, but the alleged nature of a certain class of phenomena. It is the relations of the mind's acts to the mind's power, that is under discussion ; and this sub-phenomenal connection never appears in consciousness, but is decided on as to its existence and character by the mind alone. Now the mind brings forward certain ideas to the explanation of a certain class of facts, and these ideas have no other authority than this persistent assertion of them by the mind. Herein, they all rest finally on the same

basis with each other, and also on the same basis with every belief. Knowledge being only referable to reiterated affirmations of mind.

What are the facts, then, in view of which spontaneity, liberty are asserted, are proffered in elucidation? They are, first, the variable, changeable actions of men. Human conduct presents no such sequence as to suggest to us the notion of the invariable law of causation, but, in our language one to another, in our claims one of another, in an assertion of our own power, in forecasting the results of conduct, we recognize the idea of liberty, and constantly imply or directly affirm its existence. So true is this, that no theory of necessity ever prevents men, in cases of personal interest, from treating others as if they were free; as if they had other lines of power in them than those of barren, blind causation. All anger, indignation, contempt, are as ill-timed as passion toward a brute, if this notion of liberty be invalid. Whatever may be said of the thoughts of men, their emotions are all based on liberty, are brutish and maniacal without it.

Again, the great fact, the all-inclusive fact in human society of responsibility, calls forth this notion of liberty as its only explanation. There is no axiom in morals, nor indeed anywhere, if this is not one; responsibility is proportioned to power. No one can claim either of two forms of conduct from his fellows, unless they have the power to enter upon either at their option. Here, indeed, is the grand occasion of freedom. The moral law as antecedent to action, laid upon it as an imperative, is irrational and unjust

without the ability to obey it. If the mind, in each case, is still conditioned to its own state and circumstances, then guilt, responsibility, duty, are not pertinent conceptions, since these all require sufficient power to do the obligatory act. I know very well that the necessitarian has a meaning for these words, and a form of their application. What I affirm is, that he does not reach and explain their full significance in the popular, the general, mind. It is exactly this more profound feeling which underlies the word, guilt, resting back on a belief in the complete power of the guilty party to have adopted an adverse line of action, that is always fighting against the philosophy of necessity, and preventing its universal acceptance. If that philosophy were correct, it would never have been offered but once to men. They would have leaped to its conclusions. It is a secret sense of its insufficiency to account for obligation, to cover the deeper moral phenomena of our nature, that holds men back from it, and, when they have nominally conceded its truth, allows them to make claims and impose duties, in language and form, inconsistent with it. Lay aside all the confusion of philosophy, appeal directly to the moral judgments of men, their first spontaneous conviction, and the libertarian carries the argument, men assent to, and assert, liberty as the ground and basis of morality. So true is this, that every necessitarian steals his language, as far as possible, from the vocabulary of liberty; warps the enunciation of his doctrine over toward the popular sentiment, and strives to affirm and deny necessity in the same breath. Thus, we

hear of a moral necessity, and a physical necessity, as if there were two kinds of necessity, and one at least a trifle less necessary than the other. Liberty is turned into pantomime, a mere show of powers; yet the pantomime is patiently played out to delight and pacify the populace. The deity has been stolen from her seat, but the worship goes on, for no one dares to confess or proclaim the sacrilege. Thus tyrants maintain forms whose force and import they have abolished.

A third proof, we find in the nature of motives. If a thought, not yet before the mind, has no hold upon it, by which the intellect is constrained to think it; if thought is rather the spontaneous power and pursuit by the mind of its own ends, readily may we accept a like connection between its other states. In which way ought we to conceive an object like wealth? As possessed of an efficient force by which it acts on the mind and draws it to itself? or, as giving the direction in which the spontaneous power of the soul goes forth? Is a desire occasioned, caused in the soul by the coveted object, as heat awakens molecular motion in matter; or is a desire the self-originated activity of the soul toward certain things? Plainly, the latter. There is nothing whatever to justify the opposite conception of an efficient force in objects of desire, acting on the mind. Neither is there any more proof of a force in the desire by which it occasions and necessitates a volition. The volition follows, or fails to follow, according to the external possibilities of the case, and the present direction of the soul's spontaneity. The desire itself, as a portion of that spontaneity, is dependent upon

it, and this portion evinces no power to control the remainder ; to involve and constrain by its own force a certain amount of executive force, directed in a compulsory pursuit of the object. All such conceptions are alien to the mind, and will not bear examination. A cause, always the source, and exclusively the source of necessity in events, precedes and immediately accompanies the effect, and pours into that effect a fixed amount of force : a motive, or at least the gratification proposed in action, follows the action, and suffers the power the soul pours forth, rather than is the source of it. No relations can be more distinct than these two, that between a cause and effect, the one in and back of the other ; and that between an object of pursuit and the mind's activities, directed towards it. Now if the object does not, by an efficiency of its own, cause the desire, nor yet the desire cause the volition, then there is no line of force from without, inward, but only one from within, outward. Yet, there is no liberty in the ordinary gratification of a single desire, because the spontaneity of the soul has no alternative ; it is shut up to this single direction. When, however, it is consciously placed between two forms of expenditure, there is an opportunity for a choice, and in this choice, to be finally explained by the spontaneity of the soul, there is found freedom.

There is no proper choice between things of the same kind. Two gratifications, if they are alike, leave the mind indifferent between them ; if one is inferior to the other, it presents no alternative. There is the semblance of liberty, but not real liberty, in a

choice between two and four hours of pleasure, since there is only an apparent, not a real alternative. The mind is not irrational and absurd because it is spontaneous, and its liberty is present to open the way to wise action, not to preposterous action. Liberty, spontaneous power, is not exercised by the soul in flat contradiction of its reason, because it may be so exercised, and therefore, a fallacious, deceptive alternative, is to it no real alternative. Coins, marked to the senses one and four dollars, give no play to liberty, any more than the possibility of walking on one's hands, makes this, in contrast with walking on one's feet, a matter of choice. Is there, then, in human action any real alternative, or is liberty, after all, a dormant power through the want of an opportunity for its exercise? If all enjoyments can be brought to one grade or standard, and measured thereon as greater or less, then liberty disappears, since we have only in each case to bring forward our rule, to decide by it the question of degrees, and forthwith all liberty becomes irrational, absurd. Indeed, such would be the results of utilitarianism, resolving all actions into a pursuit of pleasure, and bringing pleasures, for a test, to the sensibilities to be played on by them.

Our moral nature, however, gives a true alternative to the mind. Conscience both renders liberty necessary, that its law may be obeyed; and possible, by giving a new, a diverse, a truly independent line of action to the soul. The spontaneity of the soul finds the play known as choice, as freedom, through the moral nature. The rewards of right action can

be brought in comparison with the appetites and passions to no common scale of pleasures, and graded thereon as greater or less. Duty frequently fails to present itself as pleasurable, and yet remains in its full force, and the pleasure which is to follow from obedience is not the very motive of obedience. Any weighing of obligation, with enjoyments, of moral satisfaction with appetitive indulgence, can only reveal the disparity of, the unlikeness of, the two, and leave us still constrained to choose between them. Here, then, in this essential diversity of motives, which come in, on the one side from the physical, and on the other from the spiritual, world, we find ground and occasion for liberty, for a spontaneity that may go forth either way ; that may strike downward or upward in radical or plumule as it pleases. The grounds, both for the direction and the degree of the activity are found in itself. In these two facts, therefore, that motives have no efficient force, and that there is a real, not an apparent, diversity among them, we find the conditions, first of spontaneity, second of liberty.

Again, we argue freedom from the inadequate statement of the facts, to which the doctrine of necessity leads. There is no more decisive proof against a theory, than that it tends to a disguisement and perversion of the facts ; that it puts in circulation a clipped and fraudulent currency. Of this we can give but a single illustration. Both Bain and Mill make the notion of responsibility commensurate with, perfectly equivalent to, the notion of punishability. Says Mill, "Responsibility means punishment," and punishment

he regards as just because it stands in the relation of a means to an end ; exactly as whipping a horse is allowable, if it is really a condition of safety, and advantage to those who drive him. To establish my assertion that the necessitarian perverts moral facts in their statement, two things are in this example necessary : first, to show, that, with him, responsibility and punishability are equivalent ; second, that they are not so equivalent. If the motive controls the mind, reasons the necessitarian, then the mind can, under given motives, do no otherwise than it does do. Yet it is right to punish the person who does wrong, because the punishment itself becomes a motive, alters the relation of motives, restores the moral equilibrium of action, and protects both the man and society from the wrong bias which had seized him. Hence, responsibility and punishability mean the same thing, since in saying that the man is responsible, we only mean to say, that it would be right to punish him ; in no other sense is he responsible. Is not the second point now also plain, that this use of the words, responsible, responsibility, emasculates them, causes them to fall like lightning from heaven ? When we say that a man is responsible, we mean to affirm a profound moral truth, and may not have in the mind's eye any notion of punishment whatever. Moreover, the nature of punishment itself is greatly modified by this view. We are willing to accept the theory, that punishment is inflicted solely for the discipline of the person and the protection of the community, but this does not alter the fact, that it has a fitness, an emo-

tional basis in the guilt of the party who has called it forth. We may confine a lunatic, but the transaction has a moral character totally different from that of the imprisonment of a murderer. With Mill, punishment and responsibility both sink down to a purely animal basis. A beast is punishable and responsible in the same sense that man is, since, like man, it can be restrained by judiciously inflicted pain, and may be dangerous without it. When logical thinkers, like Bain and Mill, exhaust the moral world of all significance, so banish from it its own peculiar aroma, and leave it in the statement, the exhausted refuse of itself, waste-matter whose essence has all been distilled and pressed away, we may well distrust the correctness of their initial idea. Ethical phenomena are often treated with the same wisdom of method as would belong to a chemist, if he should first drive off a volatile gas by heat, and then deny its existence, because the residuum did not disclose it. The subtle substance of morals is made to effervesce in the heat of analysis, and the coarse remainder of action is then easily explained by ordinary motives.*

We cannot leave this notion of liberty, resting on the foundations now laid for it, without answering the most urgent and pregnant of the objections which have been brought against it. Physicists have, in turn, battered it and passed it by in scorn; and the stones they now cast, they fling in the spirit of the Israelites of old, who, in the same act, made a tomb and built a monument for their victim. The first of these objections comes out of the very heart of science. It is her bitter rejection of that which she can make

nothing of. The objection is this : liberty is equivalent to fortuity ; a free action is one without a cause, and, therefore, without ground and government. Science eschews nothing so much as that which is not amenable to causes, since the physical province is her kingdom, and causes are her subjects. All that escapes a fixed law, emancipates itself from her control, and sets up a rival, not to say a hostile and disturbing, authority. The answer to this objection is simple : the mind is indeed not a cause, nor is the motive a cause, nor is the choice an effect. All the phenomena within the mental field are spontaneous, and causation does not take part in the transaction till a definite physical force is somewhere realized through the intervention of our physical structure. It does not hence follow, that all is accident and chance, because it is not fixed and fastened by force. The mind is, though a spontaneous power, a rational power ; and though the conclusion of a proof does not make the premises, nor the premises cause the conclusion, they are nevertheless interlocked in an orderly, sufficient way. Motives are grounds and occasions of action without being its causes ; and the mind is not fortuitous in its pursuit, because that pursuit is an expenditure of its own power. It is not an accidental arrangement under which certain things call forth desire, and others do not. Neither is it the result of fortuity, that the volition is confined to two lines of action ; nor yet of chance, but of choice, that the mind accepts one in preference to the other. Indeed, here is the gist of the matter. Can there be action which is not conditioned by that which is out of

itself, nor controlled by conditions previously placed within itself, that is not fortuitous action? We answer, Yes. For if not, creation is impossible, since creation is not a transfer and change of force, but a bringing of force, conditions and all into being. God is not conditioned from without, neither from within by any prior action other than his own, but he does give an orderly, rational origin to force. The human mind, therefore, may do the same thing, so far as fortuity is concerned, and its activity need not be causal in order to be consequential and rational.

There must be a limit to the conditioned somewhere, beyond which it passes into the free, the spontaneous, the unconditioned. Either the universe as a whole is conditioned from within, self-conditioned, or conditioned from without. If from without, then we do reach personal, spontaneous, power; if from within, then we assign to matter as a whole what we have refused to concede to mind, and make it a self-conditioned existence. This is more than once, the spurious result of philosophy. What it has refused to grant to mind as incredible, it, at length, allows to matter; in the face of experience, freely conceding to the weaker what it could not find, and would not endure in the stronger. Thus it is deemed more rational that matter should condition itself from all eternity, than that it should be conditioned by God; that order, thought, complex and complete relations should flow forth from a material source, than that they should be referred to a spiritual one. What is this but denying spirituality to mind to restore it again as a quality in matter?

A second allied objection is, that liberty gives no weight to motives. This we allow, if by weight is meant an efficient force by which they act on the mind. The mind moves toward them, springs up in power in reference to them, but can, on grounds given, reasons rendered, increase or withhold that power, an unconditioned power as regards the circle of circumstances under which it arises. The entire vocabulary of the necessitarian is at fault. It is figurative language which he insists in employing in a literal sense. He speaks of motives as greater or less, implying different degrees of efficiency in them ; whereas, the whole idea of force, in connection with inducements to action, is a transferred one, comes from the physical world, and cannot be carried over to mind with definite estimates, with weights and measures, with a registration of intensities. All that can be understood in this connection by the words greater and less, is the varying power of the mind's spontaneous activity toward the motives ; and if there is no other way of measuring motives, as greater and less, than this of the mind's response to them, then we reason in a circuit, when we say, that the mind always obeys the strongest motive, having no ground to call it the strongest except the mere fact that the mind does yield to it. The statement of the necessitarian would be, the motive, the external object, occasions, causes, a certain play of feeling, this feeling, according to its degree, occasions, causes a certain volition, and the volition is thus conditioned to the motive. Our first answer is, the motive has no power over the feeling, but the feeling

is spontaneous under the motive, hence this is not a connection of necessity ; and further, that the connection between the feeling and volition is also a spontaneous one, and, if there are two or more directions of action, the mind is conditioned to no one of them, and is free to a choice between them. A second answer is, the necessitarian has no way of measuring motives unlike in kind except through the feelings called forth, and as these feelings are also unlike, no method except the fact of a resultant volition. But to affirm, in one breath, that the will is governed by the strongest motive, and in the next that that motive is the strongest which governs the will, is to reason in a circle. "Nay," says Mr. Mill. "If there were no test of the strength of motives but their effect on the will, the proposition, that the will follows the strongest motive, is not identical, and unmeaning. We say, without absurdity, that if two weights are placed in opposite scales, the heavier will lift the other up ; yet we mean nothing by the heavier, except the weight that will lift up the other." Hold here. Mr. Mill has hit on the best possible comparison for his purpose, and if it is applicable, we concede him his ground. In the first place, we deny the statement, that we have no other measure of weight than this one form of experiment affords. Each weight may be used in a system of pulleys, or with a coiled spring, and show in both the same grade of force ; more satisfactorily, each exhibits the inertia and the momentum due to their respective weights, and this is an independent measure of the amount of matter in them. Fling into one pan of

the scales, the tack-hammer, and the sledge-hammer into the other ; now take them out and strike with them, and you have an independent confirmation of the first conclusion. The one has more matter than the other ; this it reveals in its momentum.

In the second place, we deny the existence of sufficient resemblance in the two cases. Each weight is known beyond all doubt, and every material circumstance concerning it is known ; our antecedents and consequents are thus fixed, and the same movement always follows the presence of the weights. In the case of any volition, and still more in the majority of volitions, we fail to know perfectly that which makes up motive ; and the action which follows often varies, and is not unfrequently entirely changed. Suppose our two weights, the same to the eye, should alter from day to day under comparison, and that this state of things, as regards the weight of all bodies, should repeat itself with unending irregularity, and it should then be affirmed and assumed that the heavier body always did bring down the scale, and that the variability was due to some subtle evaporations or absorptions of substances of which we seemed to get a glimpse, but had no sufficient measurement, how would the proof for the assertion then stand ? Evidently, it would have disappeared. Now this is the case with motives. Motives that seem to be the same are inferred to be different, if the action varies ; and those that seem unlike, are regarded as like, if the action is the same. That is, our motives are not, like weights, distinct and undeniable : but we regard them now in this light, now in that, according to the

conduct that follows them. Again, if we knew of two weights, only the single fact, that when placed in the scales one predominates, that is all that we should be at liberty to affirm, and could not add, there is more efficiency or force in this than in that, till by further and varied experiments, we had determined this result to be due to efficiency or force. The less weight may, in some situations, raise the greater; that a scale-pan is not one of them, is to be shown by varied as well as by repeated trials. Evidently, if liberty did exist, the will must still follow some motive, and if this motive was shown by that mere fact to be the stronger motive, we should then reach the absurd conclusion, that liberty, in its exercise, proves itself, must prove itself, to be necessity: that is, a manifestation, hence a proof, of liberty is impossible. This entire notion of the influence and force of motives comes from causation, is impertinent to the department of mind, and has no other ground or reason than the obstinacy with which we transfer the facts of one field by analogy to another. Liberty has the same independent basis in the mind as causation, and though the latter notion, now so assiduously developed in science, is constantly finding its way into philosophy, it is just as much an intrusion and mistake there, as was formerly the notion of spontaneity, when brought from mind to matter to the detriment and oversight of its fixed laws. This subtle intrusion of causation is the ever-returning occasion of difficulty. Says Hamilton, "It is of no consequence in the argument, whether motives be said to determine a man to act, or to influence (that is to determine)

him to determine himself to act." Mill, in admiration, exclaims, "This is one of the neatest specimens in our author's writings of a fallacy cut clean through by a single stroke." But the whole force of the thrust is dependent on the substitution of the word determine for the word influence. If to say a motive influences, and a motive determines, an act are not equivalent, the boasted blow is a mere flourish in the air. Now, to influence and to determine are equivalent only on the grounds of causation, of a like efficiency of force covered by the two words. It was only because of this physical meaning which adhered to the word influence in the minds of Hamilton and Mill, that they were able, with such craft and glee, to creep through it into that second word, determine, and, by thus evading the outworks of liberty, steal into its citadel and strike down the flag. Do the motives determine the mind's action? remains, under this double phraseology, as before, the entire question.

