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EVOLUTION
AND
PHRENOLOGY

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ALFRED THOMAS STORY

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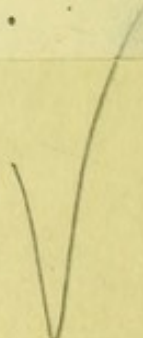
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EVOLUTION

AND

PHRENOLOGY

BY

ALFRED THOMAS STORY,

Author of "The Building of the Empire," etc.

THE BRITISH PHRENOLOGICAL SOCIETY (Incorporated).

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I.



WHAT man is, and how he came to be what he is, are questions that have perplexed the subject of the query throughout the ages. Numberless are the ways in which these and other cognate questions have been propounded, and equally various and unnumbered have been the answers offered in solution of the enigma. Nevertheless we are probably to-day as far away as ever from any real solution of the problem. Possibly we may be doomed never to know it. We shall certainly never know it in its whole extent, because the whole is unknowable to our finite intellects. Much more we may know than we do at present, because, though man's beginnings are enveloped in mystery, we are given both the intellect to investigate and the interest to stimulate speculation concerning his origin and destiny.

Whether for good or evil, we are no longer able—if we ever were—to look with indiffer-

ence upon the issues of mortal life, as, according to our view, the whole animal world below man does. We must be for ever inquiring—probing into past and future—looking everywhere for the initial spark of life, divine or other—looking everywhere for the origin and meaning of joy, for the origin and meaning of its constant correlate pain.

For joyful as life is—and joyful it undoubtedly is at the full of its powers—it develops at the core, and in proportion to its joy, a pain that will not be stilled, that will not die, the heart pain, namely, begotten of the doubt as to the final outcome of life. Does it fade into nothingness, or does it run through a dark and narrow strait into a limitless sea? Is its term and finish as that of the brutes, or does it develop into a closer relation with a being, spiritual and eternal, who is, as we dream, the author of our existence and the centre and aim of our longing? And, again, do our finite conceptions as to right and wrong, duty, and the end and aim of our being, in the main and finally agree with His?

On the one side we have such resemblances to and affinities with the lower animals

that we cannot help the doubt sometimes as to whether we do not perish like them. But, on the other hand, notwithstanding these likenesses and affinities, we are widely different in certain respects, the origin and source whereof we are entirely ignorant. There appears to be a superadded something in man which, while it gives increased joys, is a cause of ceaseless perplexity and even of torment. What does this difference mean? Nothing? Or is this life of ours, as has been the dream-thought of the ages, an immortal, a semi-divine life, wedded to and intermingled with a lower animal being, destined to play a part in the sphere in which we see it and know it, and then to return to its own—to what it is intrinsically? There is the enigma.

What, in other words, is the purpose and purport of that something added to the mere animal, which pains and perplexes man so terribly, and yet is his greatest glory and yields him his most perfect joy? And whence came it? These are all questions which men of thought are ever desirous of seeing answered.

II.

MAN'S life, as we know it, is bound up with a planet, every law of whose existence makes for change, makes for possible decay, at the same time that it makes for possible advance. The very circumstance that there is no iron stability, no invariableness of condition, is a factor working for progress towards a higher perfection. But it is likewise a factor that makes the reverse equally possible—namely, a descent towards a less perfect condition, or, in other words, towards worse evil, a greater imperfection. For everything works in a more or less perfect adaptation to its circumstances or environment, and the plastic powers of nature are such that the effort is ever towards a fuller and more perfect adaptation. And, as with every advance, higher powers and possibilities are come in contact with, movement and growth is ever towards a greater perfection.

The earth is in a transition state. Science shows it to have gradually developed from an inchoate mass of warring elements into a

condition in which life in its lower and more rudimentary stages became possible. Then, step by step, perfecter and more complicated forms were evolved, working up through snake and lizard and bird, through monkey and ape to man, the latter in turn rising from lower to higher, shaping and carving his upward way by an age-long struggle against fang and tooth and claw, sharpening his wits in the process, but developing also an amount of energy and cunning that made him in the course of time the capsheaf of created things. He cleared the earth of its monsters, or did his share towards that end, succeeding more, of course, by his invincible courage and his far-reaching intelligence than by any effort of physical strength alone. Indeed, in the long war he waged with the various forms of beast there was no power or faculty in them which he did not make his own, and, if need were, go a step beyond his instructor.

Thus, in his contest with the evil by which he was surrounded—the savage material nature on the one hand and the ravening beast on the other—man developed so enormous an overplus of the self-protecting

faculties and domineering powers that they in turn became an added evil. They became even masterful over himself, obscuring often, and warring against, his better nature, causing him to be devilish even towards his kind, his excess of uncontrollable and unthinking greed a devil even to himself and his.

Such, indeed, organic evolution made man, and it kept him such for ages. It carried the methods of self-preservation to the extent of killing off surplus female infants, killing or burying alive the aged, and putting to death, often in the most cruel manner, those enemies that were not reserved for slavery. All these crimes against humanity have been practised by one people or another, and some of them by peoples highly advanced in the arts of civilisation. Even a section of the Christian Church was guilty for centuries of practices as cruel and with infinitely less justification, save as a means to what it considered the survival of the fittest. It was only by virtue of the gradual growth and influence of a higher and nobler power making itself manifest in the soul of man that a larger and more divine humanity in the course of time began to prevail.

Thus was it that the physical evil without made necessary an evil functioning within; and so it came about that man was surrounded and encompassed with evil—encompassed within and without. Nevertheless, deprived of this condition of evil—evil in cold and hunger and in lurking death, evil in his own enormous propensity to build up and protect himself, even at the expense of others—man could not have grown to what he is. He would have remained stagnant in some lower form of being, even if he had not long since been entirely gulped up and obliterated—like the supposed intermediate form, the “missing link,” from which he sprang—by some larger mouth.

Thus out of the evil conditions of nature came good, came growth to higher forms, to better things. For though the evil is ever present, ever powerful, ever dragging down as it were from angel to beast; yet stronger than that downward pull, more vital than the ever-persistent inertia of the brute, is the deep underlying and unconquerable love of conquest, which is perhaps the most distinguishing characteristic of mortal man. It is deeper than love, more undying than

hate, as persistent and insistent as the spiritual faculty itself, and when it fades as a dominant force in a people, that people is doomed.

Hence, through this overplus of evil, this tendency to revert to the lower types through which man has passed in his upward way, this constant temptation to evade the law of recompense, of reciprocation, to forget the greater future for the lesser present good, this ever-active allurements of the lower insidious forms of propensity and passion, is unceasingly at work checking the advance; yet along with it ever goes the consciousness that the descent is a failure, for ever is knit therewith the passion that will not be content with defeat, the whisper that the true path is upward, as of a voice calling down through the dark and from beyond the void.

And so the battle goes on—the warfare betwixt the good that incites and the evil that tempts—between devil on one side and angel on the other, both throned in one being and warring the one against the other.

The trend—notwithstanding the weight and vigour of the evil—is nevertheless for ever

upward. When that stops and life as it were stands still, then the end will not be far distant. Sometimes the march seems backward, or at least not forward. Perhaps it is but a halt for bearings, to dress, in military parlance, for a fresh start. Anyhow, ere long, another advance is seen; another stronghold of evil is won, and the basis of human life is broadened and cleansed.

III.

SUCH is the prevailing philosophical thought of the day, as we have it in Darwin and his disciples, and in the main it is beyond question true.

But there is one point—one in especial—as regards the doctrine of descent which is open to serious objection. Darwin's theory is sound and reasonable—seems indeed almost unassailable—as touching man's purely animal nature. But when it comes to his higher attributes—to what we call his spiritual powers—it becomes weak and fails lamentably to account for his marvellous expansion above and beyond the animal. Nor is it less feeble and halting as touching his higher intellectual powers, those, for instance, having to do with mathematics, imagination, metaphysics, and the ideal generally. Indeed, he can hardly be said to have attempted to produce evidence in support of his theory in regard to man's higher nature, to that "something superadded."

The theory of the struggle for existence,

with its corollary, the survival of the fittest, may account for the self-preserving properties of the mind and for their correlates in the body. But there comes a time when the developing man looks away from his mere animal surroundings—when he begins to trouble and speculate about matters that do not concern his physical well-being, any more than they concern the physical well-being of the lion or the tiger.

Moreover, these things not only do not concern his physical well-being, but in a measure—and a very large measure it is in the main—they tend to unfit him for survival in the purely physical struggle for existence. Take, for instance, the pioneers of thought in all ages, those who have spent themselves for the common good, in the search for truth, in the investigations of science, for the steady advance towards a more perfect state, the ideal of which no man could communicate to them, the sufferers and martyrs for conscience and freedom's sake and for the larger life—what had this passion of theirs to do with mere survival here? Theirs was a struggle for the nobler, the more perfect man, for him whose orbit

cuts another sphere. That love of truth, that noble instinct—the worthiest in man—for pressing forward to a higher level, in order that he may enjoy the wider prospect, the clearer vision, and that he may show them to others also—these seem to have a diviner focus of origin than that of a merely earthly security and well-being.

In brief, when we come to examine the subject deeply, we cannot help the question arising in the mind: What is it in man—what was it in the ape-man—that worked so powerfully and effectively in favour of the upward trend? What is it that gives the impulse in that direction, that causes the animal being, with a nature so circumscribed, so lowly, to bud and blossom into a creature of such marvellous spiritual and intellectual gifts? What is it that, working in man like a spiritual yeast, compels him when he reaches the acme of his growth, or, in other words, when he is in his fairest bloom, to strive and struggle for the fructification of that which is not self.

Is the theory of the struggle for existence and the preservation of the most useful type a sufficient one to account for the develop-

ment of all the mental powers which—though they may have a concern with his position on earth—are not by any means essential to his physical well-being, but to a large extent militate against it?

What is it that decides the balance, that gives the upward spring, the leaning on the whole towards steady onward progression, towards, in short, a larger ideal? For that has been the slow though sure movement through the ages. When evil was enormously preponderant, when all the conditions were of the brute brutal, there was still in the midst of the tangle a something that wrought for the upward lift, as though there were an ascending spiral that must be followed; and along this way, despite many a halt in the course and many a backward roll, the march of humanity ceaselessly toiled.

Has that marvellous impulse been all from the physical merely, from terrestrial environment acting on function? Or does it owe something to forces operating from beyond the earthly sphere?

It would seem as though something more than this mere struggle for existence, something more than the preservation of

useful variations, were needed to account for the wonderful mental and spiritual development we behold in man.

The difficulty begins, of course, long anterior to any written history, long anterior to any record open to our research. It begins, one may say, with man's first utterance of a poetic thought, with his initial strivings after perfection, that seems so far away; with his first dim yearnings for immortality, for a stage and limit of being commensurate with his capacity to grasp and enjoy; we might say with the first promptings of metaphysical thought and inquiry.

What was it that started this budding and birth of the spiritual in man? What caused that something to break out in him, that would not be curbed to the physical course, but flung out into a larger orbit than that of his merely animal nature? What was it that, at some period of his development, bred so fierce a dissatisfaction with the best of material philosophies—eat, drink, and be merry, for to-morrow we die? What was it that, at some supreme moment, gave birth to the over-man, as we may call it?

Is it unreasonable to suspect a something beating upon pre-human consciousness from the illimitable regions of the ether-filled space, some subtle force, some purer breath, or it may be a rarer and more vital fluid that, borne like sunlight, like heat, like electric waves, upon the ever-throbbing waters of that immeasurable sea, is able to act upon the supersensuous margin of consciousness which we call soul, and spur it to still higher and nobler efforts of living and doing?

The scientist is apt to say No, we have no knowledge of any such influence, of any such force. But science should be humble, and wait for evidence where none has been vouchsafed. We know that light, heat, electricity, and the something we call gravitation—nay, may we not say, even consciousness itself?—come to us, act upon us, from extra-terrestrial sources: may there not be similar founts or streams of intellectual or spiritual stimulus?