A last objection to the doctrine of liberty comes from another quarter. It is that it interferes with the foreknowledge of God. We suppose liberty does contemplate more power in man than would necessity, and, therefore, that it calls for more skill in his Ruler. When a choice is given, a veritable choice between two actions, doubtless, both contingencies must be contemplated and prepared for, and if God is not able to do this, it is certainly unsafe for him to allow liberty. But who is prepared to say that God is so impotent, that he is compelled, while mocking man with an appearance of freedom, to shove him along

a line of pre-determined action? Not we, certainly. Whatever the liabilities and demands of liberty, these we believe God is able to meet. Liberty implies two lines of conduct honestly open to man. God can meet him, and control him in either. It is by no means a matter of chance which he will pursue; it is only not a thing of necessity. The difference in results which depend on freedom as compared with those which spring from causation, is like that which exists between demonstrative and moral proof. The one is fixed, absolute in its conclusions; the other probable. Yet we even deal with both equally well. Most of our actions, our calculations, depend on moral evidence, evidence that admits a doubt, yet we prosper. Much more, then, shall the Kingdom of God thrive in his hand. It is not necessary that he should break in on liberty, nor that we should conceive it under the form of a conditional, physical cause, in order to make way for his counsels and his control. He created it, he contemplates it, and gives it the margin its activities require. His "thus far and no farther," is as effective against spiritual power as against physical force. What is capable of being known, he knows. What is not a matter of knowledge, omniscience does not suffice to make such, nor is it dishonored by the failure. The glory of God is found in his giving and handling liberty; not in his pressing his own purpose through and over all, flooding the spiritual universe, as he does the physical, with his personal force. His honor is that he floats upon and above this ocean of forces, a spiritual kingdom, spirits innumerable; not that he submerges

them all till they become mere fish of the sea, or drowns them all in it, dead men, bringing to the surface, for his sunlight, faces stark and ghastly. Let these spirits remain spirits, that God may foster them and love them, and rule in them and surround his throne with them, as the only adequate utterance of his own invisible life.

LECTURE IX.

LIFE ; ITS NATURE AND ORIGIN.—THE MIND.

WE have now considered those ideas which give character to the intellectual field, and distinguish it from every other. The first of them is consciousness, assigning the boundaries of the department ; the second are right and liberty, giving its laws. With these, beauty also is present, the central idea of the department of taste, and a product solely of emotional thought. There is yet another idea, which, for the sake of completeness, we should mention, though we do not propose to dwell upon it. Resemblance, applicable to mental as to physical phenomena, performs, in addition to the aid rendered by it in the classification of our intellectual activities, a very peculiar and important part in the processes of thought. The agreement of our conceptions, our judgments with that to which they pertain, is what we term truth, and the growth of our knowledge requires of us a careful and constant observance of this connection of the fact as present to the mind, with the exterior fact of which it is the symbol. Every step, therefore, of inquiry proceeds under the idea of resemblance in the phase of it known as truth ; and thus the trio which preside over thought are frequently given as the good, the beautiful, and the true. The good is the very substance of rational action ; the beautiful is the perfection of its form ; and the true

is the exactness of its equivalence, of its correspondence, to things as they are. The right still yields the law ; through inquiry, through truth, that law is grounded in facts ; and by taste, by beauty, action under it is made symmetrical and complete.

Liberty, as we have said, rests back on, includes as its central feature, spontaneity, and spontaneity is the condition of all that is true, that is beautiful, and that is good. Our intellectual conceptions cannot be shaped to facts, but must lie as they chance, parallel or athwart, unless the mind can at pleasure shape and re-shape them, till the exactness of agreement is secured. Our æsthetical productions above all need to show the easy, free, cheerful, unconstrained way in which they have sprung up ; while virtue is chosen conformity to the law of our moral life, which, by the adoption of every other law, becomes the law of our entire life ; and perfect virtue is the instantaneous and spontaneous response of the mind to every holy impulse. Spontaneity, then, is the seat of our spiritual power, and virtue the form of its perfect manifestation ; while beauty remains the grace of that form, and truth its harmony in a universe of kindred being.

We now pass from the field and law of mental life to its nature and source. Mental life ; the words imply that the mind presents a form or phase of life ; and that life is the germinant, generic idea of the spiritual world. Spencer gives this definition of life : " The continuous adjustment of internal relations to external relations." It has much merit, but seems to us to share the general deficiency of his philosophy,

and to be rather a statement of a portion of that which life does than an exposition of the life-power itself, the source of all vital phenomena. A definition should contain an inclusive statement of that which is to be attributed to life, and also a reference of these results to it as their source. We only know life by what it does ; yet what it does is not life, but the product of life. Life is measured by the sum of all that it accomplishes, and this sum is the complete, phenomenal expression of that power. Such a statement, however, is necessarily of the most general character, since life is not so much life as "lives," is not so much one force as a great class of forces, each working results peculiar to itself. The lichen and man have little in common, and that definition of life which is not too broad for the one nor too narrow for the other, can only include the most generic features.

Appropriating the labors of Spencer, we would say, that life is that power which establishes a circle of internal relations, and maintains them in constant adjustment with external relations. The entire notion of power now present in the definition is there by our insertion, and it has two offices : first, the building up of an organic product ; and second, the maintenance of it. The parts of an organic being are strictly parts, play into each other, are dependent on each other, and together constitute a whole. The rank of life is shown by the complexity and completeness of this dependence, by the entire separation of the living being from every other, and by the varied ministrations within itself to its own happiness and power. Thus man is looked upon as a microcosm in

the marvellous multiplicity of dependencies and delicacy of attachments in his complex, physical and spiritual structure, in the innumerable things he is able to do, and able to suffer. To set up such a circle of relations, to build such an organic structure, and to maintain it in instant, perfect adjustment to a thousand variable outer agencies, is the highest known labor of life. From such a product as this, life sinks downward, till, in the amoeba, composed chiefly of protoplasm, and possessed of no permanent organs, it scarcely shows a trace of that power which in man overwhelms us with astonishment. Yet, even here, as life it works like life, and extemporizes organs which subserve their purpose, and disappear again in the speck of jelly from which they spring. Having no limbs, it establishes a limb at any point; having no stomach, it starts digestion wherever it can secure contact; and thus, without fixed relations, it renews fluctuating ones as suits the exigency. The word life, therefore, presents an instance of one of those sweeping generalizations, by which a single point of agreement is made to cover great variety of details, and we conveniently speak of one power, where a great diversity of allied powers is under consideration.

There are three questions which are asked and variously answered concerning life: Why postulate a vital force, a life-power at all? Whence is the source of life, what has been the origin of vegetable and animal life on the globe, and of the various forms they have assumed? And, if a life-power be conceded, what is its nature and its method of action?

The first of these questions, Is there a distinct life-

power? has been recently answered by a few physicists in the negative. An obvious, preliminary objection to this opinion is, that it has arisen, not under the impressions of the most palpable manifestations of this power, not in view of the highest animal life, nor indeed of the great mass of life, animal and vegetable, but has been the result of an inquiry into life in its most obscure and undeclared forms. It certainly weakens any argument, that it gathers its data from dark, marginal facts, and goes directly against those conclusions that spring naturally from plain, massive, central phenomena. A tendency to reduce facts to a minimum visible, and to draw one's inferences from the last point reached, is always unsafe. A class of experiments which has been one source of this conviction are those which pertain to the spontaneous generation of life. It has been doubted, whether life in all instances springs from a previous, living germ ; whether it is not sometimes found where no germ could have been present. This is a question of fact, which may, perhaps, be said to remain unsettled. As, however, the broadest of inductions has established the law of the dependence of life on germs, only the most undeniable proof can be allowed to overthrow it. All doubt and uncertainty accrue in favor of a law which has such various and unmistakable grounds of proof back of it. Yet, granting the spontaneous origin of life in one or more forms, the argument for its independent, original character is not thereby invalidated. This does not rest on the theory of germs, but on the fact of peculiar phenomena, demanding for their interpretation a peculiar power. If such phe-

nomena are present, the law of causation demands for new effects new powers. If elephants were found suddenly to appear after certain sand-storms on African plains, this fact would not show the indentity of the wind and dust elements with the life-power. It would rather show the disguised way in which a supernatural force had found admission among natural ones. Infusoria, appearing in a given solution, are as much a new product as would be our elephants. Physicists may explain their presence as they please ; we trust, however, that they will not be so unphilosophical as to overlook that which is new in the results, because it is very small. The whole argument turns on minutiae, is poised on microscopic points. If the difference between an infusorium and a dead atom is too little to indicate a new power, then it is too little to establish the presence of life, too little to be made the grounds of an argument against life. By as much as the infusion with the infusoria is more than the infusion without them, by so much is there proof, and sufficient proof, of the presence of a new power.

A second line of argument has been recently presented by Huxley. It is this : " Protoplasm, a complex body, exhibits the phenomena of life. This protoplasm is devoid of structure, that is to say of any structure except the molecular structure possessed by all colloid matter. It contains neither cells nor nuclei." Protoplasm is the food both of plants and animals, with this difference, " that plants can manufacture fresh protoplasm of mineral compounds, whereas animals are obliged to procure it ready made,

and hence, in the long run, depend upon plants." This discovery of vital power in connection with protoplasm, ranking with the highest inorganic rather than with the lowest organic compounds, has been thought to have great significance, disconnecting life from the cell, hitherto its last refuge, and exhibiting it at work in matter not yet definitely arranged or organized by it. The conclusion of Prof. Huxley, and of others, in regard to protoplasm, is this: "Its existence proves life to be a molecular property, and shows that organization is the product of life, not life the product of organization." He regards the notion of vital force as a wholly gratuitous assumption, as much so as would be an explanation of the various properties of water by the idea of "aquosity." "We do not hesitate to believe," he says, "that the many strange phenomena, the properties of water, result from the properties of the component elements of water. What better philosophical status has 'vitality' than 'aquosity?' And why should 'vitality' hope for a better fate than other 'itys' which have disappeared since Martinus Scriblerus accounted for the operation of a meat-jack by its inherent, 'meat-roasting qualities,' and scorned the 'materialism' of those who explained the turning of the spit by a certain mechanism worked by the draught of the chimney?"

We should wish no better example than the above of the hasty generalizations with which physicists are ready to precipitate themselves into a half open opportunity to traverse the ordinary and more spiritual view. Even the data for a specious conclusion against an independent, vital principle are wanting.

The professor should at least have shown that protoplasm is a chemical compound that can be realized at will, and that when secured it exhibits at once, necessarily, uniformly, the entire circle of vital appearances. This is the case with water and its properties, and thus a limited circle of definite powers calls for no other explanation than the fixed nature of the elements concerned, their molecular structure. When, however, and we draw attention to the fact, we find water assuming in snowflakes, on the window-pane, and on the bars that begin to interlace the pool by the way-side, striking, variable, peculiar forms, we explain them by a new force—that of crystallization, as we do the spheres it forms in dropping from the finger-end by the idea of attraction. Huxley, far from laying this foundation for his argument, speaks of “dead protoplasm,” that is, protoplasm without these living properties. The language is as unfortunate for his reasoning as if he had been compelled to admit the existence of water without the qualities of water. Then, indeed, should we be forced to refer these qualities, on their manifestation, to some new force, which we might more fitly than euphoniously term “aquosity.” If Huxley had been able to show, which he has not shown, that all protoplasm exhibits a constant series of vital phenomena, how far off would he still have been from accounting for the ten thousand separate and fixed forms which life assumes ; how little would he have been at liberty to refer these, so new, so diverse, so striking facts, to the molecular action of the elements of protoplasm ! All the burden which these data of proof could honestly bear

would be those facts which they strictly cover, to wit: the circulations, contractions, prolongations of protoplasm. Till this wonderful protoplasm can, on certain fixed, physical conditions, be shown to run through by rote all the phenomena which belong to all forms of life, as water stands ready to assume its Protean shapes, from ice to steam, with perfect regularity on fitting suggestion, the proof of the equivalence of its molecular forces to the power of life is not complete, and "vitality" still rests on different ground from that of the "itys" which have gone before it. Even the first step in this proof has admittedly failed, and protoplasm is sometimes living protoplasm and sometimes dead protoplasm. Will Mr. Huxley be so kind as to tell us the difference between the two?

What is it that vital power or the "lives" are invoked to explain? Those most varied, those most wonderful, combinations of parts and functions in the organic products of the vegetable and animal kingdom. We are content to accept the assertion, that no vital result is reached without the expenditure of chemical, thermal, mechanical forces, without the mediation of those molecular forces which inhere in the several elements handled by life. The proof of this is by no means complete, but it is sufficient to render the conclusion exceedingly probable. Says Wm. Odling, in his Lectures before the Royal College of Physicians: "Chemists and physicists are well assured that be life what it may, it is not a generator, but only a transformer of external force." (p. 108.) Certain it is that every known, physical change

assumes the form of a chemical, thermal, mechanical one, is a change in molecules or in masses exactly allied to changes that take place elsewhere. No process, new in kind, new in its ultimate constituents is found within an organic body, when this process is compared with those which take place without the body. In this respect the organic product is like the laboratory of the chemist. Much happens there which is not in form occurring elsewhere; but it happens under molecular actions identical with those in the world at large. Nor do we well see how it could be otherwise. A living creature is not made, as a building is erected, out of masses whose internal structure remains intact. Their structure is broken down, and new compounds are realized by a new allotment and union of elements. This is a chemical process; these are exactly the results that we term chemical; and either the vital principle must create something absolutely new, or the various organs and members of its respective structures must arise under the re-organized, molecular, that is chemical, action of their constituents. We do not expect an architect to make his stones, his brick, his timber. The vital architect, working within a more interior circle, that of molecular forces, does not make these, but employs them, and therefore all its processes have the appearance and form of chemical facts. What life is evoked to explain is not these, taken separately, but collectively: not these in what they are in themselves, but in the relations which give rise to them, and in the results to which they tend. We demand life for the same reason that we demand a chemist in the labo-

ratory ; not because of what takes place in the retort, but because of the retort itself ; not for the chemical actions and reactions of the experiment, but for the very experiment, its existence as a present fact, and its presentation to us. We require an architect not to account for the stones and mortar, but for their relations to each other. We may understand the transfer of a telegram through the workings of a telegraph, the circuit of chemical, electric and mechanical changes therein, but the message itself we understand only through the existence of a distant friend, his character and purposes. Now if the vital power were a force lodged in these or those molecules, and could by some possibility show itself as a distinct force, and not in the discovery seem to be one of the recognized forms of physical force, we see not how it could do the work we have for it. We have enough physical forces ; what is wanted in an organic product like the human body is something to use them, to separate them, compound them, and set them at services reciprocal and complete. There is material enough, and variety enough in it ; we are waiting to see it combined, its forces included and harmonized in a system of ends. This supreme mystery in every living thing, this variable and wonderful power, whose products are our perpetual astonishment, every penetrative mind is more or less conscious of. Thus Odling proceeds to say : "I believe, however, that chemists appreciate to the fullest extent what may be termed the mystery of life." Dr. Bushnel thus gathers up before the wheels of his ardent rhetoric the chemical explanations of life as the small dust of

the street, and makes of them the clouds that signalize without retarding his progress: "I hardly know how to speak with due respect of a theory that makes a very little, almost tiny, amount of science go so far, and solve a problem of such wonderful complexity. Take a human body, fibered, vasculated, innerved, articulated, digesting, secreting, absorbing, breathing, circulating, carrying on even thousands of distinct operations, at hundreds of thousands of distinct points, all necessary to each other, so that when some tiny process, never perceived by man, slips its duty, and the proportionate working is but a little changed, the equilibrium called health is upset—conceive all this, then conceive that this multifarious world of operative powers plays on, still on, asleep and awake, for sixty or a hundred years, mastering heat, and cold, and breakage, in a thousand forms; whereupon the chemist, who has gotten hold of a few simple laws of inorganic matter, tells you that he can solve it; that we take in food, and the food put in the structure, as a machine, makes force and carries on the play, and replaces the waste, and so that the machine keeps everything, even the machine itself, in order, proportion, and prolonged operation! The body is, in this view, nothing but a laboratory, gotten up with just so many parts as there are functions, and they all play together, making it a body. Carry out the figure, now, and see what is in it. The chemist has a laboratory full of vials, bottles, acids, alkalies, all manner of simples, and all manner of salts, with combustibles, and fires, and galvanic batteries, and force-pumps, and gasometers, in short, a

little universe of chemical substances and machineries. Now this doctrine of the body is just as if, connecting all these vessels, and substances, into a chemical circle, by pipes, and pumps, and sponges, and wire-conductors, and going to his digester, he were to put in three times a day a loaf of bread, which has in it such a wonderful wise-acting set of forces, that, passing into the grand circuit of the laboratory, he imagines it to keep all the parts in play and sound condition—the vials just as full as they were, and of the same substance ; the galvanic batteries, eaten up by the acids, still sound and good as before ; the combustible, going off in gases, replaced by new combustibles ; the ices, dissolved, replaced by freezing, and the vapors thrown off, by condensing ; and even the iron digester itself renewed in the wear, by the nourishing force of the bread that is dissolved in it. What a magnificently preposterous solution is this to be offered in the name of science ! And yet the same kind of solution, put upon the body with such easy complacency, is at least a hundred times more preposterous as the body-laboratory is at least a hundred times more complex.” A power, then, which does a work so wholly beyond purely physical forces, so directly opposed to what these, when left to themselves, can accomplish, death itself being nothing other than their unguided action, as the shattered vehicle is the sequence of the runaway horse, is not a physical force, but something wholly transcending it.