The entire universe is bound together by chains of interdependence, the one part feeding and sustaining the other by all kinds of subtle and indefinable influences; and wherefore not by that also which we name

spiritual, by that something which in our best and most self-less moods fills us with impulses and longings that are not of the animal, that are indeed ever at war with what is merely animal, and which overwhelm us with a sense of unutterable failure until we have, as it were, placed the animal and brutal under our feet and entrenched ourselves securely in the over-man. Science, feeling its way towards the elucidation of the mystery of the universe, tells us that the ether by which all space is filled, like matter, is not dead, but is endowed with sensation and will, that it is, in short, vivified by some principle analagous to what we know as soul. We know, moreover, that through this living sea, vibrations travel which cannot be propagated by matter, and hence we see how some such ethereal force as that of which I have spoken may be conveyed to man from the depths of space, from that larger environment, in brief, which his organisation predicts.

IV.

ONLY the existence of some such power or force as that here suggested outside man, acting upon a nucleus conditioned to the same within him, will, as would seem, account for his continued development from and beyond the domain of the purely physical into the region of the super-physical or spiritual. For it is true in every department of life that only that which is like produces like, not that which is unlike. Unless, therefore, there were something of the nature of spirit outside man acting upon a germ within, he could not develop or show anything of the spiritual.

I speak of this something that acts upon man from without and beyond the terrestrial sphere as a subtle force or power for want of a more precise term. It might possibly be best expressed as a divine or divinely-working principle permeating the entire universe. Still it manifests itself in us and to us as force. For wherever, and so soon as, it is able to find a nucleus of conditioned

atoms or nerve substance, wherein it can make for itself a home or nesting-place, it uses that nucleus as a reservoir of spiritual force, or—so to say—as a fulcrum wherewith to give the spirit lifts into a higher air, glimpses of a purer light, and thus stirs it with yearnings towards a perfection not of the animal, with strivings and pulsings towards the divine.

So far as we know, there is nothing in those animals that in their peculiar formation and endowments come nearest to man at all analagous to the impulse in this direction which characterises the human. The ape, the closest approach from the animal side to man, becomes as he grows older more and more bestial. Man, on the contrary, as the riddle of the Sphinx clearly indicated, becomes less animal, more, as it were, super-animal. In short, when not utterly depraved by a bad start or lame upbringing, man comes more and more under the influence of that something which makes for the upward soar.

A principle analagous to this we see, on the physical plane, in different forms and degrees, permeating matter in the shape

of an impulse towards beauty—beauty in the tree, in the flower, in the crystallisation of minerals, in this latter so beautiful and wondrous that it is regarded by some as vital, in the harmonious landscape, in the starry night, even in the common work of men, when that work is touched with the best impulses of his nature—impulses to give the worthiest that is in him, apart from any selfish or self-seeking feeling whatever, but simply out of devotion to that spirit of beauty, or indwelling love, which is the germ-principle of all true things and all highest art.

It is this indwelling spirit, or principle, that is the mainspring of all the harmony, all the order, all the resulting beauty which we are able to contemplate in the universe. It works in all things for the greatest perfection of which the thing in itself is capable. Only in man it takes on a higher form in accordance with his loftier destiny and the greater altitude to which he has attained and the still higher whereto he aspires. In time this force, working for his highest perfection, is penetrated with a subtler, a more ethereal essence, which stimulates and moves the

spiritual vitality within him to greater advances towards the ideal of his being—this on the one hand, while on the other it takes advantage of those advances to add another and a higher cell, then to “inflow” that cell with fresh accessions of the divine light and life. Even these cells in themselves, and the faculties which arise out of them, make for orderly development, for ethic—what we call morals.

To put the thought in another form: this all-pervading principle or force—a force the most subtle of all those with which intellect has brought us acquainted, the nearest approach to that something which we know as pure intelligence, perhaps in the active sense reason itself—is for ever striving to find a new and a stronger fulcrum in the human mind; and then, when it is found, turning that fulcrum to account for further growth and development in the spiritual direction.

This force, like electricity, is ever present and active, either in a latent or a procreant shape, or, as we say of electricity, in either the positive or the negative form. In the one form it is effluence, light, a condition of

spiritual receptivity; in the other it shows itself as reason pure and simple. For aught we know it may be at the root of consciousness itself: for is not reason a larger, a fuller and completer consciousness?

It will be seen that *in esse* this something which I call the divine principle is that wherein lies the possibility of the higher, the potential man—a being who, while still remaining an individual and a self, becomes less and less selfish, less and less egoist.

This potentiality—we know not whence it started, at what point in his upward course it became potential: all we know is that at some fateful, some divine, all-important moment a molecule of vitalised matter was excited to a higher degree of sensibility than had ever happened before, and thence arose a parting of the ways. Through that more highly sensitive molecule of brain-substance a new thought or feeling, a higher emotion, a larger consciousness—in short self-consciousness—entered the brain or mind of a created or evolved being; and that thought or emotion started the creature on a new path. The little scintilla of thought, the small accession of higher emotion, became

the germ of a new departure, of—in the long run—a conversion or development infinite in its extent and importance.

A spark from the ethereal stream had entered, a spark infinitely small, but enough. For wheresoever it can find entrance, there this spiritualised force or principle kindles a divine life, or shall we say a divinely-becoming life?—a purer and further-reaching intelligence. We know not how, or in what particular way this principle or force began its career, any more than we know how or when human consciousness began—any more than we know how the inorganic, that first miracle of ascending nature, changed to the organic.

Possibly the two things, human consciousness and this divinely-working principle in man, had their rise together. With man's consciousness of himself began his differentiation from the brute. With that process of widened consciousness he was launched, as by an imperceptible switch, on to a new line of progress, into a new direction—a direction which ran almost parallel with the brute for ages. But though there was no visible deviation, one existed, and by gradual

accentuation age after age it became in course of time of enormous proportions.

As to when or in what manner it commenced to show itself we can only speculate. First of all, possibly, it started on its course by creating or awakening an all-provocative imagination, the potent alembic of all spiritual chemistry. Its primary step may likely enough have been the awakening of a sense of beauty—beauty of form, beauty of sound, beauty of motion, or, it may be, beauty of conduct. We are in the dark.

The perception of something beautiful, that is, pleasing, in sound, a recurring note, a bar that seemed ever to awaken a pleasurable feeling, an emotion of delight, in the upward-tending simian, the first step towards music—this may have been the arresting sensation, the switch on to that enlarged consciousness which in the long run meant man.

May we not imagine, too, in connection with this awakened musical sense a perception of beauty of form coming to the enlarging soul? For suppose some semi-man, some early Jubal of the woods, having discovered that pieces of dry wood, when deftly struck,

will emit sound, discourses rude music—to which the playful young anthropoids dance and caper in sight of the thoughtful elders, as they rest in the quiet even-tide. Even parents of such lowly grade rejoice in the jocund gambols of their young: and who can doubt that as the more lithe and graceful caught the rhythm of the sonorous wood, and leapt and swayed to its bidding, a dim perception of the beauty of their joyous antics entered the souls of the fond onlookers, and the æsthetic emotion was born.

Or it may be that in the realm of imagination pure and simple arose the primitive impulse on the road to this larger life. The aboriginal he, when making his way upwards from his primitive ape-like condition, saw himself surrounded by monsters of every sort, from the huge saurian to the dinotherium, or other equally gruesome monster. They haunted his dreams as his waking thoughts. When his still downward-looking eyes happened to be turned to the glooming night-skies, he fancied he saw there, as we see shapes in the fire, the self-same forms that tormented him in his daily path, in his lowly lair. What wonder then that in his growing

body of superstition, in his grimly-peopled imagination, parent of his one day theogony, he contemplated little else but crowds of evil and vindictive beings—nothing beneficent. Of beneficence he had as yet little or no conception. Nature about him was mostly bestial—bestial and hard. And as nature was, so was he himself.

Thus out of his being and its surroundings the aboriginal to-be-man created phantasms more cruel than the realities about him. Yet phantasms though they were, they were powerful enough upon his fears and upon his obsessed imagination to oppress and control him, to make him, by their reflex action, like unto them. For our fears, as our loves, shape and fashion us. Our religious fears shape us to hates and shames, our religious loves to every form of tenderness and gentlest affection.

But even in this crude, brutal imagination of the rising man the spiritual force was labouring to gain its end, working with the means at hand, as it ever does, to achieve its purpose. For, observe how ever in Nature—which is so often said to be cruel and unfeeling—observe how, in her methods, there

is a kindly motherliness which makes the best of things, and never gives up even her comparative failures until all hope is gone. How she will mend and mend, patch and patch, and sometimes, even at the worst, solder her broken vessels, like the sick oyster, with radiant pearls—pearls too of beautiful thought and sweet, nay, divine endeavour.

And as it was with our far-away semi-brute ancestors, so it is with us to-day. Do we not still live under the phantasms wrought out of our own imaginings, or those created for us by our forebears? We are gradually working our way out of them; but they cling fast and will not lightly be dispossessed. Still we have grown and are ever growing, thanks to that something beyond, to the all-pervading over-mind, that living and spiritually vitalising consciousness, which into every opening cranny of higher brain substance insinuates its particle of light, the light that in the positive cell is transmuted into the clarity of reason, into the illumination necessary to and in keeping with a larger and more immaterial environment.

Everything that makes appeal to this

illuminated consciousness helps forward the approximation to that over-mind, that divine ideal of ordered governance which must exist somewhere. Thus the awakening soul, seeing at first only the shapes of cruel monsters reflected in the nightly skies, and fearing them, comes gradually to perceive that in yon over-arching heaven there lurks a harmony which, erstwhile but dimly seen, rivets more and more his dawning sense and stimulates it to greater desires of knowledge, to wider and more intimate accessions of spirit.

Thus step by step we have learned that harmony, a reasoned chain of causes, controls the universe; and our knowledge, reacting upon our consciousness, as all true knowledge must, compels us to admire, and then to love, the order and celestial harmony which we see in heavenly things. The thing we know becomes a part of ourselves; it fills us, possesses us, just as the early man's phantasms obsessed him, and, in proportion to its completeness, works towards more perfection in ourselves.

How real this influence has been, and with what absolute and positive a force it has acted upon man, we shall be better able

to understand when we come to analyse the effect which has been produced upon the human mind and spirit by man's deeper investigation into the facts and conditions of universal space—facts and conditions which could only be appreciated in proportion as human consciousness, gradually feeling its way to and touching a larger environment, threw out ever-widening powers to keep pace with its growing need. And this, we may be sure, will ever be the case, if we will but cherish the ground of faith that is within us, and let the spiritual life-stream have full and free access to our minds—let the impalpable touches of consciousness beyond the reach of the five avenues of sense have larger and more joyous control.

V.

THE thought herein contained is worth pursuing a little further. For it would seem as though certain of our more wondrous mental possessions, or psychological powers, had come to us from our persistent study of the heavens. Those limitless star-spaces are pregnant with thought, suggestion, with meanings which beget thought. In other words, those infinite depths, filled with unnumbered worlds, excite and almost formulate thought. They enlarge the conceptive powers of the mind, compel it to widen its grasp, and to that end the means by which it grasps. Thus the mind creates for itself as it were fresh powers—creates them in conjunction with an intrushing force or essence which is the vital principle of its life.

The more this idea is pondered over the more deeply shall we be struck with its capacity to explain the phenomenon of man's growth beyond the point to which his physical evolution naturally brings him. For where the physical law leaves him, so to

—speak, there this something from the beyond—this something which he can only reach by means of his imagination, winging as it were his thought—seizes hold of him and bears him still onward, completing, or trying to complete, that larger evolution which has for aim the perfect man, a man whose needs and aspirations are infinitely larger than his merely earthly environment. We can see even the way it began to act, this something from the beyond.

The harmony that reigns among the heavenly bodies is one that strikes the simplest observer, as it must have struck the primeval man. It is so patent, so wondrous that from it arose, apparently, the first conception of the harmony of the Divine Mind. We have only to turn to the most ancient writings to see how this thought possessed the imagination of men in the earliest ages. They cannot think their highest thoughts without looking up at the stars; and the more they look at them the deeper go their thoughts, carried forward as it were on streams of profound intuition to conceptions of an underlying and all-pervading harmony.

And as it was with the ancients, so it is with us to-day. The more we know of the heavens the deeper becomes our wonder and our admiration at the harmony they display. It is a harmony so wondrous that it leaves nothing superfluous, shows nothing wanting. From the tiniest moon or asteroid to the most stupendous system, there is not one body without its due place and influence, not one but has its own beauty and radiance, even though that beauty, that radiance, be reflected—like the light of our moon, for instance. Nay, when it comes to that, all owe something elsewhere: nothing is what it is of its own self. For the harmony is an inter-harmony—a something that cannot exist of itself alone. Each star, planet, world, depends on others, on the whole, and the whole again on the Central Soul, which is harmony, and lives and works through it all. The more we study the heavens the more deeply do we become possessed with that thought. We cannot get away from it.

The ancients were so struck with the sublime and ordered movements of the heavenly bodies that they likened them to a choric dance, which, in turn, they supposed

to be accompanied by a celestial music—the music of the spheres. There is not only something very beautiful in the idea, but there is, as seems more than probable, an adumbration in it of a great truth. One of the conquests of the latter half of the century in the domain of science is the law of the correlation of forces, or more properly perhaps, of the persistence of energy. We know that, according to this law, no power is, or can be lost. We know that if it disappears as one thing, it re-appears, or is traceable, as another. Thus the force we call electricity may be transformed into light, into heat, into chemical force, into motor power ; but whatever the change, there is no loss, no waste.

In Nature electricity manifests itself to our intelligence as light in the lightning, as sound in the thunder, as energy in its destructive force. Dispersed through matter, it is equally active in other, though more subtle, forms. It is in reality the same force revealing itself to different senses. So, we may say, it is with the choric dance of the spheres imagined by the ancients. To their eyes it was a dance, a stately movement, communicating joy ; to their ears, the ears of the soul, it was

music; while to the higher spiritual sense it appealed as Divine harmony.

To us moderns, used as we are to dwelling almost exclusively on external things, much of that inner sense which is so beautiful in the ancients, and is seen in such splendour in the Hebrew Scriptures, has been lost—lost, that is, in the depth and intensity it once had; and so, perhaps, the wonder and glory of the heavens do not so readily translate themselves to our minds as the ordered and rhythmic dance, as celestial music, as beauty, as creative thought-out work.

But though the stars do not appeal to us in this way, or do not thus appeal to many; yet few are they who could study their structure, their motions, their interdependence one upon another, the laws of their existence, their inner life, so to speak, without being deeply influenced thereby. The order and harmony which reign in and through them enter into our souls as we study and contemplate their nature and movements, and can never again wholly leave us. We may not be at once transformed to their perfection of order and balance: we are not, and cannot be, suddenly so changed. But the

force with which those perfections strike us, revealing, as they do, the beauty and unity of the creative thought, wherein there is no anarchy, the sense of awe and majesty they constantly create in us, as, perhaps, nothing else does in the same degree, gradually and insensibly work a change in our minds, fashioning us, as it were, more and more to their Divine model.

Thus the study and investigation of astronomy has ever had a distinct and steadily-increasing moral value. For it is impossible to think that man, seeing and admiring the Divine order and harmony manifest in the universe, as revealed to him by the solar and stellar systems, could fail to be influenced thereby to wish to see in his own life and conduct, in his character and being, something of those supernal qualities. It is an inalienable attribute of the best natures to aspire unceasingly to the higher and nobler; and it cannot be that they should study that marvellous reign of law—attuned, as we put it, in the language of human feeling, to music and the dance—which is for ever displayed to our nightly gaze, without wishing to bring down something of its beauty, something of

its perfection, into our too often tumultuous earthly courses.

Thus much for the ethical aspects of the study of astronomy. It has helped enormously in the evolution of man's moral nature. Equally great has been its influence on the intellectual side of his being. It has stimulated imagination in its nobler forms, and thus has created or developed functions of mind which would otherwise never have appeared: so at least one is led to think. But of this aspect more will have to be said later on.

A similar influence for good in the spiritual direction has been exerted by other branches of study—simple unbiassed study, that is, of the order and system, the intermingled force and intelligence, everywhere visible to the reverently inquiring mind. For one cannot throw one's spirit into the investigation of these things without feeling that intimately connected and interwoven with such systems is a life co-extensive with their needs, and that with such life is bound up an intelligence equal to and commensurate with its breadth and of a like majesty and omnipotence.

VI.

BUT while the truth here set forth holds good of other departments of investigation, none of them are calculated to stimulate wonder and awe as does the study of astronomy, or at least not to the same extent. It so effectually stirs and kindles the imagination, wherein alone the soul can realise and, in a manner, be in touch with the Divine handling and management of the universe, that awe is thereby purified, and reverence lifted into its true and natural atmosphere.

Moreover, while this insight humbles man by showing him his insignificance, he is at the same time elevated by being enabled to see that, despite his littleness and brevity, he possesses something of grandeur in that he finds in himself points of contact with the Divine Mind in being able to perceive the wonderful order with which it works, as well as the astounding magnitude of the operations within its comprehension. Thus, as Kepler puts it, we are enabled to "re-think the

thoughts of God." Nor, in re-thinking such thoughts, is it possible not only not to be lifted by the act, but caused to love the perfections of the order and the beauty revealed.

Besides, such love cannot exist without a co-existing desire to possess, to assimilate the thing loved, and to make it, as it were, the centre of a new growth. In some such way is it that genius works. It loves the beautiful, the perfection of the thing it sees with the inner eye—loves it with so engaging, so engrossing an adoration that it must in one way or another possess it and show its possession by bodying it forth in efforts of its own. Thus, as we say, the supreme, love, as exhibited in genius, is creative. It is so essentially creative that its works are the great way-marks of civilisation, the beacon-lights of human development and endeavour. Hence there is hardly an important turning-point in history, hardly an act sweetening or elevating human society, but it comes in the first instance as a thought-wave from the beyond, striking upon some superior human consciousness, prepared, we know not how, for its reception.

So, bit by bit, as we come to know more,

and to make that little known, we shall fall into ways more truly in harmony with the reciprocal system and mutual control which are seen manifested in the realms of space. In that way the very orderliness, the nice balance, the fine adjustment and poise, the exact give and take of the celestial spheres (type of what might, and probably will, be in man when he has attained the full meridian of his growth)—in this way have these perfections their influence upon us, helping interiorly, and with a rational potentiality, in the process of evolution which began cruelly from without and on the fiercely material — the purely natural or earthly—side.

The thought is inspiring. For we cannot know anything of the admirable order, the marvellous inherent reason and intelligence manifest in the cosmos but gradually it will find its way into our lives, mingling its essence with our essence, or consciousness, and so by conjunction produce something of the quality admired and loved. Because, in learning to admire, we insensibly learn to love the order and harmony everywhere visible in the universe; and feeling that as

is the universe, which is external to us, so should we be, who are so intimately in touch with it, so much a part of it, we are stimulated to strive after that perfection which is our archetype, and to assimilate thereto the native and inborn principle of our life and being.

For, just as the ordered ways of the suns, systems, and stars constitute the moral order of the cosmos as regards those bodies, so there is a similar moral constitution inherent in human nature, ordained, as in the case of the stellar systems, by the Divine Architect, or pre-ordained according to the innate and seminal principle of the universe upon which all things are fashioned. In each case the order is fitting and sufficient, but not of a hard or stereotyped character, debarring liberty, freedom of will, growth.

In the sidereal system it leaves room for meteors and comets, for evolution and decay. In the human world likewise there are moral vagrants, meteors that seem to set moral law at defiance, comets that appear to range far and wide out of the beaten track, appointed for all. But notwithstanding they are frequently so errant as to seem beyond

all control, they are yet within tether and come home at last—debtors after all to the eternal moral law.

When we look at our solar system, considering it from the outside, as at first we must needs do, we regard it as somewhat of the nature of a machine held together and kept in motion by an external agency. We call it by the name of gravitation, a something that compels the orbs in space to take a certain course, but whose nature we know not. It is only afterwards and gradually that we come to perceive that the idea of compulsion in the mechanical sense is erroneous, and that the power which controls those orbs is in themselves, although of themselves alone it could not continue to exist, but must be sustained by something external to them which is of the same nature and essence as themselves.

Hence in those bodies we see the two principles, or perhaps we should say the dual principle, at work which is everywhere visible in nature—the matter of which, to our material sense, they appear to be constituted, and the inner life or essence which makes them what they are and holds them together.

The same dual nature obtains in human beings. The physical nature may not (for some reason) be in accord with the inner principle (or soul), and so the order—the moral order, as we term it—which is the inherent law or principle of the soul in health and true strength, may not have full and complete sway, but in the end it exerts its sway nevertheless, and the most erratic is at last subdued. For no being can at once enjoy the satisfactions which arise from conformation to the moral law and the satisfactions which arise from breaking away from the law; but either he must suffer from conformity or from non-conformity. We know that conformity does not entail penalty, and so the moral law is justified.

Thus this law which makes for happiness and growth towards perfection in man is primal and eternal. It is as firmly, and as freely, based as the order controlling the solar and stellar systems—is as far-reaching too and as imperishable. It exists, and will continue to exist, without decalogues and catechisms, although it does not follow that these are not needful and salutary in their way and season. Moreover, it is the har-

monious working of that internal and inevitable moral law that creates and keeps alive in the soul the supernal joy which exhales in worship and adoration of the sovran source and fountain of all law and all intrinsic good.

To open the mind, therefore, to let it grow to the comprehension of these principles, and especially of that divine, all-pervading principle which lies at the root of all effective growth—that is the essential thing to be aimed at. Not to think we know, to be satisfied with half truths, expressed perhaps in vague formulas, but to yield the mind to the action of this vital spiritual principle which underlies and permeates all life and all phenomena, and which, in the end, to all who sow for that reaping, pays in full and abounding measure.

The spaces around us, as we know, are full of electrical and other waves and vibrations. For ages man was unaware of their existence; only gradually with the progress of knowledge were they revealed to him. Now, however, their existence is so certain, and to such an extent ascertained, that we are able to use them, to turn them to account for our

advantage. We cannot see these waves, however, and have no physical consciousness of them, although doubtless in various ways, unknown to ourselves, we are influenced by them.

So, with this subtler force, this divinely vital principle, which pervades every crevice and cranny of the universe. It is there, but our physical apprehension knows it not. We are acted upon by it; it influences our lives and actions in ways that we do not perceive; we even live by it in all but the more animal form of living, and yet our science never detected it, never even until quite recently suspected its existence.

It was only by continually coming upon, or finding indications of a force beyond those with which our instruments and methods can deal, that a suspicion of the truth was forced upon the mind. The long-known, but mysterious and inexplicable phenomenon of telepathy can only be accounted for by the existence of this all-pervading force. There are other psychological operations equally cryptic that only some such principle can explain. An inventor once said to me: "A man may try as much

as he likes to invent; but he can do little with all his trying. His brain has to grow to it in some mysterious way, and then the idea flows into it." That inventor had got an adumbration of a great idea. Poets, too, are aware that when they try the most they are the most likely to produce their worst verse. The best they do comes uncalled for, unsought.

It is only by the opening out of the mind, by the expansion of its consciousness, so as to receive larger influxes of the Divine principle or force, that we can hope to grow to the larger stature whereto we know and feel that man is heir and can attain if he will.

This is the idea to which science has now to rise in order to accomplish a further great stride in advance. Thus far science has been working with material instruments only—with instruments conditioned to the thing they investigate, while this power can only be investigated by the instrument conditioned to its needs, the brain, the home, or earthly dwelling-place of the soul.

That which is hidden within our mortal frame, that which we call man's soul, that is

the man himself in essence and truth. All the rest is vesture, covering, temporary and local organs, instruments that are essential to him only in so far as his earthly life is concerned, and which the real, the essential, man only uses for the purposes of his present existence. Thus with his lungs he breathes the air diffused around him, and so provides for one of the conditions of his physical life. But deeper than that air, more living and vital, of a subtler and more penetrative nature, is the spiritual atmosphere which is the breath of the soul and the seminal principle of all life.

That is the principle which connects and allies man with the source of all being—whatever that may be—and with the fountain of all intelligence and all truth. Without it there can be no consciousness above that of the animal. As already said, indeed, it is a question whether at the root it is not the principle of consciousness itself. But there are degrees of its reception and possession.

Some, in consequence of imperfections of condition, may never be able to experience the full inrush and control of that life-giving air, that larger breath. But to the

majority—if they will but free their minds and put themselves to the endeavour—the treasure is as a book to be opened, a language to be learned. It means an opening up of lost channels, a freshening of blunted nerves, the spirit of growth given back to stagnated cells, and thus possibly a faculty restored. But there can be no such restoration if the mind or soul be locked up in any accepted finality, spiritual or intellectual. That truth is written broad on every page of history—as it is in the brain itself.