Our next inquiry pertains to the method of the introduction of life. The forms of life are so distinct, and so manifestly of comparatively recent origin,

that they have furnished a strong argument for those who have wished to mark the exact historical periods at which creative power has appeared. A theory has been brought forward, which physicists have eagerly seized upon to rid themselves of these points of attachment of a supernatural agency. This theory is more often known as that of Darwin. It is so familiar, that I may pre-suppose a knowledge of it. It so divides and subdivides the spaces that lie between the several kinds of life as easily to pass them in detail, and climb by a consecutive series from the lowest to the highest. It comes in to complement the theory of protoplasm, and, though not believing in germs, to work up the merest germ of power into a universe. Not only is this theory of Darwin not established, it is, by the admission of its friends, incapable of present proof. Indeed, this is one of their strong arguments, that as it is from the nature of the case impossible to secure the data requisite for its confirmation, they should be excused from the labor; while the presumption they are able to raise in its favor should have full force. They not only ingeniously excuse themselves from its establishment, they wish their inability to be accepted as a make-weight in place of proof, to open the way for easy acceptance. The impossibility and the argument run thus: A large part, by far the larger part, of the record of the life of the globe is either obliterated or beyond our reach; as therefore the annals of life show great rents, large omissions, so ought the forms of life, the intermediate links being swept into oblivion. This fact, so plain and inevitable, should not weaken the argument

afforded by those positive and close relations of certain portions of life, suggesting, as they do, a like dependence everywhere. Treat the proof of this theory in the most considerate way, and still, in view of all the difficulties, it remains weak. It rests by far too much on our ignorance ; this can give it no positive support. Moreover, though the geological record is very incomplete, the facts it does give are scattered widely up and down the entire field, and should serve as fair types of the remaining facts. Our actual knowledge is not, therefore, proportioned in its extent to the relation which the discovered facts bear to the undiscovered ones, but is much greater than this ratio would indicate. A single known fact may stand as the representative of innumerable unknown ones. We are not thus at liberty to insist to the full on the great loss of geological data. We know the history of our own race in its leading features through a knowledge of a very few of the events that have actually transpired, and so may we that of the organic world. Looking upon our geological knowledge as a proximately fair presentation of the field, the spaces, the chasms between the kinds of life are so many and so broad and so universal as greatly to weaken the force of the argument, resting on those instances in which they closely approach ; and the more so, as, on any theory, we are prepared to expect a frequent and intimate dependence of the forms of life, and even a genetic relation of many varieties. This failure to close up great gaps in the chain also occurs at points at which the material, if it existed, should be especially accessible, for instance, in the space between man and

the beings below him. The facts, therefore, seem to suggest two methods rather than one in creation, an occasional close union of species, and a frequent broad separation of families.

Again, the Darwinian theory requires to be supplemented by many other suppositions favorable to it. Thus when Geology indicates that great inroads have been made upon life, sweeping a large part of it from the globe, some land of refuge must be provided, some ark launched in which it can hide, where progress may still be maintained, and where it may return, on occasion, to occupy the old region once more uplifted. Now this careful, prudent, shepherding of primitive life, and maintenance for it of many unbroken threads of development, is cumbersome, improbable, and purely hypothetical. It seems to have been handled in a very rough and destructive way. Moreover, some forms of it have certainly remained for incredible periods without material change. Life, then, must have early divided itself into permanent and flexible forms, and no uniform law of variability can be established or assumed. Thus we get back to accidental, hap-hazard results, as to the conditions and directions of change. The argument from embryology, much insisted on, seems to us peculiarly vague. If life has been introduced in this serial way, that fact does not render an obvious reason why successive stages of lower life should be found in every embryo of higher life. Must every portion of the history of its race be repeated in pantomime by each embryo? If any part is thus to be rehearsed, why not the whole exactly? In passing from the general, the indefinite,

to the specific, the definite, would there not naturally be stages, faintly figuring the like stages which universal life assumes in working out exactly the same problem? The proof at this point lacks definite force.

Our purpose now, however, is to show that our notion of the independent nature of life does not depend on the rejection or acceptance of this theory, but is equally sound on either supposition. The only question raised by it is, Whether life, as a fact, has been enlarged on the globe by slight increments in connection with previous forms, or by decided, independent steps? In whatever way we answer this inquiry, we may still believe in a super-physical, vital force. Suppose the growth of life, as a whole, to have been, as in each of its separate forms, by slight changes ; living centres creeping, like the fern, from point to point, taking up new positions in the plane of development, and, on the right and the left, establishing and maintaining distinct ground, different genera, classes and families. These increments, by which the life of to-day is more than that of yesterday, are still to be accounted for. They may be referred to outward circumstances. They have been so attributed, till the manifest inadequacy of the causes has made the ascription ridiculous, and, as a general theory, untenable. Physicists will hardly strive again to show that water produces web feet, or air wings.

These changes, this variability, may be said to be accidental ; while the preservation of that which is most apt in the several species may be referred to natural selection, to the very fact of higher adaptations, and the possession of more powers in the struggle for life.

This feature of natural selection, Darwin has developed in a most thorough, ingenious and instructive way, leaving no room to doubt its presence as an efficient cause or condition in the world. The other half, however, of this second explanation is every way awkward. It is pitiful, starting out with the action of law, universal and complete ; having reared, with much hullabaloo and clapping of hands, the flag of independent, self-sufficient, natural forces, to be compelled, in so important a case as this of life, to admit that its changes are subject to no order, are accidental. It might, perhaps, be as well to admit spiritual powers as accidents and fortuity. Chance is an ugly deity, and it is much like passing from Jehovah to Moloch to accept it. Further, if the life-forces are intrinsically variable, that is uncertain, that is accidental, through exactly how wide a circle are these accidents to run ? What sort of lapses and failures, what feats of agility and leaps of progress are they capable of ? Accident in the realm of order is like disease in the body—one can hardly say how far it will spread. Where, moreover, in the geological world is the evidence of the innumerable slips and falls which the life-force must have sustained in thus mounting to its present position ? Accident has no law, and traces of every shade and form of failure should be met with. Even with natural selection at hand to save the good, it would take accidental variability a long while to construct the organic world. Geological æons would certainly not be periods too great in which to run the entire circuit of possible mistakes, and gather out and up all the marvellous

beauties, aptitudes, coincidences of the life of to-day.

If external circumstances cannot occasion serial development, if accidental, irregular modifications are not sufficient for this end, a third explanation alone remains, that the vital forces are themselves conditioned to orderly changes. This, the only tenable ground in connection with the theory of Darwin, makes of vital force the same inscrutable, indefinitely divisible and distinct, thing that we have spoken of as life-power, as the lives. It matters not that life has become what it is by short steps. Its character is decided, not by its length of stride, but by what at each point it is. The building is no less majestic because it has been in the hands of architects for generations. Lives to-day are no less numerous, distinct and wonderful, because they may have been at some previous time fewer and more closely connected. These steps of growth and distinction are not, because small, less observable, significant and supernatural. Every increment in the effect demands a like increment in the cause, and these increments collectively constitute the organic world under discussion. We are not to powder down a granite mountain, wait for the wind to blow away the dust, and then say, this is nothing; we are not to divide and subdivide the spaces between the right and the left, the top and the bottom of this pyramid of life, and then say, These results are too small for consideration. We cannot drop them from our theory as unimportant factors, too insignificant to effect the result, and yet look to them as the sources

and ground of the present organic creation. Give to us, gentlemen, all that belongs to us, do not overlook it because it is little, and we promise you, that, increasing it at every step, enlarging it at every change, we will, coming up through the long lines of life, make of it that handsome capital of astonishing and supernatural power expressed in the manifold lives of to-day, that hide in ocean, creep or walk on land, or fly under the heavens. This tearing and teasing method, this plucking away the cable of truth fiber by fiber, not breaking it by one manly effort; this reduction of argument to impalpable powder, and then sending one's breath through it as dust to be gotten rid of, is a form of ratiocination which calls for no great respect. The slightest increment of force demands a full and complete recognition, and the miracle of life is subdivided, not weakened or removed, by the reduction of it to many stages. A thousand mills as surely make a dollar as ten dimes, and the theft of one of them, in the exact realm of philosophy, is palpable dishonesty, is the vulture's bill once more struck into the Promethean heart of truth. Grant us, therefore, in any theory of development, each step of progress in its true significance, as something beyond what we had before, as an additional force, either in existence or in manifestation, and we still have that mighty life-power, which has mounted the throne of the world, rules its mechanics and chemics, and gathers its retinue from darkness and from light, fleet of foot, swift of wing, and sharper than the winds in the keen insight of thought.

The theory of development, seen in its true bear-

ings, has powerful attractions for us. We are almost ready to regret that it so lacks proof as to remain only a guide to inquiry, to be used cautiously, and not as a sufficient explanation of facts. We see, however, no ground for the ridicule which Spencer is ready to bestow on the special-creation-hypothesis. Having amused his fancy with the image of wayward atoms and dispersed elements rushing in to a centre to take part in the formation of man or beast, he says of this, to him inconceivable, fact, a special and complete creation : " It is one of those cases where men do not really believe, but rather believe they believe. For belief, properly so called, implies a mental representation of the thing believed ; and no such mental representation is here possible." Can Spencer conceive, that is, form a complete and satisfactory image, of the explosion of ten pounds of gunpowder ? The black, palpable mass suddenly disappears, leaving a scent, a sound, a sight, fire and cloud, behind it. If he can, can he not as easily conceive of a like instantaneous return of the powder out of the gases, its elements ? and, if this be possible, is it any the less possible to conceive of the like sudden appearance of an angel, a man, an animal ? The fact is, he can form no complete image of the process in either case, and the explosion of the gunpowder has no other advantage over the instant creation of Adam than that of familiarity. One becomes weary of this talk of the conceivable and inconceivable, when every process that transpires within us and about us is inconceivable in its last analysis, in all that lies beyond the eye. The development theory has no advantage

over that of special creations in conceivability, except that it takes its food finer. It makes each new event smaller, and hides it away more perfectly. How a new variety is occasioned in fruits, in flowers, is inconceivable; so is it, also, how an old one is maintained. Familiar and not familiar is all that can be meant by conceivable and inconceivable in this connection, and the argument resolves itself into, What is, has been, and always shall be.

We come to our third inquiry, What is life? We answer, a super-physical, a spiritual power, as opposed to a defined force with a material centre. Our reasons for this belief are various. Life performs a spiritual work, it constructs an organic being according to a definite plan. The plan, the relations, the ministrations, are what this controlling efficiency is evoked to explain. Again, no physical, local, definite force can do this work, since it is a pervasive and variable one; nor is any particular physical force called for, since these in sufficient numbers are present, and known as mechanical, chemical, nervous forces. Further, the life-power is one of maintenance and repair, one of resources, shifting its methods and grounds of action and resistance. It meets exigencies with new results, and thus shows itself flexible, variable, spontaneous. Again, it is capable of indefinite increase, and thus is not amenable to the law of cause and effect. It is difficult to believe, that the entire oak is potentially in the acorn, that the egg contains the force of the completed bird. The life-power seems rather to expand with its growing work, and to come, like the mind, to each new undertaking with new

energies. A complex organism, like that of the animal, can hardly lie crowded in the minutest germ, without making of that germ an unnecessary mystery. Or, conceding this, how is an acorn to hold ten thousand acorns equal to itself, nay, the ten times ten thousand which these may produce? The equality of cause and effect finds no application here, and the smallest centre of life goes out to conquer, cover and dwell on a continent.

This diffused existence and spirituality of the vital power is further confirmed by the results reached by those who refuse to accept it. Darwin and Spencer have both been forced back into theories, the one of gemmules, the other of physiological units, as inconceivable, as perplexing, as much beyond all possible physical proof, as any notion of the life-power can be. The gemmules of Darwin are most strangely endowed, most wonderfully prolific, infinitely minute, wholly supposititious, and left to perform an incredible work in an incredible way. This great materialist, turning his back on life-power, ends prodigious labors with a conception as perplexing, obscure and superphysical—if experience is to be allowed to tell us what is and what is not physical—as that which he left in the outset, determined apparently never to return to it. While the physical side of a life-power is just as intelligible as are the facts under any theory, in its philosophical aspect, it commands respect and belief; it stands in sympathy with those other invisible forces which compose the spiritual world. That the lives—meaning thereby those separate manifestations of a spiritual power that call

forth and maintain distinct organic beings—stand in ranks or grades is evident. The lowest grade of this power is seen in the vegetable. Passing to the animal kingdom, we find a new and much more perfect dependence of parts secured in connection with a nervous system ; and, certainly in the higher animals, the introduction of a fresh element in sensations, feelings, recollections, the incipient phenomena of consciousness. Thus, life strikes down into the dark world of an unconscious, a purely physical, region, and later reaches up into consciousness, the first light of a spiritual realm. Life lies as a mid-way power between the physical and the purely spiritual. It acts only in connection with a physical organism, is conditioned to it, but nevertheless, it is able to take into its service, sensations, emotions, the first elements of the upper world.

We would look upon the mind as something super-added to life, and far less dependent than it on physical conditions. While life is restoring its powers by sleep, the mind remains active. Often in waking moments it performs its most severe labor with closed senses, the busy shuttle of argument flying in the chambers of thought, while the submerged, forgotten, physical processes slowly proceed, like some heavy water-wheel plunging on in the darkness beneath. Life, in passing from the animal to man, carries its full quota of powers, and adds to them new points of contact with the spiritual world. The nervous mechanism has now no longer exclusive relation to an automatic government of the body, part acting upon part, the outside playing upon the inside through

sensations and perceptions, the past upon the present by recollections ; but in the cerebrum, the highest chamber of consciousness, of rational counsel, is now found an adjustment that takes cognizance of the facts of a purely spiritual realm, and transfers thoughts, volitions, affections to the physical world, lets them down, in their influence, on matter. An *Æolian* string is thus strung, that gathers harmony from the mute winds above, and pours it on the sensible ear below, filling the world with its music.

A true, independent, spontaneous thought-power, a soul, a mind, we believe to belong to man alone ; while the appearance of it merely is found in the animals. Consciousness with them stands in strict dependence on the life-power, in simple ministration to it. The question, *Whether animals think?* we have elsewhere broached, and shall only add a few general considerations. Thought is not any mental activity, but that particular activity by which we rationalize, explain, and expound sensations under some notion, which the mind furnishes for this purpose. Thus we may see a ball, but thought about it implies that we bring to it the notion of existence, and think of it as real ; or the idea of space, and contemplate its size and position ; or that of causation, and inquire, *Who placed it there?* These and like processes are thinking, and they imply the presence in the mind of regulative ideas which give form and shape to them. There is another and inferior form of mental activity ; in it, that which is seen acts directly as a sensation, and secures appropriate effort without reflection. Thus the horse snaps at the

pendant fruit, the lamb leaps the ditch, the bird lights on the spray, without consideration. So also recollections have the same direct, spontaneous hold on the entire powers. The horse quickens his pace as he approaches the home of his owner, and the dog greets with extravagant delight the return of his master. In these cases, nothing is required to account for all the facts beyond the direct connection of the feelings with their appropriate manifestations. In some cases the steps are less simple, two or three more remote elements come in, and these we are ready to ascribe to the presence of thought. Thus, when the dog has made a raid on a neighbor's flock, he may hide away in fear. We at once say he is conscious of his guilt, is ashamed, and does not therefore venture near his master. Yet his whole experience has been such as to fasten together these two experiences, an attack on sheep, and the fear of man. It is not strange, then, that the one should strongly revive the other. The animal has quick, alert senses, and a retentive memory. It must happen again and again in its experience that two, three, four states or actions should occur and recur in a fixed order; these the memory so binds into one bundle, that the first of them draws after it the remainder in an automatic way. A fly annoys the flank of a horse; he is hitched short, and makes an ineffectual effort to strike it; in sheer restlessness he steps up and then snaps his teeth on the vexatious insect. This is done several times, and shortly, the connection established, he spontaneously steps forward before closing on his adversary, thus saving his jaws a superfluous and

painful jerk. How inevitable is it, that man, with whom almost all mental activity is one of thought, should explain these, like, and more complicated actions, as the result of thinking? Yet animal life is doubtless as homogeneous as our own, and either the most of its activities are guided by thought, or none of them are so directed. Thought, if possible, can hardly play a wholly secondary and subordinate part. Now the great mass of activity, almost the entire mass of it in animal life, calls for no other explanation, suggests no other, than this of spontaneous association. This being conceded, we see also that pure associations must, in some cases, be adequate to results which, taken by themselves, we should very naturally attribute to thought. Is it not, then, more philosophical to suppose that these are the highest attainments of association than indications of totally different powers, that nowhere appear in the bulk of action? The way in which the parrot, the elephant, the horse are trained by repeated and fixed associations; the speedy and decided limits which their education reaches; the fact that that which has the appearance of thought often passes by descent from parent to offspring, as the good qualities of a game-dog; the almost instantaneous and certain way in which the young of animals suit all their actions to objects and spaces, in a method far beyond what is possible to thought; the easy manner in which association can be made to explain instances of skill, at first sight difficult of solution; together with the fact, that we project our own forms of action downward on the brute, interpreting his experience

by ours ; and also that we multiply, highly color, and exaggerate stories of brute sagacity without careful inquiry into the form of the facts and the connections indicated by them, these and like considerations lead us to believe, that the proof that animals think is insufficient, and, as the burden of the argument lies with those who attribute powers, that the philosophical conclusion remains, animals do not think, the rationalizing, the intuitive, element is wanting in them.