The wind blows upon my body, the cold nips it; every physical sensation tells me of something connected with the material envelope whereby I am surrounded which it is important for my well-being I should know. Hourly, momentarily need has attuned my nerves to every the slightest external influence. So persistent, so insistent is this appeal, and has been throughout the ages, that it has become with the majority of mankind the dominant, almost the sole note. Only now and then, when the physical clamour, so to speak, has worn itself out, or is stilled by satiety, does that larger appeal, that wind from beyond the material sea,

get with them the slightest chance of a hearing.

At first man in his primeval state—just emerging from the brute—was purely natural—natural, that is, in the sense of a nature bounded by his earthly circumstance and environment. But gradually the extra-natural, or spiritual, began to tell upon him, and he became a dual soul. It was then, and not until then, that a spiritual nature became grafted upon the lower animal nature, warred with it, and, after an infinity of checks, subdued it—if not wholly, at least in part—to larger issues.

It is a marvellous history, this of man's ascent from the brute. It seems at first almost incredible that any extraneous influence acting upon merely animal faculty, animal sense, could have produced the results we behold. But if we look at the dog, and consider what man's companionship and influence has done for it, we shall see therein an analogy, almost exact, to that exerted by this superior spiritual principle upon man.

It is almost universally acknowledged that man's influence upon the dog has been such as greatly to soften its nature and increase its

intelligence. This may not be true as regards all dogs. But if we take the dog as a genus and compare it with the jackal or wolf (from which it is supposed to have had its descent), we see how greatly it has been modified and improved by its long and intimate association with man.

Indeed, the canine tribe has changed so much under domestication that it is hardly like the same animal it was in a wild state. As the friend and companion of man, *canis* has assimilated so many human qualities—such as devotion, fidelity, a sense of right and wrong, etc.,—as to have become distinctly raised in the scale of being. In short, through his long association with man, and the love he has thereby developed through the influence of his master, the dog has become, to some extent at least, a moral animal. He has shown a beginning of ethic faculty.

Darwin, in his "Descent of Man," notices this advance in the nature of the dog through his companionship with man. "Our domestic dogs," he says, "are descended from wolves and jackals, and though they may not have gained in cunning, and may have

lost in waryness and suspicion, yet they have progressed in certain moral qualities, such as in affection, trustworthiness, temper, and probably in general intelligence." * In another place he says: "Besides love and sympathy, animals exhibit other qualities which in us would be called moral; and I agree with Agassiz that dogs possess something very like a conscience." †

These facts appear to favour my case more than Darwin's. They do not specially advance his general argument of the evolution of man's moral nature through the influence of the struggle for existence. We can hardly imagine the dog rising to such a high condition of morals and intelligence through the force of his physical surroundings merely, that is, by natural selection alone. If we take man as part of his environment, yes. But man's influence is more than physical.

Possibly in the course of time the dog's environment might have done great things for him, although it could hardly have brought him so far in the ethic direction. At least it has not done so in the case of

* "Descent of Man," page 50.

† *Ibid.*, page 78.

other animals not subjected to the same influence. The wolf and the jackal remain wolf and jackal, just as the lion and the tiger remain lion and tiger. But when man selects an intelligent specimen of the jackal or wolf, or of both, and brings his superior powers to bear upon them, we see gradually evolved out of their brutishness the beginnings of conscience and other moral qualities. Thus man's higher intellectual and spiritual development has proved to be to the dog what the spiritual influence acting from the beyond has been to him.

VII.

IN these adumbrations I make certain assumptions, which, I think, at this time of day will not be seriously disputed, except by the prejudiced and unscientific. I assume (1) that the brain is the organ of the mind, and (2) that the brain consists of a congeries of organs or centres, each having a distinct function to perform in the cerebral council. Both these principles are now admitted by leading physiologists.

I further take for granted certain other broad generalisations; as, for instance, that the organs of the intellect are seated in the frontal convolutions; that the cerebral centres for the more animal functions have their location in the base of the brain; and that the upper or culminating convolutions have to do with the manifestation of the moral and spiritual powers. I do not for the purpose of my argument assume as correct all the phrenological divisions of the brain, some of which, it is possible, may be open to question—as regards definition and nomen-

clature at least. But I hold as well founded, and indeed beyond dispute, the above general principles, and most of the organs or cerebral centres of mental functions.

Nor can any one who has given careful and unprejudiced study to the subject deny that such is the case. But it so happens—and the reason is not far to seek—that phrenology has not during the last half century met with anything like fair and unbiassed treatment at the hands of scientific men. Any slight and insufficient argument has been, and is still, deemed good enough to cast against the science of Gall and Combe. Even the antiquated and often-met objection of the frontal sinus and the varying thickness of the skull—an objection which at best can only affect the practical application of phrenology as an art of reading character, and in no sense its principles—is still trotted out as the *pons asinorum* whereby the medical student is conducted to the supposed grave of phrenology.

“Even so eminent a physiologist and so careful a thinker as Professor Huxley,” says Dr. Alfred Russell Wallace,* “when I once

* In “The Wonderful Century.”

asked him why he did not accept phrenology as a science, replied at once, 'Because, owing to the varying thickness of the skull, the form of the outside does not correspond to that of the brain itself, and therefore the comparative development of different parts of the brain cannot be determined by the form of the skull.' To this I replied (says Dr. Wallace) that the thickness of the skull varied at most by a few *tenths* of an inch, whereas the variations in the dimensions of the form of the head as measured in different directions varied by whole *inches*, so that the size and proportions of the head as measured or estimated by phrenologists were very slightly affected by the different thicknesses of the skull, which, besides, had been carefully studied by phrenologists as dependent on temperament, age, etc., and could in many cases be estimated."

Professor Huxley admitted the correctness of this statement, "and had really no other objection to make," says Dr. Wallace, "except by saying that he always understood" that phrenology "had been rejected after full examination . . . and to ask, if it were true,

why it was not taught by any man of scientific reputation?"

Why indeed—except because scientific men can sometimes be as blind and bigoted as theologians.

It is greatly to be regretted that a man of Huxley's grasp of intellect and breadth of view did not break through the prejudices of his day and give an independent examination to the science of phrenology. There was every reason for him to do so in the publication of Dr. Ferrier's work on the "Functions of the Brain," which, if it did not mark an era in the history of cerebral physiology, at least called renewed attention to the claims of phrenology, and proved to many, who were not too prejudiced to allow facts their due weight, that what was supposed to invalidate the so-called "assumptions" of phrenology, went in reality a great way in support of its theories.

It was supposed, for instance, that Dr. Ferrier's new 'centres' cut the ground from beneath the phrenological organs. But when his facts and experiments came to be analysed by phrenologists, it was found that some of his centres were in truth only fresh

readings for old 'organs'; while other discoveries lent a general support, rather than the reverse, to the conclusions of phrenology.

For example, the gustatory centre of Ferrier, located in the lower temporal convolution, is the 'alimentiveness' of phrenology. Phrenologists established the location of the organ by observing that whenever there was evidence of fulness of brain beneath the zygomatic arch it was accompanied by a strong appetite. Ferrier proved the accuracy of phrenology by showing that the excitation of the brain at that centre—that is, the lower extremity of the middle temporo-sphenoidal lobe—caused movements of the tongue, cheek pouches, and jaws in the monkey, indicating a desire to eat.

Another cerebral centre in which the new phrenology agrees with and confirms the old is that for the articulation of speech, situated in the third left frontal convolution. Dr. Gall in his researches had discovered the location of 'language,' as he called it, years before Broca's observations became known; but it was not until 1861 that this faculty was fully recognised by scientific men.

Ferrier observes that inability to speak

is not due to paralysis of the muscles of articulation, for these are set in motion, and employed for the purposes of mastication and deglutition by the aphasic individual. It is only when the centres of articulation are destroyed on both sides—that is, in each hemisphere—that complete paralysis of the articulatory apparatus occurs, as well as aphasia. Dr. Ferrier challenges any one “to bring forward a case in which, with bilateral lesion of the centre, no aphasia occurred.”

Nor are these the only centres established by the new phrenology which in a measure confirm old organs recognised by phrenologists. Darwin, Sir Charles Bell, and others have observed the movement of the zygomatic muscle, and have recorded their observations touching the facial expressions of joy, corresponding to the phrenological faculty of hope, which, when excited, has a tendency to draw the mouth backward and upwards; the cheeks also become extended, while the muscles around the eye become contracted. Dr. Ferrier's excitation of the region of hope in dogs caused the tail to move, an action always associated with joy or hope.

In the angular gyrus we get the centre

for fright, or fear, which is affected by and through the platysma muscles, while the mouth retracts. This corresponds with the phrenological localisation of cautiousness, which, when large or active, gives timidity or fear. "Numerous experiments," says Mr. James Webb, "have shown that non-perception of danger is observable in those animals that have had this part of the brain destroyed."* The centre for the raising of the shoulders—with the extension of the arms and the flexion of the knee—correspond with the organ of veneration, or worship, a fact recognised by Ferrier in his lectures on Cerebral Localisation.

The centre for the concentration of attention, situated in the parieto-occipital fissure and angular gyrus, corresponds, according to Ferrier's observations, to the organ of continuity, called also concentrativeness. It may seem a curious fact to many critics that this part of the encephalon has considerable influence over the whole brain, and impressions made through the eyes are carried to

* "Phrenological Aspect of Modern Physiological Research."

the back part of the brain, where the sight centre is traced; and sight is a powerful medium, and a necessity, for the concentration of attention.

Dr. Ferrier stimulated also the lower part of the temporal lobe, which, he says, causes an animal thus stimulated to bound or spring forward and lash its tail. Jackals "bounded forward as if suddenly startled." Dr. Ferrier observed also that murderers are very broad in this region—that is, immediately over and backward of the ear. This is where Dr. Gall found the organs of "destructiveness" and "combateness" to be situated, and his discovery corresponds with Ferrier's observations.

Other similar correspondencies between more recent investigations into cerebral localisation and phrenological observation might be pointed out, as, for instance, among others, that the centre for musical expression is "in the Rolandic region," where phrenology has always put it. But the above instances will suffice to show that phrenology is very far from being the exploded pseudo-science which Professor Huxley took it to be. Indeed, so far as the fundamental principles of phrenology are concerned, Dr. Ferrier, in

his "Functions of the Brain," practically grants the whole position.

"There are," he says, "centres for special forms of sensation and ideation, and centres for special motor activities and acquisitions, in response to and in association with the activity of sensory centres; and these, in their respective cohesions, actions, and interactions, form the substrata of mental operations in all their aspects, and all their range. . . . There may be highly-developed sensory centres and defective sensory apparatus, and highly-developed motor centres and defective executive apparatus—conditions which must materially influence mental development. But other things being equal, if such a postulate can be reasonably made, there are grounds for believing that a high development of certain regions will be found associated with special faculties, of which the regions in question are the essential basis."

This and many other similar passages in the same work, and also in the same author's lectures on "Cerebral Localisation," are exceedingly interesting and conclusive from a phrenological point of view. To the same general effect is Mr. Herbert Spencer's

conclusion, expressed in his "Principles of Psychology," that "whoever calmly considers the subject, cannot long resist the conviction that different parts of the cerebrum must, in some way or other, subserve different kinds of mental action."

As regards the methods whereby these motor reactions are produced—that is, by removing the skull and placing the two electrodes of a battery upon the particular part of a brain whose function it is wished to determine—although valuable so far as they go, they cannot be taken as evidence of anything but the fact that they show the direction of the motor nerves. The electrodes may stimulate centres of sensation or ideation; but we can have no evidence of the fact beyond a muscular movement such as might result from a thought or a sensation.

The grey matter of the cortex of the brain is generally held to subserve the purposes of mentality, and the induction is doubtless right; but we have no proof that the white matter is not equally concerned in the processes of mind. Indeed, it is beyond doubt that the white matter plays a very important part in cerebation. If we may so put it, the

cineritious layers, which cover the surface of the cerebrum, and dip down between the convolutions, are concerned with the more active operations of mind, with carrying messages to and fro, not only in respect of the muscles and external senses, but between one centre or organ and another; as, for example, between the different regions, or zones, concerned in the manifold operations of speech—between the Rolandic region, where the lip-and-tongue memories of words are stored, and the temporal region, where the auditory memory of words has its seat, and thence upward to the angular gyrus in the occipital region, where the visual pictures of written or printed words are held to have their memory-house.