If this be true, then man takes rank at once in a new grade of beings ; to life-power is added thought-power, and the rational element is superinduced on the vital element as wholly above and beyond it. Some strange, abnormal facts look toward this result, such as the well-established one of two distinct phases of character and of consciousness, apparently diverse personalities, appearing successively in connection with the same body. This independence and superiority of the soul prepare the way for a belief in its immortality, and enter to confirm the argument from its moral nature and law.

Such, then, are the two variable, spontaneous, spiritual powers which appear everywhere at work in the world, those of life and of mind. The way in which they touch the physical being is inscrutable. They always arise under, and act through, its forms, yet reach results not only beyond these forms, but in the very teeth of them, as shown in other connections. Life stands in most varied and immediate relations with physical forces, while mind acts through it and by it in its highest forms. Life works matter up to the conditions required by mind, and yields its own

best products to its possession. So strangely, yet so undeniably, are the visible and the invisible interlaced ; so deeply, even in its finite forms, does spiritual power sink down into material forces ; so marvelously are material forces put in delicate balance, and play under the intangible thoughts of our intangible intellectual life. Mystery can go no further ; yet deny this mystery, so sustained by all that we know of ourselves and of the external world, and we do not dispel the darkness, we only diffuse it, till night settles upon all, and even the phenomenal world, the facts of matter and the facts of mind, blend back again into confusion and chaos. Wisdom lies in putting mystery at the right points ; in making the night the forerunner of the day.

LECTURE X.

INTERACTION OF PHYSICAL FORCES AND SPIRITUAL POWERS.

WE have now explored the two distinct fields of inquiry offered us by our regulative ideas, those of matter and those of mind. We have discussed the laws and the sources of the phenomena of each. Matter gives us fixed, conditioned, permanent forces, whose law of interaction is causation, and whose abode is space. Mind gives us variable, spontaneous powers; spontaneous in that there is not present permanent or transmitted force, but power in its very exercise springing into being; variable in that it is not conditioned to one degree or grade of expression, but only restricted to a certain circle of results. The foreshadowing, the adumbration, of this power of the soul is the power of life. This, in its simplest forms, presents its entire phenomena in the physical world, yet is itself nowhere to be found as a distinct physical force. In its superior forms, it is accompanied with the rudimentary conditions of mental life, though wanting its central feature. The law of spiritual phenomena is, in the power implied, that of freedom; is, in the direction enjoined, that of virtue. The spontaneous and the free in mind, the thoughts and the volitions, so play into each other, that the whole structure of our life comes at length to be that which the soul, by its own choice, has shaped for itself.

The spontaneous impulses are soon wholly expended in the directions and at the duties the voluntary powers lay upon them. The seat, the home, of these spiritual facts, is consciousness.

If, in matter, we found a steady, inscrutable force back of all phenomena, whose existence and maintenance we can, without theoretical difficulty, refer directly to God, not less do we find in the lives variable and restricted powers, which suggest his immediate presence. We reason here also from the results to their source, and we thus reach a flexible power, with limits indeed assigned it, but not one expended in a fixed, physical, mechanical way, under forces from the very outset fully present. Here clearly appears something very like the yielding, changeable hand of personality. In the human mind, we approach a power of a still different character. True, primary, responsible volition is only possible on the supposition of independent and original strength. The very act of choice, if it be what it purports to be, must be our own, as God's acts are his, and we become, in the likeness of God, centres of power; and, through the forces by which he surrounds us, and into which our powers play, able to give new directions and efficiency to forces. In the present lecture, we desire to mark the interdependence of these two distinct lines of activity, those which, in the sequence of physical events, are fixed and causal, and those which, in the liberty of volition, are spontaneous and changeable. They are interwoven by constant conversion, a fact of mind appearing as the product of a physical fact, and a physical fact arising

as the result of a mental one ; and thus they flow on together in distinct fields, yet in one time.

In the first place, we see that these two forms of phenomena, with both of which we seem equally familiar, being under the government of distinct laws, diverse notions, require each to be steadily considered subject to its own appropriate ideas, and that any transfer of these can only breed inexplicable confusion. Knowledge, like the human body, must rest on two distinct limbs, correlatives yet diverse, and carrying it forward by alternate rather than simultaneous movement. Steadily to refer physical facts in their physical relations, to causes, to forces ; and spiritual facts to powers, is the first condition of maintaining the completeness and integrity of our knowledge. In other words, we must see how, under the diagram of our intellectual faculties, our original ideas, its two fields fall apart, and are to be searched out apart, if searched out successfully.

In the earlier periods of knowledge, confusion prevails. Fortuity, the counterfeit of spontaneity, is thought to enter more or less extensively into the physical world ; while fatality, the counterfeit of causality, glides up into the connections of mind. Nor is this, in the form in which we wish to put it, an overthrow of the very doctrine of regulative ideas, grounded as these are on the necessary convictions of the mind. Physical effects as physical facts have never been thought to be without causes, but have been incautiously referred to spiritual agents ; neither have those practical claims and duties that hinge on liberty ever been surrendered, though their theoret-

ical foundations have been obscured, and the laws and bounds of freedom left undefined. Two forms of the mind's action, have been blended, while each with equal pertinacity has rejected rejection, and refused annihilation.

In the growth of knowledge, as inquiry has set in the one direction or in the other, has causation or liberty encroached respectively on the opposite ground, philosophy bringing its conclusions to the material world, or science forcing its laws upon mind. In the present and previous century the scientific tendency has been too strong for philosophy, and materialism, the bowing of all events to necessity, the reduction of all powers to the grade of forces, has been prevalent. Working in an opposite direction, idealism has more rarely evaporated the material world into a majestic cloud-scene, sent it all buoyant, airy, flexible into the heavens of its own conceptions, and then sported with its facts, fraying them into fleecy thinness, or piling them up in heavy masses, as the playful winds of thought chanced to come and go. But these victories of mind in its laws over matter have been so rare and harmless, as to have but little practical significance, at least for Englishmen. The chief points of discussion which pertain to the interaction of mind and matter have arisen against materialism, in its effort to sweep over and submerge the entire province of the soul, to roll its own sullen waves in cheerless requiem from pole to pole. Water and air are fit emblems of materialism and idealism, each struggling either to overwhelm or to veil the solid land with its own by-play of

forces, the one taking it back into the darkness and death beneath it, the other hiding from it the light above it.

The spirit of materialism early reveals itself in connection with miracles. Why are all physicists so hostile to miracles? Plainly because these are a rent in the seamless garment of universal law; an appearance of the ghost of slaughtered liberty, of banished personality; a breaking in again of those very conceptions and powers which it has been the painstaking and protracted labor of science to expel. There is a certain instinctive antipathy, a nervous and morbid apprehension of all that looks toward the miraculous, on the part of physicists. They scorn and hiss it; they chafe at it, and are nettled by it, as the unspeakable incredulity, the infatuated ignorance of men, refusing to be weaned from the past, ever ready to slip into former faults and fooleries, gravitating with the momentum of protracted habit and pertinacious associations, towards the blind fears and hopes, the irrational alarms and expectations, of barbarism. Men will not cease to be children, and shake off the phantom beings, the fleshless spirits, of the nursery. An antecedent conviction so strong takes possession of the merely scientific mind against miracles, that no proof is sufficient to overcome it, and very little proof sufficient even to call for an examination. A certain indignation and scorn seizes at once on the mind at the very idea that men will be at their old tricks, fools forever. The conflict is regarded not as one between theory and theory, but between keen-eyed science and dull-eyed ignorance,

stupid credulity ; as the withstanding of a washed sow bent again on the mire.

So many have felt the force of this new sentiment, coming forward under the endorsement of science, of careful, historical and critical inquiry, boasting the progress of the past centuries as its own achievement, the emancipation of mind as its own labor, that even those who have maintained their belief in miracles have sometimes done it with such qualifications and concessions and apologies as to destroy the true character of these more manifest works of God. A miracle purports to stand, and must, if a true miracle, stand in direct intervention of natural law. It is an extraordinary, not an ordinary, method of working ; one that manifestly transcends those limits which God has established between his own activity and those of his creatures.

To say, therefore, that a miracle may be the result of another law of nature, striking in at remote periods, like the alarm of a clock, provided for in the original structure to meet certain exigencies at certain intervals, is at once to destroy its intrinsic character, and pervert its moral power. It is no longer a miracle, as indicating the descent of Divine power on nature, but simply discloses a new and more intricate way in which his power is locked up in, and conditioned to, nature. Thus the miracle, stripped of the significance it purports at the time to have, becomes dishonest and deceptive, a reproach to the credulity of those who accept it, and a shame to the integrity of him who employs it. A miracle towers straight up into the heavens, cleaves through natural law,

parts it on either hand, as the rod of Moses the Red Sea, or it is nothing, nay, worse than nothing, a delusion and a superstition. We wish, at least in attitude, to confront squarely this scientific sentiment against miracles, and to take what blows it can give. We wish to carry this controversy to the court of reason, and press a decision there. We are not fearful of the issue, we only desire to precipitate it.

Under the conjoint scheme of science and philosophy now laid down, we see that the miracle stands in perfect sympathy with one half of the constitution of the world. In mind we have spontaneous, free, creative power, a power of a strictly supernatural character. If we define nature as covering those events which occur under fixed, invariable law, making it coextensive with the physical world, then the mind of man is supernatural. Its activities are not conditioned to any specific results. If we define nature as a term applicable to all events, whether of a material or spiritual character, which are familiar, which constitute a part of our ordinary experience, then the mind is not a supernatural agent; but while found within nature, is yet perfectly allied to that supernatural agency which the miracle discloses out of nature. One half, then, of the kingdom of knowledge is in perfect accord with miraculous intervention, indeed exhibits a perpetual intrusion of mind upon matter of essentially the same nature. It is not till we have taken the material world as the starting point of our inquiries, and resolved to rule out and overrule all laws from other kingdoms of thought by the private statutes and by-laws of this kingdom, that we have

any ground whatever for the feeling which leads to the exclusion of miracles. Get back to mind, plant one foot on philosophy and only one on science, and then these prejudgments rise, disperse, hide themselves in clear air, like morning mists, and we wonder that conceptions, the merely transient product of the moral temperature, could ever have so perverted and restricted our vision. Let the damps of earth lift, let them cease to linger just about us, passing upward they shall conceal nothing, shall show deep rifts into the blue beyond, cut off gratefully from us the too intense light, and disclose a diversified and cheerful landscape.

If our conception of force as God's conditioned and established, yet direct and immediate, activity is admissible, certainly a miracle can find easy way into nature. Let his force strengthen itself or withdraw itself, and the work is done. Some may feel that there is a profounder objection to miracles in the character of God; that they imply variability, fickleness, uncertainty in his methods. This also seems to us a shallow, inadequate presentation of the Divine nature. We object to it, as overlooking the fact that there are two parties to the world—God and man. This common ground of intercourse and labor does indeed require settled laws, unmistakable and inflexible conditions; but the weak faith of man also requires, lest God should be altogether hidden behind these impersonal rules, manifest intervention, direct personal revelation, and for this the miracle becomes a necessary, natural, obvious condition. It is both wise and gracious, it is neither inconsiderate nor

changeable, for God to shape his actions to the variable conditions under which they are put forth. We have little sympathy with that conception of God which fears to set him about any one thing at any one time, lest it should limit and belittle his activity, and proceeds to withdraw him into the eternity and immutability of his purposes, to make of him a still, deep ocean of potential being, that cannot ripple lest it break its own infinite repose, and shiver into a million facets its now imperturbed, homogeneous reflection. An Infinite One that cannot accept his own acts lest he be broken up and lost in them, that looks more to the statics than the dynamics of being, is not the Jehovah of our thoughts. A God that lives and feels in every act is more to our intellects, and every way more to our hearts, than this passionless potentiality.

The secondary and transient office of miracles in the economy of the world, however, may rightly be urged. They break ground for faith, but they are not the condition of permanent faith. They are like those slight shocks which precipitate crystalline action, or those initiatory changes which unlock chemical affinities. Miracles help the mind to a momentary finding of God, but we learn otherwise how to abide in his presence. The miracle must always remand us to the natural law under which we are to remain on a permanent, hourly footing of intercourse with Heaven. If miracles, ostensible miracles, lapse into a series of wonders, into growing and multiplying prodigies, they soon intoxicate the mind, make of its faith a wild delirium, destroy the health and repose

of the soul, and leave it bereft not only of strength, but of its antecedent conditions. Nothing so shatters and shakes into paralysis the spiritual constitution as repeated and ever-returning shocks of the marvellous. There must be, there always will be, a growth out of miracles and the need of them into the calm possession of God, in his habitual and most expressive forms of action. An electric current may perhaps quicken the sluggish wheels of life, it cannot remain the permanent condition of well-being. The intense light of the miracle is flashed into nature, only that we may commence our study of it, and feel henceforth and forever that it is God's wisdom and love that are everywhere here. It is the single pressure of the clasp hand, the transient light of the earnest eye, that throws in upon us the love of another soul, ordinarily shown in a grave, diligent regard of our habitual wants.

A second point in the interaction of material forces and spiritual powers is that of prayer. We have not yet discussed the being and nature of God. The reality of our faith in him being assumed, it is evident that the method in which prayer is, or at least may be, answered, involves again the relation of these two lines of events. From this question the physicist, however, excuses himself. It does not present that plain, bold, historical front which, in the case of miracles, precludes neglect. The answer of prayer is a matter exclusively of individual faith; and interests, therefore, chiefly the religious mind. The purely scientific thinker looks upon it, at least as ordinarily held, as an impossibility, and lightly dismisses the

subject. Here, again, the distinctive, physical sentiment has so found its way beyond halls of science into the precincts and courts of religion, that some of her teachers are willing to say, that the answer of prayer is another constitutional trick of the machine, and that natural laws, in their first adjustment, contemplate and provide for it. This view is so forced as to be essentially absurd. The very notion of a law is that it is inflexible, that it pursues one course of action; indeed it is nothing but the statement of such a fact. A law, therefore, is of the nature of a straight line; and no straight line, and no series of parallel straight lines, can be made to pass through all possible points, located at random. Yet the petitions of men, in reference to the provisions of nature, are such chance positions, such accidental, disconnected points. No consistent, independent system can cover them, any more than a definite curve can sweep through all spaces. Either, therefore, the natural law must be conditioned to the prayers of men, and suffer their irregularity, or the prayers of men must be conditioned to the law, and thus forfeit their own freedom. The two things, necessity and liberty, a fixed and a free sequence, cannot both rest on the same basis. They must maintain their independent relation, or one be swallowed up of the other.

This view also gives a new and false coloring to the act of prayer. The petition is for that which is predetermined and necessary, and the answer follows in no sense from the prayer. Thus what comes to the surface for the eye and faith of the believer

is quite different from the real facts, quite opposite to them. Prayer seems to be a means of getting near to God, but is not ; and our too credulous belief flings over it a deceitful light. The answer of prayer, both on moral and scientific grounds, both as a matter of honesty and of sagacity, must be upheld as a direct intervention of God in favor of the suppliant, or must be abandoned. An answer to prayer which pertains to physical events, so far as these are not in the hand of man, must be of the nature of a miracle, with this important difference, that the one openly transcends the powers of nature, and the other does not. The one is thus a matter of common and public significance, the other of individual faith only. In our day it is thought to savor of weakness and superstition to believe in a direct, supernatural answer to prayer, and the individual convictions of a multitude of intelligent people, their settled, frequently verified, private faith, productive in them of none of the fruits of superstition, but quite the reverse, possess scarcely a feather's weight in the estimation of those who propose to put this question on a truly scientific basis. Sad is it that these words, a scientific basis, should have such a one-sided bearing ; that unbelief should have made of them the favorite cant for the introduction of its own dogmas ; that a spirit of investigation, that is so skillful with the microscope, magnifying all things close at hand, should be so awkward with the telescope, bringing near that which is afar off. Sad is it that alleged spiritual facts do not even claim consideration, have lost respectability and repute, are, when they seek admission, su-

perciliously nodded into the street again, as of too erratic, flighty and decayed a cast to occupy time—the time of these sagacious, practical men, this last nobility of knowledge, who have the world now in hand, its molecules and its masses, its ways above and below, past and to come, and are thus busy while the day lasts ; as if truth were only the present atmosphere in which intellectual ephemera float, to be followed by like ephemera, playing in a like way, in like fickle sunshine. This assumption of all reason by short-sighted science, that compensates the fine disclosure it gives of the passing hour, by the utterly blind way in which it stumbles on to the final event, and falls into the abyss beyond, is the folly, the narrowness, the bigotry of our time.

We need to be at no loss to see how prayer is answered. The forces of the world are not so weighed up and stamped, like mint-bags, that nothing can be added to them or substracted from them. If these, each and all, are united instantly, freshly, every moment, morning by morning, evening by evening, to their tasks under the hand of God, may he not grade them to the wants of his children ? and do not these wants call for fixedness on this side, and flexibility on that ? Is it not as irrational to ask for nothing as to ask for all things ? If indolence and thoughtlessness are the products of an ill-grounded faith, that flings itself blindly on spiritual powers, are not love, strength, consolation the rich fruits of a sense of God's presence and aid ? What nobler lesson, striking upward to the intellect and downward to the heart, outward to the actions and

inward to the affections, imparting the power of thought and the repose of faith, than this inquiry, What in nature are we to do, and what aid under God are we to have in the doing of it; how are its ordinary and its extraordinary liabilities to be met? What better path can be thrown up for us, with more bracing air and commanding out-look, than this which trends along the narrow ridge between the purely natural and the purely supernatural, between Nature and God, Earth and Heaven, disclosing the forces to be met and worked with there, disclosing the light, the promises, the powers that flow in upon us here, ready for a spiritual, a truly potent, ministration in our behalf? He who lifts and pries in the physical world alone, whose fulcrums are all stone, and cordage all hemp, may not appreciate this, may come from his own discipline a tough, sagacious, muscular fellow, that one is reluctant to give at last as food to the worms; but he who has philosophy in him as well as science, who casts the light of his own divinely free and illumined spirit on the things before him, will understand, that it is often better to wait than to do, to trust than to know, to pray than to labor, and that the power, the stroke of wing, that bears the whole man upward is now from the physical and now from the spiritual side, is now a using of what God gives us, is now a waiting on him for more. It were a strange thing, indeed, if the minor virtues and conditions of intellectual life were provided for; if foresight, patience, industry were called forth and rewarded, and no corresponding address to our higher affections, no provocation to our spiritual

emotions were found. At no point is human life more blended with the Divine life, more drawn up into it, than at this point of prayer, a free approach of man in gratitude, inquiry, request to his Maker.