The white matter, on the other hand, has to do more with what we may call latent mind, with memory, with recollection, with all that mass of stored-up intelligence and sensation, the result of the experience and the learning of years, as well as probably of hereditary mentality, which is always more or less ready when required, and yet is not for ever playing as it were on the surface of the mind.

The amount of proof that such is the case which is to be found dispersed through works on physiology is well nigh overwhelming.* One instance, however, will serve our purpose here. It is that known as the American Crowbar Case, and is based on data supplied by Drs. Bigelow and Harlow. A young man named Phineas P. Gage, while engaged tamping a blasting charge in a rock with a pointed iron bar, 3 ft. 7 in. in length and $1\frac{1}{2}$ in. in diameter, had the bar driven into his jaw and clean through his head, coming out near the sagittal suture in the frontal region. The implement was picked up at some distance covered with "blood and brains."

Gage's life was for a long time despaired of, but he ultimately recovered, and lived for twelve and a half years after his accident. His skull is preserved in the Medical Museum of Harvard University, so that there is no question as to the route taken by the crowbar. In short, it passed through that region

* See on this point Dr. Bernard Hollander's "Mental Functions of the Brain," a work published since this essay was written.

of the brain which, according to phrenology, has to do with the intellectual and moral faculties. A large portion of the brain-matter of those parts was carried away, and we would naturally expect, after such serious injury, to find the integrity of the functions manifested by those parts greatly marred, if not entirely destroyed. Such indeed was the fact.

Professor Ferrier, who gives the case in his "Cerebral Diseases," writes, quoting from Dr. Harlow: "His contractors, who regarded him as the most efficient and capable foreman in their employ previous to his injury, considered the change in his mind so marked that they could not give him his place again. The equilibrium or balance, so to speak, between his intellectual faculties and animal propensities seems to have been destroyed. He is fitful, irreverent, indulging at times in the grossest profanity (which was not previously his custom), manifesting but little deference to his fellows, impatient of restraint or advice when it conflicts with his desires; at times pertinaciously obstinate, yet capricious, vacillating, devising many plans of future operation which are no sooner arranged than

they are abandoned in turn for others appearing more feasible. A child in his intellectual capacity and manifestations, he has the animal passions of a strong man.

"Previously to his injury, though untrained in the schools, he possessed a well-balanced mind, and was looked upon by those who knew him as a shrewd, smart business man, very energetic and persistent in executing all his plans of operation. In this regard, his mind was radically changed, so decidedly that his friends and acquaintances said 'he was no longer Gage.'"

Could anything more strongly support the view, not only that the white matter of the brain serves, as it were, as a reservoir of mentality, but that the broad generalisations of phrenology are true? The parts of the brain injured or destroyed in Gage by the crowbar were those subserving the functions of intellect and the faculties of benevolence and veneration. Hence the reason why his religious and reasoning powers were so greatly affected that he became "a child in his intellectual capacity and manifestations," addicted to "the grossest profanity," and yet possessing "the animal passions of a strong man."

VIII.

IN the phrenological division of the encephalon we find certain portions of the brain substance allocated, as already said, to purely animal functions, others to the intellectual powers, while still others are devoted to the manifestation of those higher faculties which we name moral. These latter are more particularly the faculties which differentiate man from the lower animals; for many of the intellectual powers are met with in the brute creation, although for the most part on a lower range of manifestation. In the case of dogs, as we have seen, we perceive also indications of the rudiments of moral sense; and similar hints of the presence of what we call moral feelings are occasionally indicated in some of the anthropoid apes. In other words, these simians sometimes show the beginnings of altruistic emotion, more particularly, however, in the form of tenderness for their young. Darwin has given some striking instances of the kind in his "Descent of Man;" but these may

be explained as arising out of the social instincts.

Only in the dog do we find anything approaching the range of moral feelings as manifested in man, and these, as already explained, and as admitted by Darwin, are traceable to the influence of human companionship. For instance, kindness, sympathy, a sense of right and wrong, gratitude, and perhaps some glimmerings of reverence are evidenced in the dog. But when all is said, these indications are initial and rudimentary in comparison with the same faculties in man, in whom, in the best specimens, they are predominant and controlling.

Some of these powers, which are sometimes designated moral and sometimes religious, have relation to man's duties to his kind. Others have for function a relation different to and higher than man's duty to his neighbour. In other words, they are more purely spiritual in their relation. They appear indeed to exist specially and specifically to be the recipients of that higher ethereal and spiritual effluence which is the inspiring force of man's development out of the purely animal into the spiritual. Although

material in substance, they yet constitute, as it were, the founts and receptacles of the spiritual.

These moral and religious organs are seven in number, and are named respectively—veneration, benevolence (or sympathy), spirituality (or wonder), hope, justice, truthfulness, and firmness.* They are not perhaps all very happily named; but it is not easy to suggest alterations that would better the definition. The fact is we do not know the exact psychological value of these centres of higher feeling and emotion, and the names given to them are more or less guesses at function, albeit there is little doubt they are approximately correct.

It may be that what we call veneration focalises a group of nearly allied faculties, the functions of which are to raise the mind into a region of lofty and divine endeavour,

* I differ somewhat in these divisions from phrenologists generally. I regard firmness, or more properly perhaps "will," as a moral faculty, because it is so essential to steadiness of purpose. The organ of conscientiousness I divide into two parts, which I call "justice" and "truthfulness" respectively. The latter is seen very beautifully developed in the head of the late Queen.

and that the surrounding organs are but offshoots of this central faculty, having slightly differentiated powers. They are all primarily avenues of spiritual influx, and though in their lower grades of development they may seem to look only to a terrestrial environment, no one can see them in their higher psychological manifestations without being convinced that they reach out beyond the earthly sphere—that they are, indeed, conditioned for the reception and radiation of influences beyond those of the merely animal nature. For instance, I believe it will be found that no one is ever subject to telepathic or similar influences who is not well developed in the organs of sympathy and wonder.

In short, it is through the coronal organs that the spiritual principles of the universe find an entrance into man and make for themselves a home and, if we may so put it, a spiritual incubating-place in his being.

The animal of itself can only produce animal. It needs the aid of this ethereal force to lift the animal out of the animal rut into the way and approach spiritual. And certain it is that the man who thoroughly

and assiduously desires and prepares himself for the reception finds himself reinforced, according to his aim and need, by accessions of this supernal strength and wisdom. And this, no matter what the form of religious belief he accepts, or thinks that he accepts. It is even a reservoir of strength to many who find themselves in opposition to all received forms of religion. For, in sooth, that only is truly religious to a man in which he finds himself thoroughly rooted, and wherein he experiences an impulse towards the best he knows and feels.

It is with man much as it is with the free-swimming embryos of sponges, polyps, jelly-fishes, medusoids, sea-anemones, &c., the food of the great majority of which consists of small organisms. By moving their cilia they are able to stir the waters and so gather to themselves the food they need. Only in man's case we are apt to look at his analogues of the cilia—that is, his physical limbs—as the main part of him, whereas they are in truth but temporary filaments, so to speak, adapting him to his terrestrial surroundings, and serving, as their cilia the polyps and the medusoids, to bring him in touch with his

food and the other requirements of his physical being.

These have by some been likened to the roots of a tree; but in reality man's true roots—those which anchor him to the deepest principles of life and of being—are the cells of his brain. By and through them he is rooted in the eternity of things, by them he is infiltrated with the seminal principles of the universe. By virtue of, and in due proportion to, the influx of that principle or force he is able to comprehend something of what he is, and the grandeur and glory of his destiny. Nor can he cultivate and encourage larger and larger influxes of this essential force without adding to his growth in the form of augmented brain-cells, and through them enjoying increased receptivity in the spiritual sense.

This super-attenuated force, this rarefied and spiritualised electricity (so to speak), like the light from the central orb of our terrestrial system, is ever flowing to us, beating upon us, from the central fount of all systems, possibly from the great soul-centre of the universe itself; and wherever there is a spiritual eye, a crack or cranny of spiritual

sight, of spiritual feeling, any the smallest receptacle or cell for the garnering of this divine effluence, there it enters in and makes a home for itself, and becomes a centre and focus of new life. For there is no absolute finality in human development so long as we keep the spiritual avenues of the mind open and untrammelled by the dry-rot of words. The brain will continue to grow in the spiritual centres — as all true students of phrenology know—long after the merely physical powers have begun to fall away and decline from their pristine powers.

Herein, if we will but investigate, we shall perceive to lie the fundamental and germinal principle lying beneath and at the back of all human development and all true human improvement. The *modus operandi* whereby this spiritual force first effected its lodgment in the to-be-man is a mystery to us. But may we not suppose that certain of the higher faculties existing in animals, when excited *in excelsis*—like that of tune for instance—may have been wrought into a condition of super-receptivity which enabled them to be acted upon to a certain extent by the spiritual force pervading the universe? In this

manner it may have been that the first stimulus for the growth of the specifically spiritual cells and centres arose. For one of the things that strike us in regard to the brain is how one organ merges or leads into another. Thus the organ of sublimity, with its suggestions of awe on the one hand and its delight in the grandly beautiful on the other, carries with it, as it were, something of its two buttressing neighbours, cautiousness and ideality.

Music has always exerted so powerful an influence over the mind that it is very likely that the tune or sound-sense was one of the first of the more æsthetic faculties to be developed in the becoming-man. It is still one of the most potent influences for refining and elevating the human soul, being capable of awakening in it those latent harmonies which attune it to the rhythm of the spheres, and this though it is so deeply rooted in the animal nature that it may be made a whip and spur to every passion.

We can imagine a race of beings, still low in the scale as compared with man, in whom, from some cause, this faculty of tune had become specially developed, possibly through

proximity to some bubbling brook or tinkling waterfall, or it may be through the constant hearing of some sonorous wood, its varying tones gradually coming to have a meaning to the animal intelligence. Thus would arise the first beginnings of the musical sense. And if we imagine, through the imitative faculty—so striking a peculiarity of the ape, for instance—an attempt to reproduce those sounds by the voice, in order to express the meaning they conveyed, we get the first primeval elements of music.

We know that nothing can be perceived except through that which is of the nature of the thing perceived. In other words, a musical sound cannot be perceived except by means of a nerve or cell which is of the nature of music, or conditioned to it. Moreover, that which the mind perceives—that in its normal condition it enjoys. Or, to put it in another way, the normal action of every cell gives pleasure.

Hence, a being in whom the tuneful sense was developed would take delight in those who could minister to that sense. Thus would arise added attractions which would act as allurements to marriage, and so to the

propagation of other beings with still more of the same faculty.

It is one of the surest notes of true psychology that the faculties and powers which give the greatest and most perennial delight act together, so that where one is excited the other is apt to be excited also. This is particularly the case with the emotion of love and the faculty of music. We see it in the bird as well as in human beings, and I think we may safely deduce therefrom the inference that it was through the influence of music that man received his first lifts up the spiral of being.

We might in the same way trace an exaltation of the faculty of love in the form of devotion to offspring, which, from being the least selfish, is the most liable to that sort of exaltation, or excitation *in excelsis*, which conditions it to the reception of the spiritual vitalisation, as I have called it. For it is of the very essence of the spiritual to be stripped of all selfishness.

By this means we may see how, acting upon the hyper-sensitised margin of mere animal consciousness, but emptied almost to the last shred of selfishness, this spiritual

force wrought in favour of a higher condition—wrought, in brief, in favour of the superadded something which constitutes at once the crowning glory and the eternal hope of man.

Men, through the inconsistencies of theology and the materialistic tendencies of science, often reason themselves into an attitude of negation in regard to religion. They deny the existence of a creative power, of spiritual influences. They avow themselves thoroughly atheist. But when the pressure of this argued disbelief and negation is allowed to slacken, the soul swings back to its old and natural trust—to its instinctive and primordial faith—as though it were ploughing steadily along some spiritual tideway; and though cross-currents may come, and swerving storm-blasts arise, to trouble and vex its course, yet, freed from these, it again feels the tug of the old tide and the throb of the rightful current under its bows.

The mind is, in this respect, like a buoy. It may be forcibly held under water; but immediately the pressure is taken away, the buoy rises again to its normal position.

And in that position it resembles man. As the lower part of it is submerged in the flood, so man in his animal nature. That part of him lies in darkness, subject to a lower consciousness, partially instinctive; but his upper part is bathed in an ever-brightening light, in proportion as he makes room for a constantly widening and deepening consciousness.