What does this view of prayer allow us to ask for? We may ask, as the child asks, for anything that we think that we need, which is not within the reach of our own exertion, and whose bestowment would not evidently contravene a natural law. In gratification of our own wants, we are not to expect miracles; since this would involve a constant, an habitual disregard of those very limits which God has for our well-being assigned to his action. David might pray for the life of his child, while the child lived, not for its restoration after death. Death was the distinct expression of the Divine will. There is nothing complicated or obscure in this view. We stand in like conditions before God as before an earthly parent. What has been distinctly refused us, we may not again ask for. Will, once expressed, is to be final with us. Events that cannot be altered without a manifest intervention are of this nature. It is nothing to us that what we ask *may* involve a modification of natural forces; these, till put forth, are the unexpressed thoughts of our Heavenly Father. That the thing petitioned is precluded by forces that have openly taken effect does concern us, for therein is found the clearly expressed purpose of God. Whatever has passed the obvious limits of natural law discloses the will of God, whatever remains within those limits is as yet unpronounced.

The answers we receive to prayer turn wholly on

faith. They arise under the disguise of natural law, and may be ascribed, as the soul is inclined, to God's hand, or to an unusual coincidence of causes. We may stand in them before nature or before God as we please. Indeed the truly inspired spirit will make no difference between the two. To it nothing is ordinary, nothing extraordinary, in God's love and intervention. Prayer springs from faith, and in its answer is addressed to faith. It is unto us according to our faith. Prayer is capable of the highest use, of the easiest abuse. It pertains to the secrets of the soul, its living walk with God, and subserves a living purpose only as it finds God, feels his strength, and puts that strength to full and faithful service. The answer of prayer lightens not the labor laid on us under natural laws, nor gives us the presumption attendant on their easy arrest. The blessings of prayer must descend like dew on growing plants, must come as refreshments to working men, before they can play into the healthy, spiritual economy of the soul, and build it up.

The sciolist will most assuredly be ready to deride this view of prayer. What, does God play fast and loose! Are forces which are fixed and unchangeable for science, flexible and facile to faith? Are we to believe that action which is immutable, perfectly so, to the most searching observation, becomes beyond observation, mutable, bending by increase and by diminution to the wants and wishes of men? that faith is thus called on to fly into the very face of scientific thought? Even so, we answer, and we stand before the judgment of reason. How the scio-

list is to overrule convictions shaped in the realm of mind, by the mere inertia of opposite convictions, shaped among physical forces, we do not see. The appeal must be to a full bench, to all the powers of mind. At that tribunal it may seem as probable that God should give as that he should not give, that he should be possessed of the pliancy of personality as of the rigidity of force.

There is another still more recondite interplay of powers in the world, the immediate action of the Spirit of God on the spirit of man. To this, no form of experience gives us a clue. So thoroughly do these influences form an invisible world, in their descent upon us, respect the integrity of our own mental structure ; so entirely conform themselves to the appearances, buoyancy and upward lift of our own thoughts, that they are no more alien, abnormal to the mind than is the food which the plant gathers from the air to its structure. Indeed, is it so much more wonderful that the Spirit may come close to our spiritual life, may quicken and enliven it, than that leaves, floating in the air, can be with it in such constant, invisible interchange of material, drinking freely deep draughts of life? What pitiful, blinding tricks our senses play upon us, if we are to believe and conceive nothing which they have not confirmed ; and this, while they leave their own facts more than half hidden in inscrutable processes. That the Spirit of God comes near to man, that the spirit of man, without loss of freedom or the least sacrifice of its own integrity, comes under the quickening power of this interchange of life, are truths of such scope and

quality that we pick them not up in the streets, but they come to us direct from Heaven, are of so subtle, vital and profound a character, that they lie not out distinct, separate facts in our experience, but are the secret and substance of our spiritual life, its daily atmosphere.

The perpetual descent of spiritual powers on physical forces as now indicated in miracles, in answers to prayer, and, indirectly, in the influence of the Divine Spirit on the human spirit, we are disposed neither to limit nor disguise in statement; nor pass lightly in discussion, as unable to endure scrutiny; nor to present in a shame-faced way, as if it were the weakness and not the strength of our creed. We are not careful to inquire who do, and who do not, regard this constant, natural and supernatural presence of spiritual powers in the world as a good joke; or who, not willing to deny it, are yet anxious to refine it away; we believe it to be the soundest of the conclusions of philosophy, and the holiest of truths.

In view of the ground gone over thus far, it is plain that we are decidedly right or as decidedly wrong; that in cutting straight down between matter and mind, and between the conceptions that rule in the two directions, we show ground and reason for great diversity in men's opinions, according as they allow one or another class of ideas to overrule the mind. The entire attitude of the physicist is made perfectly plain, nay, seen to be inevitable from the moiety of knowledge to which he confines himself. Start the processes of thought in material forces, let the causal conceptions there applicable grow daily in power;

let the perfect solutions these offer of all physical facts be dwelt on, and increasingly admired ; let the facts of philosophy remain strange, remote, unfamiliar, obscure to the thoughts, and how certain is it, that spiritual conceptions will become more and more attenuated, till they vanish altogether. Men occasionally modify the superstructure of thought, but do not often meddle with its foundations. Let these foundations, therefore, be laid in the material world alone, and the longer they think, the more they inquire, revolving in one round of conceptions, the more certainly do they depart from those initial ideas, whose presence and explanatory power can alone make the phenomena of the spiritual world real and rational. For this tendency, blindly taken up and blindly pursued, there is no remedy, but sound, mental science, and starting points taken in a new field, and followed to new conclusions. That contempt for metaphysics should accompany an exclusive cultivation of physics is as natural as that the costume of a strange people should seem grotesque to us. He who, living on one side of the globe, knows nothing of the other, must have restricted, inadequate and inflexible conceptions of it. Look straight forward at the landscape before you : invert the head and look again. The scene is strangely softened, a fascination, a dreamy, celestial unreality has stolen over it. Raise the head, and back slide the fields and forests and valleys to their common-place appearance. It is as if you had caught on the face of a friend a sudden flash of inspiration. Such are the variable aspects of nature under slight changes, but much more subtile

and significant are those diverse phases of intellectual light which steal over the fields of knowledge, and make of them, now the safe grazing ground of the senses, now the wild haunts of weird thoughts, and now celestial plains, checkered far and wide with heavenly beauty. The exclusively scientific tendency of our day, we challenge, as it forces its way into the departments of philosophy and religion; we remand it back to its labors, back to the tasks assigned it, assured that the conceit of its great successes there will make it here only the more dangerous, dogmatic and intractable.

On the other hand, to one who starts the fruitful movements of thought in contemplating the phenomena of mind, who establishes the ideas that rule here, and makes them familiar to the understanding, there not only appears no improbability in this interdependence of spiritual powers and physical forces, but that the last should escape from under the first, the less from the greater, seems to him a conception impossible and absurd. That matter should set up as against mind to plan and make and rule a universe, to put form and force into it, is as if the dog should command his master, or as if the satire of Swift should prove true, and the horse turn out to be the man. What, we pray to know, is mind, finite and infinite to do, but rule over matter? Or what else is it evidently doing day by day? We can give no other interpretation to all that we see about us, but this very interpretation, of the supremacy of the soul in the body, and through the body in the world. Liberty, spontaneous power, bound to no causal con-

nections, but using these as occasion offers, these are the conceptions and this the experience with which we are familiar, and that God should work in a like way in a universe, yet more immediately in his hand, is as much a matter of course as our own variable plans for the day and freedom in their execution. The pregnant question, then, comes, Which of these two classes of thinkers have reason with them? It is not difficult to decide to which the vast majority of men have belonged; but the self-confident physicist, sure of his new ground, distinctly advances, like Spencer, this fact, that the masses of men have believed otherwise, as a reason which makes for the minority. Old and antiquated are synonymous in the vocabulary of the sciolist. Religion and superstition are different sides of the same thing, while metaphysics are the last retreat and hiding-place of all blind beliefs.

In this last conviction, the materialist is so far correct, that out of philosophy has come, and will continue to come, those conceptions which are to plague him more and more. Reason lies with him, if the mind, in its own phenomena, as a distinct and peculiar fact, is to be overlooked; and matter be made to furnish out the entire universe with its laws. Reason lies with us, if the seat of reason is in the mind, if what it believes of itself is equally true with that which it believes of matter, if it may be presumed to know as much of its own principles as of those which rule in the external world, and is as competent to recognize its own nature and activities as those of material objects. In short, metaphysics

must be swept away, the inadequacy of the mind's own action, its interpretation of its own phenomena in its own field be shown, and that too by the mind itself, as a condition of the triumph of the physical tendency. Our thoughts must stultify themselves, confess their own unsoundness, before they can be bound over to the external world.

It is, then, in the field of philosophy that the battle is to be fought, and the first inquiry which an earnest searcher into these foundations of truth must put to himself is, What are the grounds of rational conviction? This question carries him at once to the mind for an answer, and if he accepts, as he must and should accept, all of its persistent action, its fixed forms of assertion, as ultimate, as equally authoritative, then his next question becomes, What are these? If at length he makes answer, as we have made answer, They are the senses, they are the intuitions, they are the understanding, each with a form of knowing, each supreme in that form, he at length finds himself planted squarely on the physical and the spiritual worlds, and their junction and intercourse inevitable. The inquiry, then, With whom rests the balance of reason, the materialist or realist, in their diverse views of the facts of the world? finds an answer in the comparative breadth, scope and correctness of the philosophies that underlie the two systems. The arbitrament is here, here is the appeal, from this court must come forth the final verdict. No complaint is made of Mill, Spencer, Bain, that they do not carry the case up to philosophy, that they suppose, with their feeble and remote followers,

that this tribunal is abolished; but that their philosophy is partial and unsound, that they use the mind to destroy the mind rather than to unfold in full force its faculties, that they take sides against the mind, and make a point of its alleged weaknesses. The very powers they so dexterously wield, the bold way in which they strike out against their own independent, spiritual being, remain a proof for that being more unanswerable than the proofs by them offered against it.

If it now be asked, since the point at which this balance of reason rests is admittedly to be decided in the court of philosophy, whether we are unwilling to trace the controversy; is to be fought out between men of strength in this remote arena, how are we in the meantime to be assured of the direction of the under-current of truth, whose general course is of such moment to us? we do not believe that a sufficient answer to this question is very far off, or very difficult. We act every day and hour as though we believed in causes, though neither Spencer nor Mill nor Bain find any foundations for the belief. We act as though man were free and blame possible, though the philosophy of these gentlemen discovers no grounds for the conviction. May we not as easily and rationally accept the soundness, in general direction, of that vast volume of belief in spiritual powers, a belief from which none of us can escape, even momentarily, except by spasmodic, gymnastic throes of thought? In other words, it is unreason, it is against reason, to abandon the settled conclusions of reason through centuries otherwise than on the

clearest and most sufficient grounds. Rivers no more certainly reveal the slopes of continents, as they plough their deep beds to the ocean, than do the long-standing convictions of men—not as to one fact or another, one particular example or another, but as to the general drift and nature of facts—disclose the real, the inherent, links of thought. Indeed, how can it be otherwise? Either mind is in hopeless conflict with itself, or the laws of mind, the laws of its safe action, must be found laid down in that great sweep of history, wherein are traced its universal, general, generic movements.

Most instructive is the present reaction against materialism in the form of spiritualism, so called. Spread smooth the crumpled bull's hide here, and it only wrinkles the more hopelessly there. For every absurd negative here, there is a yet more absurd affirmation there; for every credulity banished on this side, two spring up on that. This storehouse of residuary phenomena, this limbo of inexplicable effects, only becomes the more chocked and crowded as the physicist sweeps the material world of all obstructions. The world, in moving onward, maintains, like an equilibrist, its narrow footing by thrusting out a hand, a rod, or a weight—now on this side, now on that. The wisdom of the sciolist we are called on to balance just now with the folly of the spiritualist, like with like. May God give us more breadth of footing, and more strength to walk, lest in some frantic out-thrust of thought, we lose our poise, and plunge sheer over into the gulf of materialism, presenting, on a larger scale, the sad spectacle which sometimes occupies our

civilization, of a fool perishing by his own dexterity, while sight-seers return one by one with shame to their homes.

There is a Nemesis that waits on unbelief, on the refusal of the faith that belongs to our faculties and to their Author, which shortly plunges us into some new credulity, and laughs at the reason which overleaps itself, and leaves the mind to flounder in fresh difficulties of its own creation. The firm, steady maintenance of the ground thus far gained in the history of thought, is the first condition of a safe advance.

LECTURE XI.

PRIMITIVE RELIGIOUS CONCEPTIONS.

RELIGION rests on a belief in the being of a God, and is determined in its character by the character of God, and of our relations to him. Men inevitably reason, in the first instance, from the form of their own actions, from the explanations they are accustomed to bring to them, to the nature and form of Divine action. In all that we do in the external world, we start with matter, we change its forms and positions, and these changes reveal the purposes we are pursuing, and our resources in their execution. Hence, the stone hatchet, the implements of war or of husbandry, become instantly to us a testimony of the presence and labors of men. It is thus natural for man to think of God as starting with matter. Matter itself he scarcely contemplates as requiring, in its presence, any explanation, and readily regards it as eternal, or overlooks the question altogether. It is the obvious arrangements of the world, its events, its organic beings, its order and completeness, that first send him forth in search of a Creator, a Ruler. This early impulse toward a supernatural power is of so simple and inevitable a character, that it may, with sufficient, if not with absolute, truthfulness be said, that all men feel it, and that an adequate and universal basis is found therein for religion.

Much later, however, there comes another view of

the case. Matter ceases to be regarded as so much dead, indifferent material, provided in inexhaustible quantities, and waiting to be shaped by mind into a universe. Matter, in its several forms, in its first elements, is found to be constituted of definite qualities, distinct properties or forces; and these, by their very nature, by their inevitable combinations and interactions, give rise to order, by slow stages passing into a complete, physical system. The seat of thought is now seen to be one step deeper than was at first supposed. The Creative Mind is not so much at work *on* matter, as it is *in* and *through* matter. The forces which we call matter, in their intrinsic nature, the quality and quantity of the elements in the world, their relations to each other in varied and complicated interactions, are found to contain the secrets of structure and of order in the universe. Thus, such elements as oxygen and carbon and nitrogen and hydrogen, in their amounts, in their exact, peculiar and complementary qualities, are seen to hold the mysteries of earth and water, of air and the life it feeds, and that if the starting-point had been materially different, either in the nature of the several forms of matter, or in their amount, all must have been chaos and confusion, incapable of construction. The elements as elements are either at peace with each other in material and organic structures, and are constructive under the plan prepared for them, or, as active forces, they are at war with each other, and destructive to every systematic purpose. In the one case the physical universe grows out of its constituents, as the plant from the germ; in the other

case, it becomes impossible. Not only is not the world made mechanically from the outside, it could not be so made. There is no rest and repose in its forces, except as they obey their own affinities, and revolve in the orbits of change congenital to them. Matter is its properties, is known only as its properties, and these properties being given, the material universe follows of course in due time. Matter in its own creation, goes to work at once to build up a cosmos.

Here, then, the old ground on which the being of a God was predicated is lost, and another ground must be found, or the argument fails. If we can still look upon matter as eternal, we have no occasion for a Creator and Ruler, so far as the inorganic physical world is concerned, since the nucleus of its strength, the root of its perfections are hidden in itself. It is framed more cunningly than the building, and not merely goes up, but grows up, without the sound of hammer. Evidently unbelief will now take encouragement, will hold fast to the old dogma of the eternity of matter, and cast away, as ill founded and unnecessary, the argument from design that went with it. Order, plan thus become necessary and native to the world, the first, last, and only form of physical forces. It is plain that in this stage of the argument between faith and infidelity, the origin of life in the globe becomes a question of great interest—the one side seeking to establish independent, creative points, the other struggling to braid this force also into the physical forces of the world. The geologic record, which was greatly instrumental in giving this new

conception of matter, as holding in itself the slowly developing germs of order, is diligently searched for the sources of the lives whose remains are so abundant in it. The Darwinian theory, inevitably adopted by those who would make Nature sufficient to herself, becomes at once possessed of a religious as well as of a scientific interest. The proof of this theory remains very incomplete, yet, if it should prevail, it does not, as we have shown, submerge the successive, creative steps indicated by the various forms of life ; it merely shortens and multiplies them. Hence the argument of the supernaturalist holds as strongly, if not as obviously, by these many and smaller fibers, as by the fewer and larger ones under the old view. The absolute size of the cable is not diminished, it is simply modified in its form of construction.

We believe, however, that the true, the better, defence lies deeper than this, that our notion of the nature of matter should be reconsidered, and that the material universe, as a mere momentary existence, in any one stage of its being, clearly demands a Creator and Sustainer, and this because a precise, definite compound of precise, definite forces expresses and does the work of mind, and of mind only. A conditioned force, that is a force shaped and fixed toward a distinct, definite end, does of itself disclose thought. Hydrogen in its properties, oxygen in its properties, the two in their combined and related properties, plainly evince the presence and activity of mind. Thus chemistry, which has done much to give rise to the doubt, does still more to resolve it. The very interesting and able lectures of Prof. Cook, delivered

here as an earlier course, are instructive in this connection. We must reach the Unconditioned through the conditioned, wherever we find it. Every fixed constituent of a settled plan opens to the eye the author of that plan. Thus in our new apprehension of the nature of matter, the possibility of its eternity is swept away, our negligent thinking concerning that point is rebuked, and, borne deeper into the nature of the world, we are brought by so much nearer to God, the seat of its strength. We find his thought and his life and his government as much in the very first as in the very latest activity. The foundations are laid in every element, and in every property of every element. Proportion, adaptation, definite quantities and qualities and relations appear from the outset, and show that matter, in its very origin, is of wisdom, is of God.

Reasoning from mere matter of such a fixed nature ; we may almost say, as organic a compound as a kernel of wheat, or a chestnut, we demand for it an intelligent Creator ; the language more frequently employed is, a First Cause. This expression we object to as faulty, as frequently springing from obscurity of thought and leading to it. The word cause we would apply exclusively to fixed, conditioned, and hence physical, forces. In this more exact and safe use of the word, the expression, a first cause, is not applicable to an intelligent being ; does not reach that to which in such a case it is intended to apply. A false coloring or direction is also given by it to the argument. If we can arbitrarily stop with any cause, and call this a first cause, demanding no further

explanation, then we should excuse ourselves entirely from pushing backward from one cause to another. If we are impelled to reason from the cause before us to the one which preceded it, and has passed into it, and from this to one yet prior, we cannot check this movement at any later point whatever, without invalidating the entire chain of connections on which we have so far proceeded. The dependence of the latest cause on the antecedent one is no more fixed and necessary than that of the first cause, so called, on something prior to it. Causes are all conditioned, and we cannot get beyond this chain by taking any one link in it, and giving it a new name. What, therefore, the general idea of causation claims, in final satisfaction of the mind and arrest of the argument, is a spontaneous, that is, a personal, source of causes. The so-called First Cause cannot be a cause, but must be a person, since only a person can lift the thoughts above the plane of conditioned activities. It is these forces of the world as conditioned that demand explanation, and this is not afforded by adding to them another conditioned force, but by bringing them forth from an unconditioned power or person.

Moreover, a finite person, though possessed of spontaneous power, is restricted within a limited circle, both as regards the time and degree of its exercise. There is in him a germ of spontaneity, but not an unlimited germ. He may grow up into a single star, but cannot be likened to that nebulousity out of which come all stars. Hence these finite bounds must be removed, or we only have a partial, secondary point of attachment for a few lines of force,

not the final gathering of them all up into one hand. Our First Person, therefore, must be an uncreated and infinite one, the I Am of the universe. Thus, in the completed conception, a new regulative idea is introduced, that of the infinite; is joined to those previously contained in personality, and we have the Almighty, the only independent and perfect Being.

This notion of the infinite, which gives form and sufficiency to the Christian idea of God, has, like other intuitive conceptions, suffered repeated and various attacks. Hamilton and Mansel have regarded it as inconceivable, while Spencer, with the same general drift of thought, has spoken of it as an illegitimate, symbolical, pseudo-idea. This notion must be vindicated, or our conception of God fails us. We regard the objection made to it as inconceivable as of no moment whatever. By conceivable and inconceivable in this connection can only be meant presentable or not presentable in the imagination. Now the imagination works only under the forms of the senses, and to say, therefore, of an idea that it is inconceivable, is merely to say, that it is not one of phenomena, that it has no final, sensible manifestation. Certainly none of those who believe in the infinite suppose it ever to be of a phenomenal, that is of a definite, that is of a finite, nature. If the infinite were conceivable, it could not remain the infinite. If the existence of this notion is to be denied, because the infinite is inconceivable, the denial can have no force except on the ground that there are no ideas and no knowledge but those ideas and that knowledge which can lie in the forms of the imagination,

which can come to us through the senses. But we offer the notion of the infinite as an intuitive idea, and it is no proof against it so urged, that it finds no entrance at the senses. This is exactly what we suppose and affirm concerning it, and assign it to a new faculty whose action is not covered by the word conceive.

The affirmation of Spencer is of the same nature, and rests on the same grounds. He, too, cannot imagine, cannot conceive, the infinite; and because it thus baffles him, he too labels it as an illegitimate, illusory notion. Here again is revealed the set and current of the old predetermination; what the senses certify this shall find acceptance, what they reject this shall be rejected; to them we commit the keys; we plant them at the door, and they shall decide, and only they, who are to find admittance. Any ideas that seem actually to get in otherwise, are, in spite of all pretensions on their part, mere phantoms, vexatious and troublesome, but not dangerous. Now the notion of the infinite, conceivable or inconceivable, substantial or illusory, is actually in the mind, and very busy there; is present to the thoughts of Hamilton, of Mansel, of Spencer, and is very mettlesome there, otherwise why this continual war of brooms to drive it out? Evidently it is like the nature of Horace, pitchforks may seem to expel it, but cannot hold the ground against it. These men have all talked much about something which they have called the infinite, and if now, according to their own confession, they do not know what it is, we are excused from giving any weight to what they have

said ; and if they do know what it is that disturbs them, that fact destroys their argument—that those who reject the notion of the infinite should involve themselves in so obvious a dilemma as this, reveals at once the confusion and perplexity of their position. They confound the action of one faculty with another, and because the power to which they attributed a result is obviously too weak to yield it, they reject the result itself. They refuse to retrace their steps, and admit the existence of an intuitive action of mind, the source of the idea ; they prefer the bold, curt policy of striking down the obtrusive notion.

One of the earlier directions in which the idea of the infinite would find application, one of the first objects of consideration by which it would be evoked, is that of space. Space is perfectly homogeneous. No definite or peculiar relations attach to one point in pure space more than to any other. What is true here, at this point, is true everywhere, and simple movement secures no change of conditions, no nearness or remoteness, no approach to this side or departure from that. Now the thoughts dwelling for a little on the conception of space, discovers this absolute oneness, this perfect uniformity of conditions in it, this homogeneity in it everywhere, by which the words expressive of relation as above, below ; here, there ; to the right, to the left ; find no application. Hence they recognize the futility of all change of place as either penetrating or modifying space, and for this reason, also, the mind supplies the notion of the infinite as the ground or form of these facts. The infinite is to be carefully distinguished from the in-

definite. A mathematical series may be indefinitely great, it is never infinitely great. The indefinite is simply that which transcends the mind's estimate, which wearies it out. Many so regard the infinite, as we think, very erroneously. The infinite is not begotten by the exhaustion of the imagination, it does not spring from simple weakness, it is not a conception on which the mind pillows itself in sheer fatigue, having added space to space in a fruitless effort to stretch a line of measurement from shore to shore of the infinite void. These are mere pranks and sports of the fancy in connection with a transcendental idea, coming to the mind from an entirely distinct quarter. We draw attention to the quickness and firmness of the thoughts in evoking and employing this conception, when rightly directed. The process is as definite as the grasp of a mathematical truth. We know certainly and forever that two parallel lines cannot enclose a space, we have but to direct the mind to two facts: first, the portions immediately before us do not, cannot, by conception approach each other; second, these portions are an exact type and representation of all other portions. For a firm and final application of the notion of the infinite to space, we have a like occasion for two considerations only: first, the point we now occupy in space is central, equally remote from all bounds; second, take any other point where we will, and its conditions are the precise equivalents of these; hence the conclusion, space is infinite. It may indeed be truly said that the first step involves the entire result, yet the mind evolves it more distinctly by the two,

and taking full hold of the two, settles the conclusion forever.

Observe the great distinctness and firmness of the notion when the mind is once made familiar with it, has lost the strangeness of movement in a new field. No truth in mathematics rests on a stronger intuitive basis. It is strange that Hamilton or Mansel should lay any stress on the fact, that the mind cannot conceive, that is imagine, the infinite, since this must be, should be, the case. Moreover, how easily is this faculty baffled or indefinitely bothered by well-known phenomenal truths, properly subject to it, such as our relation to the earth's surface during its revolution on its axis. We seem now vertical on an upper, now pendant on a lower, now projecting on a perpendicular, surface. What a struggle with the imagination have some had in accepting this simple truth. Spencer is scarcely more correct in affirming the notion of the infinite to be utterly unthinkable, thrice unthinkable in relation, in difference, in likeness. This it admittedly is, if by thinking it is meant an identification of it in class and kind with other notions ; this it is not, if by thinkable is meant that which is capable of a clear and distinct service in thought, which can enter there as an original and final element. No thinking is more complete to a thoroughly rational mind than that which calls forth from its own depths a recognition of the necessary fact, that space is without limits.

The infinite is also applicable in like manner to time, each point in turn being the exact counterpart of every other, yet only on this condition, that we consider time as one whole. It is not two infinities,

but one infinite. This notion finds a double application to God ; he is infinite in power, and he is infinite in knowledge. It is not fitting to say he is infinite in holiness, since perfect is the notion here pertinent. Holiness pertains to the agreement of action with a standard, not to the extent of action.

In affirming God to be infinite in power and knowledge, we mean that there are neither external nor internal limits to his activities, other than those which belong to their very nature. All that is possible to physical power is within the scope of his action ; all that is possible to mental activity, to knowledge, attaches to him as original and native strength. Knowledge, then, is meant to include the entire spiritual strength, and power the entire executive force known to us as physical. Unlimited mastery in each direction is the prerogative of Deity. The infinite as applied to power does not alter the nature of power, does not make it capable of new results, but removes all limitations from it in quantity. Thus also is it in the several forms of mental activity gathered up in the word knowledge ; whether of an emotional or intellectual character, they are absolutely without the restriction of weakness or feebleness ; there are no limitations in them as activities, though they may set limits to each other. The heart of God is not made weary by loving, nor the thought of God by devising. All degrees of the one and of the other are with him.

Here again we are met, of course, by those who are wont to submit all intellectual products to the imagination, with the assertion, that we have an

utterly incoherent conception, that the moment we attempt to realize it, it disappears in thin air ; that no power can be grasped by us except in some distinct, definite putting forth, and that so put forth, it at once sinks to the finite ; that no knowledge can be conceived by us, except as a restricted movement of mind in one direction, and that so conceived it is partial and limited.

We simply respond, drive back the imagination, it is the hound that hunts behind the senses, that follows an earthly trail, or bays the placid moon in sheer impotence. Why dog the stars with it ? What is it that leads us to affirm infinite power in God ? Not a precise, imaginative measurement of what he has done ; not a compounding in gigantic additions of the forces actually expended, but the conviction of the mind that nothing but an infinite nature, an absolutely independent one, can be an independent source of force. But two positions are open to God, or to any being, that of the Creator or of the created, that of the conditioned or of the Unconditioned, and to be the Unconditioned one, is to be without limits in the forces which spring from him. All this reasoning, these conceptions of the mind, which break ground for a new application of the notion of the infinite, do not spring from the imagination, do not come within its province, but leave it at labor in a field immeasurably below, while the reason mounts up to the throne of God.

Nor does this inconceivability of infinite power prevent our handling the idea in decisive and satisfactory forms, and including within it each manifes-

tation of finite force. Space, as infinite, is incapable of division. Nothing can be added to it, nothing can be taken from it. Strictly speaking, there is no portion of space; since this language would imply an entire or complete body of space, of which this restricted part was a portion. Yet this fact does not prevent our reaching most exact, mathematical results from considering the so-called portions of space, nor our empirically treating it in connection with matter under every form of dimension, relation, and measurement. Space holds snugly all extensions without modifying them or being modified by them; while the one idea, in the furniture of thought, performs as important an office as the other, the infinite as the finite. Thus the powers of God gather up all finite, physical forces without being exhausted or defined by any one of them. We may as accurately, as safely, and with the same instruction, speak of the force of the whirlwind as a portion of the infinite power of God, and as a partial presentation of it, as we can of the area of a circle, as a portion of space, a measurement within it. The absolute homogeneity of space only makes every part of it a more complete type of every other; the unity of all forces in God imparts something of the same representative power to each of them.

Thus also is it with knowledge. When we affirm infinity of it, we do not mean to deny its character, or modify its actual form, but to remove outside restraint, and inside feebleness from it. God's power is potential; his knowledge may be potential as well. We are not to embarrass our thinking by striving to

make this knowledge, in its manifestations, at once infinite and finite, by supposing it to include a definite act of attention to each separate thing, and an inclusive, constant, fixed attention to all things ; so that the eye cannot wink lest something be lost, nor the thought move lest something be left behind, but the one must gaze fixedly on, and the other hold motionless in unchangeable reflection. We are rather, in imagination, to adhere to the form of the finite, and, in the reason, cast the infinite as the canopy of heaven over it, giving range and liberty to all its movements. Indeed, all that is highest, most potential in knowledge is not of the character indicated by this destructive not constructive, this dead not living, conception of the Infinite. The more power we have, the more vigor of thought, the less is the mind burdened by its possessions, the less does it lapse into a painful holding on to things ready to elude it. Such a mind abides in perfect liberty in one thought, in one line of endeavor, with a quiet command of many others, a potential hold on all its resources. Is it not better to conceive, is it not philosophically more exact to handle, the power and knowledge of God as we actually find them, under a finite form with the suggestion of infinite scope, than to strive after them as they are nowhere presented under an infinite form? All about us are the forces and thoughts which God employs, which come forth from his infinite resources, and why should we find any more difficulty in knowing these for what they are, than they in being what they are? If infinite power and knowledge do put forth limited products, cannot these products in turn

put us in connection with infinite power and knowledge? If the argument against the infinite is good for anything, it goes to the length of proving that all is finite, that rationality cannot recognize the infinite or the procession of the finite from it. What can be is certainly not beyond the scope of knowledge, and what cannot be known, actually or potentially, is so far impossible to being.

The truth is, our knowledge strikes into two very different realms—the phenomenal and the unphenomenal, our wisdom is to deny or to waste neither branch, but to allow the one more and more to interpret and expound the other, knowing that we grow into the invisible through the visible, the complete through the incomplete, the commanding spiritual intuition through a studious inquiry into the actual conditions, the physical or mental facts, which evoke it. Because the one is not the other, because matter is not mind, nor the language the thought, nor the symbol the very force of the sentiment, nor the marble statue the soul whose seat it seems to be, nor the finite world the Infinite Creator, it does not follow that each and all of them may not lift the mind truly, safely into the invisible region, whence they come down to us, and whose speech they proclaim to us. Indeed, in so many ways, by such slight connections, in each happy suggestion of look or sound or silence, through doors so often left ajar, we slip into the spiritual world, that it becomes truly astonishing that the universe, with its deep vault of light, or its silent paths among the stars, is not a sufficiently royal way for us all to go up by to the throne of Infinite Power.

We doubtless conceive God most exactly, when we conceive him most closely to the facts of our own experience, when we find him in most intimate relation to the works of his hands. The holiness of God, the chief of his characteristics, is known to us only in the reflection of our own moral natures. The actions of God are not forced upon us as right, they are commended to us as right, and the response we find to them in our ethical judgments, is, must be, the measure of our approval, and of the adoration we render to God. As a glass globe in the open air gathers in perfect and exquisite reflection the entire circle of the heavens above it, and the earth about and beneath it, so the soul of man, by its moral capacities, stands in central, sympathetic connections with all purity and virtue, knows them as purity and virtue through a knowledge of itself, by the sphericity of its own nature. As a tinge of color in this reflecting medium, aids rather than mars the beauty, so the dark experiences of man in transgression does not prevent his hiding in his soul an image of heaven, nor the entrance of the moral glory of God by the avenue of his moral nature. What God does, is not good to us because he does it, but because within our own conceptions it presents itself as an action well done. The interpretation is from the soul, and we know God as God by the unity of our spirits with his. The struggle of virtue in the heart of the transgressor is the response of life to life, is one more effort of a prostrate, trampled plant to bend upward its growing points to the light.

If such are the conditions of likeness under which

we approach the moral attributes of God, do we not look most wisely into his power, the nature and the range of it, when we find it in the things and the forces nearest to us, not when, under a false idea of exalting it, and striking from it finite limitations, we lift it into a region of abstractions, which are robbed of the glory of being, and have no answering glory of conception.

What is the relation of God to space? It is at once answered: He is omnipresent, and then steps in some philosopher to say, the notion of omnipresence is an inconceivable and illusory one, wherewith you beguile the thought, not instruct it. This seems to us true only on this condition, that setting our faculties at cross-purposes, we strive to handle in the imagination what belongs to the reason, and subliminate in the reason what is just nutriment and symbolic expression to the imagination. This we do on one side, when we strive definitely, that is under a phenomenal form, to conceive an omnipresent being, giving to the Almighty a shape that we may reach him in fancy, and instantly striking it off again, that he may not suffer its limitations, but still spread through and occupy all space; this we do, on the other side, when, the senses and the imagination actually feasted on the glories of the visible world, we call in the reason to drive God out of that world, by the suggestion, this is finite, he is infinite; this is conditioned, he is unconditioned. We are rather, as in language, to let the ear be delighted with the melody of the voice, and the soul to be fed on the thought. The finite is in the infinite, and of it. Let

the imagination tarry here, as in the ante-chamber of Heaven ; there is an invisible fulness back of this, on which the reason casts quick, intuitive glances, though divested of all resemblance to things, of precise and phenomenal form. The cloud is the garment of God's majesty as much by the light it keeps back, as by that which breaks through it.

Consciousness, the condition of spiritual existence, has no relation to space. Thought, as an act, is neither here nor there, and in its objects may move instantly anywhere. The only relation which mind has to locality is through the body. By means of it, the mind has a double connection with space. There is a very limited material circle which it pervades, and in many portions of which it can exercise an immediate, physical force. It has but to will to move the head, the hand, the foot, in order to shoot force through them, or through other members of the body. So far, it has a species of omnipresence within the body. If, now, matter in all its forms be but the force of God, God's will is as omnipresent to the entire material universe as my will to the tense muscle of my right arm. There is a broader circle than this from which forces, by means of the senses, the eye, the ear, reach the body, and pass by their effects into consciousness, consciousness without position or locality. May not every activity in the universe, God's own activity, come into his consciousness, without position or locality, fittingly termed omnipresent and omniscient as necessarily feeling and knowing all that is ?