It is the acme of non-reason to set down all the spiritual leanings of the mind, and the ideas that spring therefrom, as mere superstition. The yearnings of the spirit towards the infinite and the eternal are just as real, just as true indices of direction, of practical need, as the emotions of earthly love or the cravings of physical appetite. The nature of an arrow is to fly at a mark. Many arrows miss the mark; but if none ever hit the mark there would be no such things as arrows. The arrow that goes straight, and in no way discredits the aim that sent it—that one justifies the existence of the arrow, alike of that which goes astray as that which hits.

So with the cells of man's brain. None were ever designed—even by a blindly

groping cause—to an evil or feckless end. Some may appear at times to miss their mark and go groping in futile directions, but the aim is for a sure and certain point. In other words, whether this frame of ours, and its indwelling spirit, be the outcome of a creative will or the gradual evolution of an ever-active cause—whichever it be, the resulting organisation is one of perfect adaptation to its work. It shows no superfluities of faculty or redundancies of function.

Man—to put the matter in another form—is anchored to his environment by a hundred chains, by a hundred living chains. Each chain represents a need, a dependence, but it represents also a power and a joy. He cannot ignore those various links to his surroundings without injury to the fulness of his being. They are not all equally imperative in their demands at one and the same time. Some pull stronger in youth, others in age. The more animal parts of our nature are apt to clamour unduly for satisfaction when life is in its spring; and it is not until these early fires have spent some of their force that

the spiritual, which is ever appealing for admission—just like the sunlight at your darkened window—gets its due hearing. And too often then, so all-engrossing is our earthly life with its material aims, the hearing is but a partial and perfunctory one. What with science on the one hand denying the spiritual, focussing itself on an evolution that sees nothing ahead but some dark and abysmal catastrophe, and on the other a blind formalism of religion in place of a living faith, the vitally spiritual fountain of man's nature has become with the majority as a stream that has lost its way in the desert sands, or has become choked with aquatic growths, and so yields no living waters for refreshment and perennial delight.

IX

IN the foregoing chapter I have referred especially to the so-called moral organs. But there is another group of physiological centres which are very important as receptacles of psychological force of a superior kind. These are the æsthetic faculties known as ideality and sublimity. We ought perhaps to add thereto the organ of imitation, as it, like the two foregoing, leans towards feeling on the one hand and towards intellect on the other.

Imitation is an exceedingly influential faculty, its psychological expression being that of making the subject think and act like others. We may see it in a sense of admiration, because it is only that which we admire that we care to imitate.

Situated between benevolence and ideality, we see in this faculty an adumbration of both. Ideality is the psychological perception of the beautiful, while benevolence is the most purely altruistic of all the mental

powers. Benevolence moves us to assimilate to others out of pure sympathy and kindness of feeling; imitation causes us to fall into their ways through the pleasure of doing so. Ideality, on the other hand, sets up a mark, as it were, and forbids the imitation of that which is not beautiful, or, at all events, which is not seemly.

It is curious to note that, on the backward slope of the head, there are two organs the exact converse of benevolence and imitation. Opposite the altruistic organ of benevolence we have one of purely egoistic power in self-esteem; while on either side of it come the convolutions whose psychological action is to manifest the desire for approval, in excess, vanity.

Self-esteem loves self, benevolence loves others. Approbativeness says, "Admire me," imitation on the other hand, says, "I admire," and it imitates from admiration. There is, therefore, in most admiration an implied flattery. When imitation is allied with large wit it may imitate that which supposes itself admirable, but is not. Then the imitation becomes mimicry, or (with a lack of kindly feeling) mockery. Its unconscious

aim may be said to subserve the end of evolving the right type.

Here I would interject a remark. We often hear it said by opponents of phrenology that it is not scientific in its methods. But if the phrenologist makes thousands of observations on—for example—this organ of imitation, in combination with benevolence and wit (or mirthfulness), and he finds in every instance that, where the organ is large, there is manifest a strong disposition to imitate and (with wit large) to mimic, descending, in case of small benevolence, to cruel mockery, in what respect is his method, or his result, less scientific than that of the physiologist, who bares the brain of a dog or a monkey, and by means of an electrode produces physical reactions of a certain kind? Both observe with care, make note of the result obtained, and draw certain inferences.

What is it that makes the one method scientific and the other not scientific? If one of these methods is less scientific than the other it is surely that which has characterised physiological research during the past half century. For how often, and

how vehemently has not the physiologist denied Dr. Gall's discoveries, and those of such men as Dr. Hoppe and George Combe ; and yet, gradually, one after another of those discoveries has been fully and entirely justified.

Child study has become a favourite occupation with many during the last few years. Here is a way in which those given thereto may vary the commoner methods of observation. Let them learn the location of the leading organs of the brain, study their relative sizes in a group of children, and then watch the gradual unfolding of their characters. I can promise those who take up this form of study, and pursue it intelligently, making record from time to time by photograph and measurements—I can promise them most interesting results.

But to return to the organs of ideality and sublimity. The psychological action of the former is primarily to store up memories of things that are beautiful, because they are in the first place pleasing, and because they are, in the second place, useful and beneficent. It is a centre of ideation of the highest order, and supplies some of

the elements of the creative imagination. Its psychological expression is an emotion of delight in the beautiful for its own sake, and as such is an essential to the making of poetry, the first requisite thereto being, of course, language.

Sublimity is probably more purely emotional in its psychological expression than ideality; but it, too, appears to be not without its conceptual side, inasmuch as, while ideality delights in the contemplation of beauty, sublimity is more concerned with the magnitude and profundity of things. It is largely concerned in the conception of time and space as thinkable entities, and it would seem as though it was the psychological centre for the realisation of the time idea and the space idea.

A leading element in the mental equipment of the astronomer and the mathematician, as well as in that of the philosophical geologist, sublimity appears to have had a great deal to do with the development of astronomy, geology, and mathematics. There is some reason to believe that it is much more strongly developed in the higher type of modern men than it was in those of

ancient times, though, of course, we cannot be certain. In the portraits of worthies of the Greek and Roman period that have come down to us in the form of busts, or on coins, we see neither ideality nor sublimity in a high state of development. This perhaps does not say very much; for both painters and sculptors seem ever to have shown a great lack of perception as regards the general contour of the head. If they get the forehead fairly right they think of nothing else; and even in that respect it is lamentable to see into what exaggerations they frequently fall.

In short, it is quite within the bounds of probability that both these organs, in their present breadth of psychological manifestation, are a later evolution. Dr. Alfred Russel Wallace, in his criticisms on Darwin's "Descent of Man," refers at some length to the quite modern development of mathematics, and it is, of course, a matter of common knowledge how comparatively recent are some of the greatest and most astonishing discoveries of astronomy, the latter having waited, as it were, for the perfection of mathematics.

Dr. Wallace proves, I think conclusively, that the "successive stages of improvement" of the mathematical faculty had "nothing to do with the struggles of tribe with tribe, or nation with nation, or with the ultimate survival of one race and the extinction of another." "It is evident," he goes on to say, "that in the struggles of savage men with the elements and with wild beasts, or of tribe with tribe, this faculty can have had no influence. It had nothing to do with the early migrations of men, or with the conquest and extermination of weaker or more powerful peoples."

Dr. Wallace proceeds to show that the Celts, the Teutons, and the Slavs, "who have proved themselves the fittest to survive in the great struggle of races," did not owe their success in the past "either to the possession of any exceptional mathematical faculty or to its exercise." Although they have excelled as conquerors, colonists, explorers, their success, either as individuals or as nations, cannot be traced to this faculty, since they were almost the last to devote themselves to its exercise. Hence he concludes that "the present gigantic development

of the mathematical faculty is wholly inexplicable by the theory of natural selection, and must be due to some altogether distinct cause."

This conclusion agrees with the theory here advanced, that sublimity, in its present magnitude of development, is a comparatively recent acquisition, and is a psychological growth fitting man to the larger cosmical environment whereof he now has cognisance.

The ancients possessed the faculty of mathematics in a very inferior degree as compared with its development at the present day. Indeed, it would appear to have been an acquisition which accrued to man almost wholly out of the imagination created by or evolved from the contemplation of astronomy and the interstellar spaces, and perhaps the deeper destiny of man which they seem to give hope of. As already said, it appears to owe nothing to the physical struggle for existence for its development in man, but has rather come to him, as we may say, on the wings of that larger consciousness which has descended to him from the beyond through his gradual growth and

adaptation to a larger environment than that circumscribed by the terrestrial sphere.

To the successful exercise of these intellectual faculties, as to the production of the poetic muse, that as yet but imperfectly explained mental phenomenon which we designate genius is required in a high degree; and Dr. Weissman is of opinion that "talents" could not be developed under the law of natural selection. This is in agreement with the popular belief, which is as old as the hills, that genius is the result of a peculiar conformation of temperament which qualifies the possessor for the reception of a "divine afflatus," in other words, for inspiration, or an "inbreathing" of higher influences.

It is perhaps in the transcendent powers of genius that we have one of the most striking manifestations of the spiritual force. In that "airy and fiery" quality, as the late Robert Louis Stevenson calls it, which overleaps mere earthly faculty, we have a proof of its super-terrestrial origin. It has, in the ordinary sense, nothing whatever to do with the survival of the fittest. It more frequently unfits men to survive—by filling

them with a supreme feeling of the nothingness of life as we have and enjoy it here. It is based pre-eminently on a vitality, so to speak, that carries the possessor beyond the earthly bound.

And, strange to say, it is often manifested in the highest degree when the body is in an inferior condition, as regards strength—often when the owner has learned to subject his body to his will, and, as it were, to feed the mind with hunger. For it is undoubted that the mind does its best when the body is kept on a plain and even abstemious diet rather than on a full one, while the amply nourished body is the one that fits its possessor to do battle with his merely physical difficulties.

Even in this circumstance we may see how the spiritual force is the true life-giver. There is indeed more making and healing in it than in all the medicaments. This is so in part because men are taught by it to live above the merely physical gratifications of existence; but still more because their natures are open to this spiritual effluence or force, which I have described as the seminal principle of all life. But on this point I shall have something more to say in the concluding chapter.

X.

IN the foregoing chapters I have attempted to show that some of the most important powers of the mind, and especially those having to do with the manifestation of what we understand as morals and religion, owe their development more to the operation of influences acting from beyond the earthly sphere than to causes more directly at work in man's physical environment. I have shown that those influences act through brain substance conditioned to their entry, and that without such conditioned brain centres, or organs, the highest and noblest manifestations of human soul or spirit are impossible. It is only in proportion as we get these higher developments of brain that we see humanity reach its acme of moral and spiritual development. In short, in proportion as man develops these higher powers he comes under another and a higher law. He does this in part unconsciously, and from beneficent, if somewhat fortuitous, hereditary influences, which have provided him with

brain centres conditioned to what I may call the full gamut of the moral law.

If it were not that in these brain centres lies the condition precedent to the reception of a higher principle of being, how can we account for the circumstance, that so many men in all ages of the world have shown those higher qualities which ever appear to possess something of the divine? It is not that they have been influenced by dogmatic theology or Christian ethics; for we find the same thing in pagan times. Nor were these great qualities confined to persons of high lineage or noble birth. Both history and the drama point to the fact that the poor and despised, yea, even slaves, have often shown themselves to be possessed of those virtues that seem so far removed from their condition and station. But notwithstanding the fact that pre-natal conditions have so much to do with a man's spiritual position and growth, knowledge, likewise, is all important, as I have shown it to be in regard to the study of astronomy.

While man is in the purely animal sphere he is under the animal law. During his savage state he is so innocently; but there

are—it is melancholy to say—many who still remain in that condition, though long past the savage phase of being. They suffer from partial development, either hereditarily or through personal neglect.

But when the human has reached the higher cycle of his ascending consciousness, he comes from under the purely animal law, and rises to the spiritual. This he does, as already said, strictly in proportion as he grows and develops so as to take into his being more and more of this influence or force. Then his nature becomes more and more attuned to the law of spiritual harmony, which law is then within himself, not external to him, not alien, as it is until he has comprehended it, and it him. When he has reached the point of comprehension he is at one with that law.

In other words, as soon as he has grasped the thought, or principle, which it embodies, it becomes a part of himself; and as a part now of himself—of his inmost being, born into him by his comprehension, or by his growth to comprehend and embrace it—this newest efflorescence of the spiritual part of him, has his highest love. It is the best

of him—he feels it is, and so is swayed by it more than by any other part of his nature.