Space has no independent being. It borrows its reality from the reality of that which it defines. It

exists in the mirror, but dash the mirror and it is gone. It is present in the dream ; but awake from the dream, and it disappears. God's abiding activity in the external world gives abiding space, but sweep away all external objects, cancel the body, let thought alone remain, and where and what is space ? Consciousness, pure intellectual activity, finds no occasion for it, no region in which to locate it. Do not the forces of God, momentarily exercised in space, take omnipresent possession of it, give it being to our thoughts, and leave it, if he should withdraw his creations, ready to collapse like the times and places of a dream ?

May not a like conception be applicable to time ? Time seems much less fixed and settled to us than space. Its dimensions contract and expand according to our varying experiences, till hours are transformed into minutes, and minutes drawn out into hours and days. We all know the effect of dreams, of intense pain, or of great danger on our impressions of time. Now what is it that holds apart, that gives length and measurement, to the surging years of eternity, but the events that are transpiring in them, the roll of suns, the sweep of planets, the coming forth and decay of life ? And how can we more worthily conceive of this varied and immeasurable activity than as the transient activity of God, as the form in which his power is momentarily expressing itself ; the phase his life is taking upon itself, putting phenomenally forth from itself ? Is it not better to conceive of God's movable, flexible, spontaneous life, as passing down through the eternities, taking successive possession

of them, making them what they are, than to strive, against all laws of thought, to lock it up, we know not where or when, in some steadfast gaze of omniscience? Indeed, what is omniscience, but a knowing of all that has been, is, or may be? and what are the eternities but the stretch of time through which God has rolled his activity, made in their length by the slow, if you so regard it, or rapid, if you so regard it, evolution of his plans? Where is the time of my vision, its events removed? Where the time in which we enclose the eternal years of God, the distending events of his universe, the thoughts of his mind, being swept away? It has vanished like the bubble overblown, like the dream from which we have waked.

I may be asked, What is the worth of such conceptions? you cannot propose to urge them upon others as final. Their worth is very great to any soul that wishes them, who can use them in driving back those dead conceptions of the universe, which make of it a machine, mere matter; and those remote illusory notions of God, which hide him away totally outside of, and backside of, his creation, and finally forget him altogether. They are thrown out as ways of helping us to find God very near to us, as notions every way more accurate and more inspiring than those which they displace. Says Martineau—and we cannot again avail ourselves of his thoughts without expressing our admiration of the penetration and scope of his powers—“Indeed this mechanical metaphor, so skilfully elaborated by Paley, appears to be of all representations of the divine nature, the least

religious: its very clearness proclaiming its insufficiency for those affections which seek, not the finite, but the infinite; its coldness repelling all emotions, and reducing them to physiological admiration; and its scientific procedure presenting the Creator to us in a relation quite too mean, as *one* of the causes in creation, to whom a chapter might be devoted in any treatise on dynamics; and on evidence quite below the real, as a highly probable God. The true natural language of devotion speaks out rather in the poetry of the Psalmist and the prayers of Christ; declares the living contact of the Divine Spirit with the human, the mystic implication of his nature with ours, and ours with his; his serenity amid our griefs, his sanctity amid our guilt, his wakefulness in our sleep, his life through our death, his silence amid our stormy force; and refers to him as the Absolute basis of all relative existence; all else being in comparison but phantasm and shadow, and he alone the Real and Essential Life."

How plain is it, that a God so conceived, conceived evidently as he would have us conceive him, since, on the one hand, he gives us the universe through which to approach him, and on the other, supplements it with the assertion of his infinite, spiritual, and inapproachable nature, thus keeping us in the path of light by the nice equipoise of contradictions; how plain is it that such a faith, and such a faith only, subserves the purposes of a rational life. There is given us here, that which we may know, and will know, and increasingly know; and there, that which provokes inquiry, keeps the edge of appetite good,

and ever stretches beyond our thought. Every religion that has had any hold on the human mind, has had its mysteries, its shekinahs, answering to these deep things of God ; and has also had its rites, precepts, and outer courts. Rob religion of that which is incomprehensible, which cannot be found out to perfection, which refuses to subject itself to the exact conditions of time, place and circumstances, and you strip it of its transcendental truth, its infinite scope, its lifting power ; take from it its true, simple, symbolic knowledge, its near approach to God, its outer courts wherein the masses may throng to his worship, and your whole religious faith passes, like a balloon, into the cold upper air ; the eyes of men will soon cease to follow it, and return again to familiar things. " It is of such mental strife with the mysterious, which uses up our knowledge and lets us fall upon our conscious ignorance, that religion has its birth. The perpetual renewal of this controversy maintains the soul in that intermediate state between the known and the incomprehensible, the finite and the infinite, which excludes as well the dogmatism of certainty as the apathy of nescience and chance, and calls up that wonder, reverence, and trust, which are the fitting attributes of our nature."

Observe the deep foundations of rationality, on which the Christian faith, combining the known and the unknown, the finite and the infinite, the incarnate and the invisible rests. How it lays hold of all emotions of the heart ! How it engages, quickens, expands the thoughts ! How it strengthens the soul ! How it strikes deep down and far back into history

for the reasons and grounds and forms of its presence! How it draws to it remote races and distant times, and the deep-seated forces of our common life! Says Max Müller, "The elements and sorts of religion were then as far back as we can trace the history of man: and the history of religion, like the history of language, shows us throughout a succession of new combinations of the same radical elements. An intuition of God, a sense of human weakness and dependence, a belief in a Divine government of the world, a distinction between good and evil, and a hope of a better life—these are some of the radical elements of all religions. Though sometimes hidden, they rise again and again to the surface. Though frequently distorted, they tend again and again to their perfect form. Unless they had formed a part of the original dowry of the human soul, religion itself would have remained an impossibility, and the tongues of angels would have been to human ears but as sounding brass or a tinkling cymbal."

A faith so reposing, a conception of the Infinite and his government so grounded, are like the great mountains that hide their roots in darkness and their summits in light, but yield broad and fertile slopes on which many may live, up which they may ascend, at each step gathering a broader view, and possessed by a deeper inspiration. At times indeed, to the over-speculative, the too little trusting mind, the clouds that hover round their peaks may descend, and envelope the entire landscape, and the unbeliever may ask, Where now are your heaven-ascending

summits? Born of the mist, they are swallowed up of the mist. But he that can abide a little in faith, shall see the birth of new and unusual glories, when clefts appear in the riven clouds, and they flee apace before the winds that strike through them, and the light that drinks them up, till, their dim, despairing aspect all gone, and made to share the victory of the day, they linger, of things ethereal themselves the most ethereal. The difficulties of reason, left high and remote, are masses of effulgent clouds; brought down about us, and sensually scrutinized, they are cold fog-winds, that drearily extinguish our comforts, and one by one quench our hopes.

LECTURE XII.

CLASSIFICATION OF KNOWLEDGE : FORM OF DEVELOPMENT.

WE now approach the end of our labor, and should find some new light to have been cast by it upon the relations of science and religion to mental philosophy. Is it not plain, that the tendency increasingly shown to term mental science, philosophy, peculiarly and preëminently philosophy, is correct ; that an apprehension of mind, its faculties and laws, stands central in knowledge, and determines its forms and limits in all directions ; that science on this side and religion on that, must receive thence the form of their truths, their relations to other truths, and the final grounds of their validity ?

All darkness and confusion, therefore, which the prejudices of the present time shall allow to steal into the department of philosophy, must be greatly disastrous, loosening the central connections of thought, disintegrating knowledge, wasting portions, and allowing other portions, like rebellious provinces, to cast off the organic laws of the kingdom of truth, and to issue their own limited edicts in their place. The mind must mount to a knowledge, a correct and complete knowledge, of its own faculties, their scope and authority, and, from this central eminence, lay out the fields of exploration around it.

In the first place, it sets this limit to physical sci-

ence ; that it belongs to physical things and events which appear in space, and arise under the notion of causation. These inquiries have, therefore, perfectly definite, perfectly firm and invariable connections. Here, science may boast of its "immutable, unchangeable, eternal laws ;" may bind down all events to them, and delight to inquire into the kind, order and dependencies of that class of facts which arise under them.

Philosophy reserves for itself an equally distinct field, that of consciousness, in whose events the notion of space finds no application, and whose interior law is that of spontaneity and liberty. But besides these two departments of empirical knowledge, of actual things, there is another of pure conceptions. It arises from the unfolding by the mind of its own intuitions, and lies in the region of abstract transcendental truth. Thus the conceptions of space are expanded into geometry, and judgments, under the notion of identity, into logic.

These are the three primary directions of thought : space in its physical facts ; consciousness in its mental facts ; abstract truths without actual, phenomenal being. We are thus ready for a classification of knowledge, and to indicate the ruling conception in each separate science. By science is meant a form of knowing which approaches completeness and fullness ; and by a science, a given department of knowledge, so explored and explained. There is no fixed limit between that degree of knowledge which constitutes a science, and that inferior degree which remains unworthy of the name.

The first division of knowledge is into the Intuitive

Sciences and the Empirical Sciences: those which do not pertain to real being, and those which do. The Intuitive Sciences are again divisible into the Pure and the Impure. The Pure Sciences rest wholly on intuitions, give laws to facts, and receive no laws from them; are discussed independently of them. Of this class, are Pure Mathematics and Deductive Logic. To the second class of Impure Intuitive Sciences, belong Applied Mathematics, Ontology, Esthetics and Ethics. These, each of them, deal with facts, but deal with them not as facts merely, but under intuitive relations which the mind imposes upon them. Let the facts be fixed, hypothetically or actually, and demonstration enters here as in the pure sciences; that is, the reason sees the conclusion to be contained necessarily in the premises.

The Empirical Sciences fall into Intellectual and Physical. The Intellectual Sciences are sub-divided into Mental and Social Sciences. The Social Sciences are further divisible into those of History, Language and Political Economy.

The Physical Sciences contain three classes; those of elements; those of compounds, inorganic and organic; those of interactions.

The first of these treat of primary, elementary forces; the second, of the separate products of these forces; and the third, of the complex conditions of action and reaction in the different departments in which these exist together. To the first class, that of elements or elementary forces, belong Chemistry and Physics. To the second, of organic and inorganic forces, belong Mineralogy, Botany and Zoology.

To the third, of interaction, belong Geology, Meteorology and Physical Geography.

We subjoin a table expressing these relations and containing the leading, regulative idea or ideas of each science. Of course, other ideas enter in constantly, but the ones indicated give character to the respective branches.

KNOWLEDGE.	INTUITIVE SCIENCE.	Pure.		Mathematics.	{ Space and Number.
				Logic.	{ Resemblance as Identity.
		Impure.		Mixed Mathematics.	{ Resemblance as Identity.
		Intellectual.	Mental.	Ontology. Æsthetics. Ethics.	{ Causation. Beauty. Right.
			Social.	Science of Mind. Language. History. Political Economy.	{ Resemblance. " "
EMPIRICAL SCIENCE.		Physical.	Of Elements or Elementary Forces.	Physics. Chemistry.	Causation. "
			Of Inorganic and Organic Forms.	Mineralogy. Botany. Zoology.	Resemblance. " "
			Of Interactions.	Geology. Physical Geography. Meteorology. Physiology.	Causation. " " "

We now pass to the relation of Philosophy to religion. It discloses the basis of religion in our constitution ; the source and soundness of those conceptions on which it rests. These are, first, that of the infinite in its personal form, and second, those of liberty and right. Without these ideas firmly es-

tablished, and practically believed in, we can have no belief in God, or in duties owed to him. Philosophy, therefore, settles the foundations, not less of religion than of science, and shows it incorporate in our first constitution. So true is this, that in our scheme of knowledge, we need no distinct department as that of theology. The being of a God pertains to Ontology. The facts of Revelation have arisen historically, and the precepts of religion are those of our moral nature. Theology, therefore, is simply gathering together, into one presentation for practical ends, what pertains to many departments of knowledge. The assertion, that religion rests wholly on our mental constitution for the nature and fitness of its claims, is displeasing to some minds, but we think, chiefly, because its bearings are not fully understood. It seems to them to set human reason above Divine reason, Philosophy above Revelation. This, at first flash may appear to be the force of the statement, but is not its real character. God has placed the seal of his authority on our very constitution, on our rational and moral faculties themselves, and not upon any external parchment or revelation as alien to these faculties, or foreign, in its claims, to conscience. His law is written in the heart ; indeed, as a moral law, it can be written no otherwise. Commands are of no avail, except as they are, first, understood, and of no moral avail except, second, as their force and fitness are felt, that is, responded to from within. No injunctions can be laid upon any but an intelligent being, and no religious injunction upon any but a moral being ; since otherwise laid, they find no echo

in the soul, get no hold of it. We must have ears to talk to, eyes to present colors to, consciences on which to lay claims. God's government goes far deeper than the precept: it springs up in the rational, moral sense which explains and justifies the precept. It were vain that religion is both rational and right, if men were not able to discern that which is rational and recognize that which is right. God first establishes the human reason, the ethical sense, and by these, establishes his commands. His throne is set up in our nature, as to the conditions and reason of its authority, not elsewhere. This shows us why his kingdom tarries. He is struggling to correct that reason, and redirect that moral nature, that have partially lost their hold on the truth, and thus allowed the foundations of his government to give way. It is not on irrationality but rationality; it is not on strength but righteousness that God builds; and reason and right have no existence for any soul except as disclosed to it by its own action.

God has given us those powers which constitute us free, reasonable beings, and all his commands, all our relations to him, all his methods of dealing with us, depend for their fitness on the nature of those powers; and thus a correct knowledge of them, a correct philosophy, is necessary to the construction of a correct theology. If we are free, sin is one thing; if we are not, it is a very different thing. If we are able to apprehend the law of right as a primitive intuition, the law of virtue is one thing; if we are not, it is quite another. The language which God addresses to us is as much to be explained by a knowl-

edge of our nature, as the language I address to a dog is to be understood by a knowledge of its nature. It does not set human reason above the divine reason, because by the first only do we understand and explain the last. The pupil is not above the teacher, because he enters into, and explains by his own thoughts, the thoughts of the teacher. It is a very awkward and weak government which rests on strength, compared with that which rules in the very mind and heart, and is able to divide the man against himself in every act of disobedience, and make the last appeal to the conscience of the criminal.

We see but one danger to be guarded against in this statement, and that is this: Because the existence of God and the rightfulness of his government are disclosed to us in our own moral nature, and his commands meet with their final enforcement there, it does not follow that each revealed truth and specific precept will be at once and thoroughly apprehended by us, or that we shall be at liberty to set it uncere- moniously aside when it fails to disclose its intrinsic light. The reason and the conscience inquire into all things, not less scientific than revealed truths, under this condition of partial ignorance, and a qualified acceptance of what they do not comprehend. The authority of reason is not thereby lost; we are only bidden by reason itself to wait for a final adjustment on further inquiry. Conscience may sanction a command of God, as a command of God, without seeing its precise grounds; and in doing this, is as rational, and as dependent on reason, as is the traveller in committing himself to a guide. The assertion

remains true, fully true, we are built into the moral government of God, and a knowledge of him, solely by our rational and moral nature. We are rational and moral first, and religious afterward ; that is, the first capabilities involve the second, and give law to them. We are what we are, first by the creative work of God ; second, by his redemptive work under, and in completion of, his first work. To decry the reason of man, is to decry God, its author, and to put out the very eyes, by which we wait on him, into which he pours the light of his truth, and the smile of his benignity. It is not philosophy, but philosophy falsely so called, that we are to fear ; it is not the wise man but the fool, who says in his heart, " There is no God."

By the relation now pointed out between science, philosophy and religion, by which the one stands midway between the other two, and gives them the ideas under which they proceed, we are able to see a reason for the order which individual and social growth have assumed. That the progress of society as a whole should agree in its leading stages with that which more frequently falls to the individual in the development of his own intellectual life, is inevitable. The earlier periods of a nation, or of nations—as they have often so influenced each other intellectually as to make of their conjoint periods a continuous advance in thought—is necessarily made up in the great bulk of its population of individuals in the first stages of progress, while its subsequent and its later periods are respectively marked by a steady increase of those in an advanced development. Hence, the

life of the nation is a prolonged counterpart of that of the individual ; and the history of nations, as conjointly bearing on civilization, a second counterpart of the included units of growth. This is true, however, with an important exception : the individual is mortal, and the nation as well hitherto, while nations are able to take up the march in endless succession. Each of these, which are truly historic, which are the fighting corps in the army of progress, and not mere hangers-on, cannot fail at once to participate in the past, and break new ground in the future.

The individual mind, the child, starts with unbounded faith in personal powers, not so much in his own, as in those of his parents, in those of the men and the women above and about him. The boy interprets everything to himself on the side of spontaneity, of individual strength. The heroes of fiction and of history are all in all to him. They handle and wield to his fancy all the forces about them. In connection with this delight in personal prowess, this predominance of the free, individual element, the mind readily accepts the presence of spiritual agencies, divine and malign : indeed, gigantic human strength, super-human achievements and mythological beings all blend together as equally accepted parts of one unanalyzed picture. The religious element, therefore, is favored in youth by this predominance of the intuitions on which it rests, by this sense of liberty, and the weight of purely personal powers. Later, the control of the mind over its creations impresses itself on the enlarged apprehension. Pure mathematics, a solid crystal of simple thought, and, like a

fitly-shaped lens, bringing strange magnitudes and novel presentations to many practical subjects, to astronomy, optics, mechanics, lay strong hold of the intellect, and present it as furnishing and shaping its own instruments, and using them most efficiently on the material before it, waiting to be inquired into, and thus fashioned into knowledge. The personal element, therefore, still retains possession of the mind, though in a somewhat less wayward and irresponsible form.