But until he has grasped something of the scope and meaning of the universe, and comprehended at least in part his position in it, he is simply under the physical law, exactly as the brutes, his lowlier fellow-mortals, are. But when that spiritual light which never was on sea or land obtains entrance into his being, then so surely as that light enters, and in proportion to its strength and effulgence, he comes under the greater, the sublime law. But until his inner eye has seen and his heart felt the brightness of that supernal light, he has not been born into his new inheritance. His heart cannot be filled with that light before his soul's eye has known it. For, as Goethe says, in the words of an old metaphysical writer: "If the eye were not sunny, how could we perceive the light? If God's strength lives not in us, how can we delight in divine things?"

In other words, until we are in a condition rightly to perceive the spiritual law, by influxes of the divine light, we cannot truly

be said to have come under that law. Nor can we be expected to yield the fruits of that law. But when we have once known it, then sad indeed is the declension if we fall away from it, and fail to pay willing obedience to its ethic.

Hence, in proportion as man comprehends this new, this higher law, and subjects himself willingly to it, he becomes free. For it is not a law which cribs and enslaves, as human laws too often do, but one which emancipates, which lifts to the true, the great freedom.

It may be called—and is, in one aspect at least—the perception of a higher principle of reason which enters man's being, and exercising its reasonable control, as we saw in the case of astronomy, gradually enlarges and transforms him. Under its influence he rises higher and higher in the region of thought, penetrates deeper and deeper into the heart of things, and, as is the nature of pure thought, he becomes so subdued by its ineffable beauty that his soul is taken captive, and becomes more and more part and parcel of the essence of things, or of the divine corporation, so to speak.

Some who see in part, and who are indeed in part comprehended of the truth, yet never come wholly under its influence. The lower passions and physical appetites are their masters; and inasmuch as one wars against another, they are to that extent impulses to disorder. That is one reason why human society shows such inharmonious conditions—why even our highest civilisation is so inchoate, a thing so imperfect. Every one in it—all its multitudinous members—are striving for their own end, and their ends are too often not only at variance with those of others and hostile to them, but they are hostile to their own best interests, because they are at variance with the spiritual law which alone can make them strong, which alone can make them whole, and hence free and happy.

Only when society has come completely under the influence of this higher principle, under the direction and mastery of this divine power, whose nature and essence is order, equipoise, balance, can it flourish and blossom into a true and beneficent civilisation. At present our so-called civilisa-

tion kills all beauty in man, all his highest nobilities too, or at least it kills all his most beautiful, all his noblest traits.

Not always, however, is the emancipation produced by this principle perfect. Indeed, it is rarely so. When it enters man's soul in a normal manner and grows without check or hindrance, we see this higher reason assert itself in a beauteous harmony. But we sometimes meet with men in whom this higher nature—in whom this receptacle for the divine spirit—is present in strength are yet long in coming to their right heritage of reason. They have fallen under the dominion of passion, lust, the love of power, envy, selfishness in its multifarious shapes. Suddenly, however, the divine effluence has burst the bounds of the grosser nature, resolved, as it were, to assert itself and claim its own. It is called conversion by some, illumination by others; it has many names, and its ends are gained in various ways. Nor is it always equally triumphant. Sometimes it makes men mad, drives them to be persecutors, to bigotry, to religious ungodliness, to be deceivers even, often deceiving themselves.

To some the divine effluence comes in the form of poetry, to others in prophecy ; to some in the heroic fulfilment of duty, to others in humility, in the bearing of others' burdens ; to few, however, does it come in all its fulness, in all its strength, in all the beauty of its divine and unparalleled harmony. But while few reach the first ineffable rank, there are many strivers after the great light—bright lamp-carriers we may call them—who are, as it were, all-interpenetrated with the divine radiance, though they know it not.

The great gift, the freeing, does not always come while we lie in wait for it. We may trouble and moan as though on the shores of a great sea, apparently all darkness and storm, from which there comes nothing but dull negation and chill. Yet if any man seek earnestly, and try by the best means at his command, especially by a large obliteration of self in loving renunciation, for the lighting and uplifting of this great and divine influence, he will not seek in vain—if, that is, his parents have done anyway well by him. It may not—it will not—come at first in large influxes of spiritual light and liberty. It may, indeed, come but in tiny swathes of

quiet and content ; but gradually the measure of its accessions will be broadened and deepened until the whole being is, as it were, flooded with newer and richer sources of consciousness and of life. But this cannot happen until a man has got beyond mere self-seeking, even beyond that most banal form of all self-seeking, the selfish craving to save his skin. The true soul's aim should be to save others from sin, from stumbling, from the conditions which beget or foster a return to the mere animal, which lead to the closing up of the spiritual avenues. The truly spiritual man will especially refrain from putting the cause of stumbling in the way of others, even in ways the most indirect.

Herein lies the true science for man's cultivation. It is, indeed, the central science to which all others lead—in which all others find unity.

The sciences as commonly understood deal with physical means to physical ends. But they never reach the original springs or essence of things. No matter to what goal they attain, there is still a vista beyond. The mystery of the universe remains still unfathomed—the enigma of man's nature and

being rests as unsolvable as ever. His knowledge grows; but the sorrow, the darkness, the misery, and, too often, the degradation that hang about his existence, remain. With all man's science, how little can he lighten the burden that weighs humanity down — unless from these low lands, these physical vales, he sees through the inner realms of the spirit to the great radiance beyond, to that selfless idealism which makes it possible to forget self in the desire to aid the growth of others, the whole?

And why? Because by his life, by the madness of his egoism, by the huge insanity of his greed, his selfishness, he bars the way to light. He will not allow himself to grow to it. By some half truth, too, he will darkly bar the way. The earthly-seeking man will leap with avidity to a new thought, which seems to fate him to the physical. So he leapt at the evolutionary theory—leapt to take more out of it than it contained. And so, though an undoubted advance towards the elucidation and explication of things human, it resulted in a decline in some respects towards further darkness. For, after all, men, whether they know it or no,

are influenced by the prevailing philosophies; and, in this respect, many, looking at the animal, lost some touch, some effluence of the spiritual source whence the better part of them come.

And do we not see the same thing happen whenever and wherever man has accepted any faith or philosophy, however broad, however beautiful, as a final and complete doctrine of life? There is always something lacking, even in the best—some weakness, some angle at which it will not hold water. That, however, the disciple will not see, will not acknowledge, but assumes that he has the whole truth—that he, the worm, with his few facets, fully reflects the multitudinous nature of the Godhead!

Is there not in this respect some danger of the scientific spirit obsessing us as the spirit of superstition did in the dark past, as the incubus of scholasticism did in the Middle Ages? The universe is incredibly larger than all our systems, than all our methods. The scientific method is good in its way, and for the purposes it serves. It has helped to make conquests of incalculable importance in the region of the physical. But

when a man stands on the tiny pinnacle of his pseudo-fact, and with little puffs of breath says, "Thus we see there can be no truth in this or in that," the world-spirit laughs in quiet; for it knows that in and through the cracks and crannies of his 'systems' and his 'laws,' underlying, permeating his 'facts,' there lies, lives, and works the other half of the whole, which he does not see, which he in truth hardly dreams of.

The mind in this regard is like the pilot of a ship. His chief outlook, of course, is along the way he is going. But he must not lose sight of anything round and about his vessel, or even along its backward wake. His eye must be restlessly scanning the horizon from every point of the compass. If he does not do this, he is but a poor and even a dangerous pilot.

The scientific man, however, is too often just such a dangerous pilot. He looks so constantly, and almost exclusively, on the one side, and in the one direction, that he is liable to become blind, like Darwin, in all but the purely physical direction. He is, indeed, blind to all except physical phenomena. His eye is for facts of that kind

only, and when others see with a different eye—see qualifying facts—he is surprised, and puts them down to delusion.

This kind of thing is constantly at work, limiting human endeavour. The mind, as we know, can only act through the brain, and it is there provided with so many facets, each fitted for the reception of its own particular ray of light—with so many windows, each focussed, as it were, to some particular aspect or condition of things, that one has to be constantly on the alert, constantly changing or varying the outlook, in order to miss nothing, in order, indeed, to make sure of all our human surroundings. It is very easy to get a window darkened, to get it in truth overgrown, so that all reception of light thereby is at an end, so that all vision or perception therefrom is stopped. What wonder, then, that with such—with those who are thus partially darkened—all phenomena of the nature of telepathy or clairvoyance is superstition and delusion, all lifting of the soul, all yearning towards the spiritual, is a blind and futile groping after nothingness.

XI.

IT would seem to require some such principle as the one here set forth, or rather gropingly adumbrated, to account for man's conscious consciousness—that is, for his consciousness of his own self. Nothing comes from a unit. All change, and consequently all advance, is the outcome of a contest of two units, of the marriage of two forces. Marriage is thus the great primal law of the universe. As the young man desires marriage; as the maiden desires the same; and as their being is not perfected until they have united, and thus satisfied their longing and fulfilled their destiny: so the human of fuller growth longs for something he knows not what — longs for it with a deeper passion than love. Nor is this desire satisfied until a certain influx has filled and sustains his inner being.

It is a desire, a yearning which nothing earthly will satisfy, neither power, nor wealth, nor beauty, nor the satisfaction of every earthly craving — nothing, in short, save an

influx of this something which is not of the earth, which, for the lack of a better term, we call divine.

So far as we know, no other creature except man is troubled with this longing. It never arises—to our knowledge—but as an outgrowth of man's consciousness of the fact that he is a conscious and sentient being, an entity, and that he possesses instincts that relate to things not appertaining to his physical environment. No other animal save man has arrived at the stage of self-conscious existence. No other animal can see and regard itself as an object of thought as an object of experiment and examination. He alone, of all created things—so far as we know—has arrived at a consciousness of his imperfections. This consciousness he could not have reached except through a source such as that here referred to, which gives him a superterrestrial consciousness. Seeing and knowing thus how far he falls short of the perfecter harmony existing in the universe, he has learned to brood with pain on his own shortcomings, and to long for growth towards and into that greater harmony.

What animal creature but he has asked itself the question : " How came I to be what I am ? Wherefore am I ? Whence do I come ? And what becomes of me when, like others who were here before me, I pass from the sight and knowledge of my kind ? Does this consciousness which I possess, of whose origin I am ignorant—does it pass away into nothingness ? " Other entities and forces are merely transformed—a pennyweight of electricity here, a pennyweight of heat there, always pennyweight for pennyweight. Is it not the same with consciousness ? Or may we not presume that such is the case, seeing how universal the law is ?

This consciousness is a great mystery. No man is able to fathom its nature or essence, or say whence it came. It is a somewhat that has nothing in common with matter, apparently nothing in common with force, as we know it.

All the various creatures of which we are cognisant are simply beings with natures composed of appetites and passions, self-protective powers, and a lower or narrower range of intellectual gifts, which for distinction we call instincts, and with a lower range of

consciousness, which does not reach to self-consciousness. These various possessions fit them very admirably for their circumscribed environment and their lowly needs. But there is no evidence to show that they look beyond the hour and the day, beyond the satisfaction of the present need. The bird builds its nest for the young that have not yet come; but it is very doubtful if it so much as foresees the advent of young. If it did, that would be a first step towards a consciousness of self. All it does is to act from an impulse of its being, or as we may say, from the essence of its being, whose end is reproduction. In other words, it fulfils the uses of its nature, which is limited to an earthly round.

Nor in all the realms of nature do we note any evidence of a going beyond that condition of unconscious consciousness, if one may employ such a term, until we come to man. Then we arrive at a condition of being so advanced as regards all other terrestrial creatures that it is a continual enigma.

At what stage in man's development, or in the development of the to-be-man, did this advance from simple consciousness to self-

consciousness take place? By what miracle was he enabled to leap the enormous chasm—for such it appears—that lies betwixt the creature that is merely a conscious automaton and the being who is conscious of his consciousness?—who from being a simple creature has himself become creative, and has thus become creative from a sense of his imperfections? Further, what was there in this primeval to-be-man to account for such an efflorescence—an efflorescence which has shown itself in no other known creature? Why was it—how came it to be given to him, of all creatures, to look round himself and discover that he had a soul—or, in other words, to find that there was a something in his consciousness whose orbit was larger than that of his physical environment?