It is not till the natural sciences come to possess an absorbing interest, not till a sense of the independent force and order in the world about us is strongly impressed on the mind, that it begins slowly, and somewhat reluctantly perhaps to take up the impression, that it is lapped by laws and powers hoary with years beyond its conception, broad, deep, high, strong ; with a force to which its own is insignificant, rolling on, a resistless flood, along a channel whose bed is never dry, whose current knows no pause nor abatement. Now the mind is ready to swing wholly over from its former position ; to regard the liberty with which it delighted itself as a mere delusion ; the power which it vaunted, as a child's infatuation. It now becomes its chosen wisdom simply to see the forces about it, to go with them, and escape the ruin of resistance. Religion and religious ideas appear remote and shadowy, or disappear altogether. The material universe, too strong, far too strong for the human soul, soon presents itself as strong, very strong for the handling even of a divine agent, and spirits and spiritual powers of all forms and

grades are soon left, blind Sampsons, to grind in this magnificent mill, which can, by all their strength, be revolved in one way, and for one end only.

From this final phase of the mind in its progress through partial and incomplete forms of knowledge, there is no return to strength and the composure of balanced powers and compensatory considerations, but by true, sound philosophy. Or, rather, such a philosophy should have anticipated this unseating of the mind from its central pivot, and left it still free to vibrate under every attraction, returning steadily to the polar point of personal strength. Let the mind rise a little above this stream of forces ; let it find in them one more magnificent display of personal, of divine power ; let it discern the truly spiritual influences that momentarily play down upon them, both from itself, and the great army, rank within rank, of lives that use them ; and its equipoise is restored to it. Religion comes back upon it with new significance, and it finds that it has climbed this exceedingly high mountain, not so much to see all the kingdoms of the earth and the glory of them, as to catch over and beyond them all, a more exalted view of the Kingdom of Heaven.

The progress of the individual is more frequently by points, by separation, by analysis, than by synthesis ; and thus it is ever assuming a one-sided and disproportionate appearance ; is ever looking towards something less complete than its own normal life. As it is said of embryonic growth, that it takes on forms which belong to lower kinds of life, and through these slowly approaches its own, its higher type, so

the mind accepts successive and partial phases of truth, and learns but slowly to unite them into a symmetrical, a completely developed, whole. We come to a knowledge of ourselves, as we study organic beings, destructively; we separate the bones, we pull apart the muscles, we dissect out the arteries, we pursue the nerves to their lodgment. The mechanism of the parts we at length understand, but the whole as a whole, its unity, its mystery, its life, escape us, and are to be reached again only by a pause: by regarding our dissection as all undone, and by standing silently in the silent presence of that life which fled before our busy fingers commenced their labor, and which they have now banished even from our thoughts.

The general order of development as enforced by the disciples of the positive philosophy, is that which corresponds to the one we have presented in the individual mind. They speak of a theological age, of a metaphysical age, and, last of all, of the age of positive knowledge. Of course, no age presents a phase of development, pure and distinct, but is what it is by predominant tendencies. The theological age is one in which personal elements have free, undisputed supremacy, and, therefore, in which the natural has no advantage, in men's thoughts, over the supernatural; the two have not fallen apart, and do not present different claims. Thought has not become distinct and thoughtful, and it uses the regulative idea nearest to it somewhat at random. In the metaphysical age, thought has become more severe, more logical. Indeed, logic, strictly so called,

has become the study of the mind, and its chief weapon. It still thoroughly believes in itself, and, by the fixed laws of evolution, expects, in its own judgments, from its own fruitful conceptions, to build up a consecutive and universal frame-work of knowledge. In this period, much is accomplished, and much is failed of, while religious ideas have still universal hold on the mind.

Later comes the millenium of science, in which man wakes up to find a world outside of himself, and to the fact that its laws are to be discovered, not invented ; its phenomena observed, not fancied. The mind now descends from its high pitch, and hunts bugs where bugs are to be found. At this point, positive philosophy steps in exultant ; claims this result as its own ; fearlessly asserts that mind is but a big maw for the digestion of this sort of facts ; that hitherto it has only thriven on wind, and now, for the first time, has found its true feeding fields. Some, with fatalistic folly, resign themselves to this interpretation, and think it a magnificent thing to rummage the world over, to cast up its soil, pry into its secret places, and entertain those messengers that come to us from the silent spaces above, and all for a fact, which is to be used finally as mere food to the belly. No inspirations are brought to the spirit, no consolations are whispered into its heavy ears. This might do, had we not come down from a throne, and could we not easily climb back to it ; had we not ruled in nature, and might not rule there again. It is something to hold knowledge as a mirror embraces its objects in passive reflection, but it is far

more to see for use, and to use for immortality ; to bring interpretation to what we behold, and to find, by this interpretation, our spirits knit in a kindred of thoughts and purposes to the great Architect of all.

We accept the three periods of positive philosophy, each partial phases of thought, all to be gathered up in their results as the mind advances to a higher plane of activity, and collects its gains for a new outlay. We merely refuse to accept the last and extreme position as final, as most truthful of all ; yea, the only truthful one. The pendulum pauses but an instant at the end of the arc, and impels the hours by a new vibration. Passing through science back again to philosophy and religion, we shall still find the world ready to strike off our march on the dial-plate of progress, as the race climbs the morning slope toward its zenith of strength.

If our view thus far is correct, it is plain that there are no fixed, established lines of development which society must follow, whether it will or no. Spencer may trace, as he pleases, the passage of the homogeneous into the heterogeneous ; the slow adjustment of life to its external conditions, he only engineers roads which the race may or may not travel. If it travels at all in the direction he proposes, it must, it is true, accept the general route indicated, as there is no other : but as in man the ruling element of life is a moral one, all other conditions of progress must be determined by it, and it is as possible for a nation to degenerate as to advance. Indeed, the world has as often presented the one spectacle as the other. The

great mill-wheel cannot be clogged, and minor ones revolve successfully. The ends for which man puts his powers to work will always have a moral character, will always set in operation moral laws, moral forces, for his encouragement or his overthrow; for his establishment or his retribution; and thus the individual and the nation will finally find the moral government too strong for them; that the very rapidity of its immoral prosperity causes a people first to be proud, then tyrannical, then enervate—to part, like an over-driven wheel, into a hundred fragments, and to pass into the chaos of a shipwrecked nationality, to become like old iron, waiting at the furnace door, new moulds and new uses.

How wholly mistaken is the statement of Buckle, that intellectual forces are the efficient forces in progress: that the moral element is every way secondary. Not till intellectual elements have resolved themselves into moral elements, do they effect progress at all. Not till they instruct men how to live and for what to live, do they influence life, and, teaching life in its form and substance, they become fully moral; they prosper or retard it in the degree in which they throw it into harmony with a universe ruled under and for moral ends.

The primary, the fundamental principles in the discussion of social and historical questions, of the hopes and possibilities of the race, must be found in philosophy, which underlies them. Does mind rule in and over matter, then the natural and the supernatural, the physical and the spiritual will harmoniously unite in true, in real progress. Is matter the

one seat, the sole seat of force? then progress will be either certain or impossible; will either care for itself, or need not be cared for at all. The questions of human interest can be handled on no common ground by a materialist and a realist: neither history nor society, things present, past, nor to come, can receive from them a kindred interpretation. They read the cipher with a different key, and everywhere conflicting results follow. The foundations of philosophy must be laid, or it is useless to lay any other foundations, or institute any other inquiries, save into simple, visible facts as facts. Begin in any direction to knit them together, and discrepancies and difficulties at once appear.

All systems of thought of social and ethical bearings, that are truly coherent and symmetrical, can be tested in their truth only by an examination of the fundamental principles on which they rest. Many minds are able with adroitness and logical skill to evolve a few first truths into an entire system, which cannot be treated successfully by an inquiry into the details of its structure, but only by a return once more to its initiatory and germinant ideas. Thus the philosophy of Herbert Spencer, his *First Principles*, his *Psychology*, his *Biology*, are exerting a great influence; and, while they carry with them many truths and much instruction, they are, in ethical and religious departments, most destructive and disastrous. Their evil influences are indeed restricted by two facts: many of those who are ready to accept their conclusions, do not apprehend all of their bearings, and thus easily endorse premises, from whose ultimate liabilities

they would draw back in alarm. Men are too illogical to suffer all the evil of their opinions, as well as to realize all the good that they contain. Yet, what men fail to do at once and consistently, time is likely to accomplish slowly. The mere jolt of motion shows a good deal of arranging power in loose material, and thus a slow separation takes place in opinions. The evil that is in them will not be still, and at length falls into genial soil. There it germinates, and soon a rank growth of mischief overshadows and rots away the remainder of sound thought.

A second protection, of much the same nature, is, that few really grasp and accept an unsound philosophy. Their native convictions are too strong for it. They do not, they cannot discard the ordinary connections of thought, and they use philosophy as a mere flag to unfurl on convenient occasions, to afford character and give nominal protection. It is generally certain practical tendencies, certain corollaries, which bear on daily life, that incline the most of those minds, that are but semi-philosophical, to accept one system rather than another. They choose philosophies as one chooses climates, for the comforts they yield, and they inquire or care for little beyond this.

For this and like reasons, philosophy never does at once anything like either as much good, or as much evil, as it is in it to do. It is not a contagion, but a constitutional force, that must show itself in successive generations before its real power and nature are discoverable. Yet, what it loses in time it makes up in strength and intensity, when it has once planted itself among the central forces of life, and commenced

their protracted government for good or for evil. Such a philosophy as that of the First Principles may find easy admission, with its brilliant and popular intellectual power; its last and fatal deductions may be made but slowly. Yet, for these reasons, it is, by the reflective mind, only the more feared.

The sagacious reformer works for the next generation more than for his own, and is especially fearful of those forces, whose fruits of mischief are still hidden in them. The rotten-ripe sins of the world are those least dangerous. Yet it is an utterly inadequate and unsatisfactory treatment of such works as those of Spencer, to blow against them a swarm of petty criticisms. They are too compactly constructed, too consistent with themselves, to be affected by minor measures. They are, in their leading drift either greatly right or greatly wrong, and which it is must be determined by the key of the position, the psychology. In a satisfactory attack, therefore, there is at once sprung upon us a most difficult and recondite labor, and one in which very few can engage, or which they can observe. It is not easy to find another book, so coherent, so clear, so subtle, so abstruse, and, at the same time, so fatally erroneous and mischievous as Spencer's Principles of Psychology. This fortress must be carried, this ground swept, or those many and far-reaching outposts which rest upon it cannot be captured. Philosophy must be called to its own defence, and the defence of religion, or its best possessions will be lost, and the protection which it now gives to ethical truth, be wholly sacrificed.

No fact in the progress of knowledge, more evinces the relations of philosophy to religion than the results of Hume's criticism on miracles. This criticism is and was unanswerable on the basis of the Lockean philosophy then prevalent. Hume was far too powerful for most of his assailants, and, even to our own time, rejoinders have been made, which utterly failed to apprehend the discussion and were altogether worthless. They were mud balls flung at monumental granite. They might disguise its lettering from the careless passer-by, but could do nothing toward effacing it. It was not till this destructive criticism forced into existence a new philosophy, a German and a Scotch school, that it began to give ground. Thus ever will philosophy show itself to be the citadel of truth, of which every religious, social and scientific position even, are but out-posts.

We have, therefore, always, reluctantly or otherwise, before the final issue of any intellectual struggle, to gird ourselves up for philosophy.

Starting with a defence of philosophy, and closing, in view of all its relations, with a further enforcement of its necessity, there are two other considerations which we wish to present in their bearings on this topic. Every system gathers strength for the mind whose it is, by the mere fact of familiarity. All beliefs, true and erroneous are open to the same liability. The simple fact, that they have long been held by the mind, gives them great power over it. Thought takes on itself habit, feels the ease of familiar processes, the strangeness of new conclusions, slides readily on old ways, and accepts new principles with

hesitation and reluctance. The advanced theorist may urge this fact as an objection against the staid beliefs of the past, may intimate that their chief strength lies in their prescriptive hold upon the mind, that it is mere inertia that keeps them in their places ; yet every attack which he makes under his own faith, every defence of it which he enters on, tend to exactly the same result in his own belief, till much of his conviction, his settled firmness of faith, is only another name for familiarity ; is the result of beating hard the path of thought by repeatedly travelling it. All parties, therefore, who are really in search of the truth, require the same caution to avoid the unbelief of mere ignorance, the credulity of constant credence.

Our own customs are to us excellent, our own thoughts sound, our own feelings natural by familiarity. Every mind, therefore, requires, from time to time, a violent upheaval, an earnest effort to look afresh at truth, and to allow an unbiased judgment to reach anew its conclusions. The needle, too cohesive, must be again poised, again set in light fluctuation under every magnetic current. Doubtless, to those who have tarried long in one field, the truths of every other seem vague, remote, often untenable.

Another like fact is, that every mind tends to exclusion, to concentration, to the evolution of favorite conceptions. This is inevitable from its mere finiteness, and grateful from the pleasing unity and the apparent triumphs so given to its labors. It seems to be a fancy that now possesses the scientific mind, that absolute identity, complete oneness, is to be more and more approached in the laws of the universe,

and in its forces. Harmony, symmetry, perfect interaction of manifold things, are passing over into the more barren conception of a diversified presentation of one or more central forces ; a necessary evolution, according to one and the same law, of all forms of force. The point of difference lies as to the depth of the diversities, the disagreements, when compared with agreements. Do we start with the absolutely homogeneous, or with irreconcilable differences, creation shooting out new lines from distinct points at the very outset. The one conception favors a mechanical universe, referring all distinctions to position ; and the other a vital one, one of infinite diversity and fulness. The very force of this desire after an artificial unity which must at once escape again into an inexplicable variety, we believe to rest on the gravitation of the mind toward the familiar, towards its own mechanical arrangement and handling of forces. Yet is not this tendency of the mind toward the universal application of one conception, the constant use of one nostrum, the unlocking of every lock with one key, the meeting of every social evil with one remedy, shown by a great diversity of experience to be practically pernicious and theoretically false ? We are to approach truth from many quarters ; we are to travel each road in both directions ; we are to plant ourselves in firm equipoise on both feet ; we are to believe that those who have been pursuing favorite studies with equal diligence as ourselves, have, doubtless, for us, both instruction and correction ; that the earth is not made of so many parts, the races of men are not so multiplied,

with minds so diversified, that one or two or three should explore the paths of sound thought, but that each from remote regions may bring his contribution.

The application of this caution is plain in connection with all philosophy. That system which is most rigidly one, most inflexible to all outside thought, most persistently developed from a central principle, presents least promise of complete truth ; has, doubtless, sacrificed it most frequently, and overlaid the portion it possesses of it with the greatest burden of error. Such a scientific spirit is of the exact nature of bigotry : it has in it neither historic nor philosophic scope. It grows by interior will ; by simple, dead crystallization, not with the safety and certainty of external adaptations—of a vigorous tree, in a favorable clime, under sufficient nourishment.

The simple fact then, that intuitive philosophy covers both sides of human life instead of one, two series of facts instead of a single series ; that it gathers and compacts in its own system truths from the idealist and materialist alike ; that it roots itself in history, and accepts the present with no sacrifice of the past ; that it starts from independent points, and reaches harmony, not identity ; finds more mysteries than one, yet every mystery a lighted torch for all about it ; this fact, this series of facts, makes strongly for the general truth of those doctrines which many minds, under many diverse impulses, have united to shape, and which have discovered no settled affinity for any one class of thinkers. It is not more strange that the mind should have many diverse ideas ; that to each of them should belong its prov-

ince ; that it should be laid on that mind to discover this fact, and throw order and consistency into its action by confining each faculty to its own labor, than that the external world should have its kingdoms waiting classification, each involving distinct forces ; or that human conduct and character and destiny should turn upon so many different ends, often in conflict with each other, and to be harmonized by wise selection, by careful inquiry and close restraint.

It is the excellency of the philosophy now urged ; that it meets with response in so many directions ; that it has a law for matter, and a law for mind ; that it looks earthward, but loses not thereby its power to look heavenward ; that it has a solution for the superstitions of religion, and the incredulities of science ; that it can believe here and hold fast there ; that its faith is not weakened by its speculations, nor its speculations banished by its faith ; that it speaks to the affections of the soul, and kindles its inspirations without wasting or diminishing its household goods of sagacity and prudence and forethought ; that it has a place and lodgement for all that any man, or any prophet, or Christ, can bring it from below or above, from the visible or invisible. Such a philosophy, so searching the soul with its voice, has on it the seal of truth—flexible, capacious, historic power.

One stands upon the shore of a lake imbedded in the unbroken forest. His words come back to him with strange distinctness from the farther banks. Every tree and shrub in their deep recesses seem to have united with every other in gathering up and replicating the sound. Later, one stands again at

the familiar spot, but the woodman's axe has made great rents in the forest. The charm is gone, and the spent echo has lost its fascination ; too little life is there to make answer to the life of the spirit. One must win back the woods, the unbroken forest depths, if he would hear again those words returning to the ear in clear, distinct, startling utterance. Many standing in the dusty ways of life, lift up their voices over its naked hills and cultivated fields, and the sounds pass forth blank and echoless from their lips. He that speaks in the solitude of the soul, in the presence of its unwasted emotions, catches the ear of the spiritual world, and listens in turn to its distinct answers.

Philosophy can wait ; the question is, whether men can afford to wait for philosophy ? whether there will not be a loss of vantage ground, a slipping from the heights of spiritual strength, by these unbalanced inquiries into material things, by this uncompensated pursuit of material ends ? Well it is to possess the world ; but let us possess it, not be possessed by it, possess it for ourselves, for those high and holy ends we find, and find only, in searching into the plan of our own being, its present and potential powers.

THE END.