It has been said that intellect differentiates man from the lower animals. But it is questionable if it does, save in degree. What really differences the two more than intellect is the fact that in the case of the animal there is no second orbit of consciousness at war with the first, and ever pulling and tugging against it. There are in some of the lower creatures powers of intellection,

or, as we call them, instincts, as extraordinary in their results as those possessed by man. In some respects they are almost more astonishing. We have examples in point in the mathematical powers of the bee, in the organising gifts of the ant, in the building capabilities of certain birds, in the migrating instincts of others, in the weaving of spiders, etc. Of course man's intellectual powers go beyond them, but rather in degree than in kind—in degree because it is conscious intellect, which consciousness enables him to turn it to wider ends.

No, it is not essentially in man's intellect that the difference lies. It lies in something above and beyond that. The real difference begins when consciousness reaches the point at which it parts from mere physical consciousness—at the point where the spiritual orbit breaks away from the physical—at the point, in short, where man adds to his ordinary consciousness a consciousness of the spiritual, when, at its best, his nature becomes flooded with spiritual consciousness, and his life, willy-nilly, becomes intensely moral, sometimes sublimely so. Of this fact we have witnesses in every age of the world.

There comes a period in the existence of the upward developing simian, or semi-human, when the first glint of spiritual light finds entrance into his brain-cells. That spiritual light—that celestial force—had been beating upon or around his consciousness for ages, albeit beating in vain. It was knocking for admission, but the needful brain-cells were wanting. The time came, however, when in some one becoming-human embryo a higher cell was added. There was a fortunate commixture of superior conditions, and the higher cell was born. Upon that cell the spiritual force no longer beat in vain. It received a new impulse. It came into being to perceive the more ethereal force permeating the universe—to perceive it blindly, it may be, but the growing soul did perceive it, and received it, and they were one, the receiver and the filler. For, as Goethe says, quoting an adage of the ancient Ionian philosophers, "Like is only known to like."

When once those superior brain-cells had come into existence, they developed more and more, and man became more and more differentiated from the animal. It was a

long process, however, as we count time. But what a change it wrought! How high man now became on the superior side above the animal! How the spiritual orbit gained on the physical one and dominated it!

Very beautiful are those creatures, earth-fellows with man, from whom he now gradually became separated by a chasm almost infinite in extent—the chasm that divides mere consciousness from spiritual consciousness. Excellently fashioned are they to fill their place in nature, admirably fitted for their purpose. Marvellous indeed is their adaptation to their environment! They seem to fit it like a glove. Not so man. With him there is something superadded that makes him, as it were, a misfit—looked at, that is, from the merely natural or earthly standpoint. For, if his environment is coterminous with the round of his physical eye, with the rounding of his physical needs, with his terrestrial span, what call has he for that passion for God, for that instinct of Divine righteousness (if we may so designate it), for that undying throb to know immortal life, which are the crowning characteristics of man?

Those passions and instincts have nothing to do with self-preservation in the physical sense. It may be arguable that they arise in part from the exercise of those powers which do subserve that end. But only in part. Moreover, if they respond to no actual reality they are, so to speak, merely faculties run to seed; they are of the nature of excrescences that mean nothing, an unnecessary overplus, a disease—in short, an arrow that hits no mark.

But how can that be when they subserve such useful ends? For those human beings who possess these excesses of faculty, these diseased conditions, this consciousness *in excelsis* projected into a void, make the best men and women. They show something of the divine in their character, and that, whether we will or no, is ever the object of our sincerest, our highest worship and admiration.

But if these excesses of faculty simply subserve such an end, and answer to no reality—that is, if there be no divine first-cause, no future life, no growth hereafter, nothing of the nature of reward or recompense, no better fruit from the finer or more

perfect tree, nothing added, nothing won by effort or aspiration—in that case they deceive. They answer to a mirage, to a summer looming, and the best and bravest of souls are deluded, and man, the topmost of created things, is proved a monstrosity. That, however, it is impossible to believe. All the other powers of the mind are psychological adaptations to some physical condition, to some material need, and therefore we are justified in believing that it must be so in regard to these spiritual powers, else is one half of man's orbit a mockery, and to that extent his life, in all its higher aspects, in all its noblest traits, is reduced to a farce. Which is absurd.

XII.

FINALLY, may we not speculate a little on the influence of this purely spiritual force on the physical organism itself? For is not the duration of life—earthly life that is—measured by the amount of this spiritual-vital principle inherent in the soul centres of being? No other animal enjoys the life-duration of man. Yet man is not so strongly organised physically as some of the lower creatures—his co-mates in earthly bondage. Nor is he so well protected by nature. He is more subject to the weather than most animals, because he has no natural pelt to protect him against sudden changes. His young, too, are much longer than the young of any other animal before they become self-helpful. Yet man lives on the average the longest of all animals, if we may except perhaps, the elephant. This arises in the main from the larger spiritual power by which he is sustained. It acts in many ways to bring about this result: (1) by ordering his life according to principles of

reason, (2) by enabling him to protect himself through the building of houses and the making of clothes, (3) in the most highly endowed, by the cultivation of self-denials and restraints which preserve him from the dangers of excess, and (4) by filling his soul with perceptions of those grandeurs and harmonies of the universe that acclimatise him, so to speak, to the calms and perfections of the ideal.

It is thus that he becomes subdued to that larger "music of the spheres" which is the inherent principle of all truly spiritual life, and from which is evolved by regular and gradual growth all that is of ethic value in human existence and human character. For just as man in the lowest state of savagery has generally been found to possess some notions of music, so in the same degree he is invariably seen to have shaped himself and his society to some crude notions of ethic. Neither in music nor in ethic, however, has he created anything. Both were in existence from all time. All that he has done is to have developed so far as to have come in contact with the principles of music and of ethics in their most

elementary forms. But in its most rudimentary form music, such as it is, only exists in the more brutal sense. It does not elevate and refine. So it is apt to be as regards incipient and first-step morals. They are largely penal and not unfrequently grossly brutal; and inasmuch as they are so, they tell against the happiness and good thrift of the society that suffers them. Only in proportion as society and the individual reach the higher and more complete comprehension of the law can they expect to enjoy the full fruition and contentment derivable therefrom.

Hence it is that the most spiritually-minded men as a rule live the longest. I do not use the word 'spiritual' in the ordinary religious sense, but in the broader and more general and, as I think, truer signification of those possessing the largest amount of what we know as 'spirit' or 'soul,' or, more properly perhaps, of the brain centres conditioned to the reception of that higher spiritual essence or force which, as I have said, is the seminal principle of all life.

We have only to refer to some of the

foremost men in the ranks of science, literature, and art, during the past century, and indeed to some still living, to see to what an extent this is the case. Amongst those who reached an age beyond the traditional three score years and ten of mortal life we find such names as Goethe, Wordsworth, Tennyson, Browning, Martineau, Ruskin, Victor Hugo, Carlyle, Gladstone, Blackmore, Emerson, Linnell, Verdi, Huxley, Tyndall, Humboldt, Longfellow, Whittier, all men who, if toil killed, might have been expected to shuffle off the mortal coil years before they did. But their labours in the higher departments of the spirit enabled them to carry lightly the burden of years. It is, indeed, too much subjection to the physical that kills; it is the living in the lower range of the animal faculties; the spiritual ever vivifies and gives fresh accessions of life, fresh accessions of strength. What more marvellous exemplification of this could we have than John Wesley, who, the more his work and his influence are studied, the more astonishing becomes the spiritual vitality of the man—a vitality which, I believe, had more to do with the resurgence

of spiritual life and thought, after the deadness and languor of the early eighteenth century, than any other cause whatsoever.

When we have learned that lesson in all its fulness, we shall no longer be astonished to find a man whose energies lie in the spiritual direction, and whose spiritual organs have been fully developed, living to be ninety or a hundred years of age, but we shall be surprised rather that he died so young. For when men come to live in the knowledge of their real spiritual heritage, it will be as easy for them to live to be a hundred and fifty years old, or even more, as now it is to reach seventy-five or eighty. Nor will these added years be a time of dotage either, but hale and full of vigour, touching the well-springs of a larger life.

At the present day men and women are killed in their youth—that is, all the spiritual sap is well-nigh taken out of them ere they reach adult age, and in too many instances they never recover a vestige of it again. Few can have been thrown much amongst children without having been struck with the beautiful promise of early childhood when nurtured under the best auspices and

surrounded by its best conditions. It is, as it were, radiant with a fine spiritual effluence, "trailing clouds of glory," as Wordsworth puts it. That effluence is one which, so soon as "the growing man" begins to move among, and be influenced by, the cruder and coarser material aims of the world, loses its higher ethereal aroma, so to speak, and hardly ever regains it. This decay takes place sooner in some, later in others; and only in the few does the original freshness and beauty of childhood's promise persist until the material egoism has in a large degree worn itself out, giving place and room for the budding and the blossoming of the spiritual character, the divine in human, as we see it here and there in elderly folk, simple and beautiful of faith.

To many, indeed, this never comes. For what was lost when the growing child, filled at first with ethereal promise, began to mix freely in the world, perhaps at school, is very rarely regained. Who that has watched children under such conditions but has been surprised and pained at the change? They seem suddenly to have lost—we hardly know how—a spiritual freshness, an ethereal beauty,

that set upon them like the bloom upon a peach.

We may occasionally see this spiritual character in the mother and child bound together by love—by a love in its higher development almost wholly spiritual. The ideal, however, is too often destroyed because the baser animal affection is allowed to encroach upon the diviner bond. Thus, as the child develops individuality and will, a low material egoism antagonises it to the maternal egoism—the egoism in both cases arising out of an imperfect development in and through the spiritual principle which lies at the root even of our material life. For this spiritual principle, when received in full accessions of strength, rounds out the nature with a fulness of order, beauty, and harmony more and more approximating to what we know, and justly know, as the divine.

Such a condition, however, is not often met with, and that for the reason that nearly the whole of our education makes for the aggrandisement of the individual and the self in the material sense, with an almost total ignoring of the spiritual, properly

so-called. So terrible is the effect of this cultivation of the materialistic egoism that it is almost a miracle that anything whatever of the spiritual remains in our lives after the days of early childhood. Up to that age—except in the starved and stunted child-life of the miserably poor, those blots and shames of our civilisation—all the faculties act in the fullest harmony one with another and with the conditions to which they are physiologically or psychologically related. This is the reason why children are usually so happy. All the faculties are in the freshest condition. No stagnation, no starvation has arisen.

How fresh then are the spiritual functions!
How responsive the touch!

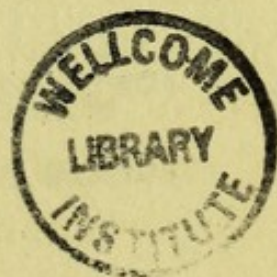
But behold a little later! What stagnation—what deterioration of the spiritual has arisen! By middle age—often enough even earlier still—habits of self-indulgence, pride, selfishness, vain and envious thought, egotisms in one form or another, have killed all spontaneity, and we see persons, erstwhile full of spiritual force and yearning, in whom that side of their nature is almost dead. They may have the form of the thing left, but

the spirit has fled. It is not infrequently killed even by the formalisms of religion itself, which, as so often taught, never gets beyond the speech centre. In such persons all trace of real spiritual volition has vanished: will, in truth, being at the bottom a spiritual force. Reason and high intuitions are at the back of it and keep it fresh and vivid with spirit; but if these have been starved and killed, the will becomes devoid of vital strength, and fades and dies into an arid mechanism merely.

It does not follow, of course, from what is here said that all spiritually-centred men and women are able to fill and fulfil themselves with years. Too often there are troubles and disappointments we know nothing of which break the spirit and cause it to be garnered sooner than it otherwise would be. For highly endowed as human souls may be, the physical nature is a heavy task-master, and the heavier the more ethereal the spirit; hence we know not but in early years the yoke may have been so heavy that its effects could never be wholly thrown off, and so tragedy has cut short life's beautiful promise.

But such lives in no wise negative the rule of the spiritually full man being the longest liver. The world's history of its greatest men—that is, those whose labours have been in the spirit, stands in attestation of this truth, and there is no sufficiency of evidence to prove the fact in any other way. The spiritually fed man is the only full man. He alone is truly representative of human life at its best, and he only approaches the ideal because he has a brain conditioned for the reception of a force or influence the source of which lies beyond the terrestrial and mundane sphere.

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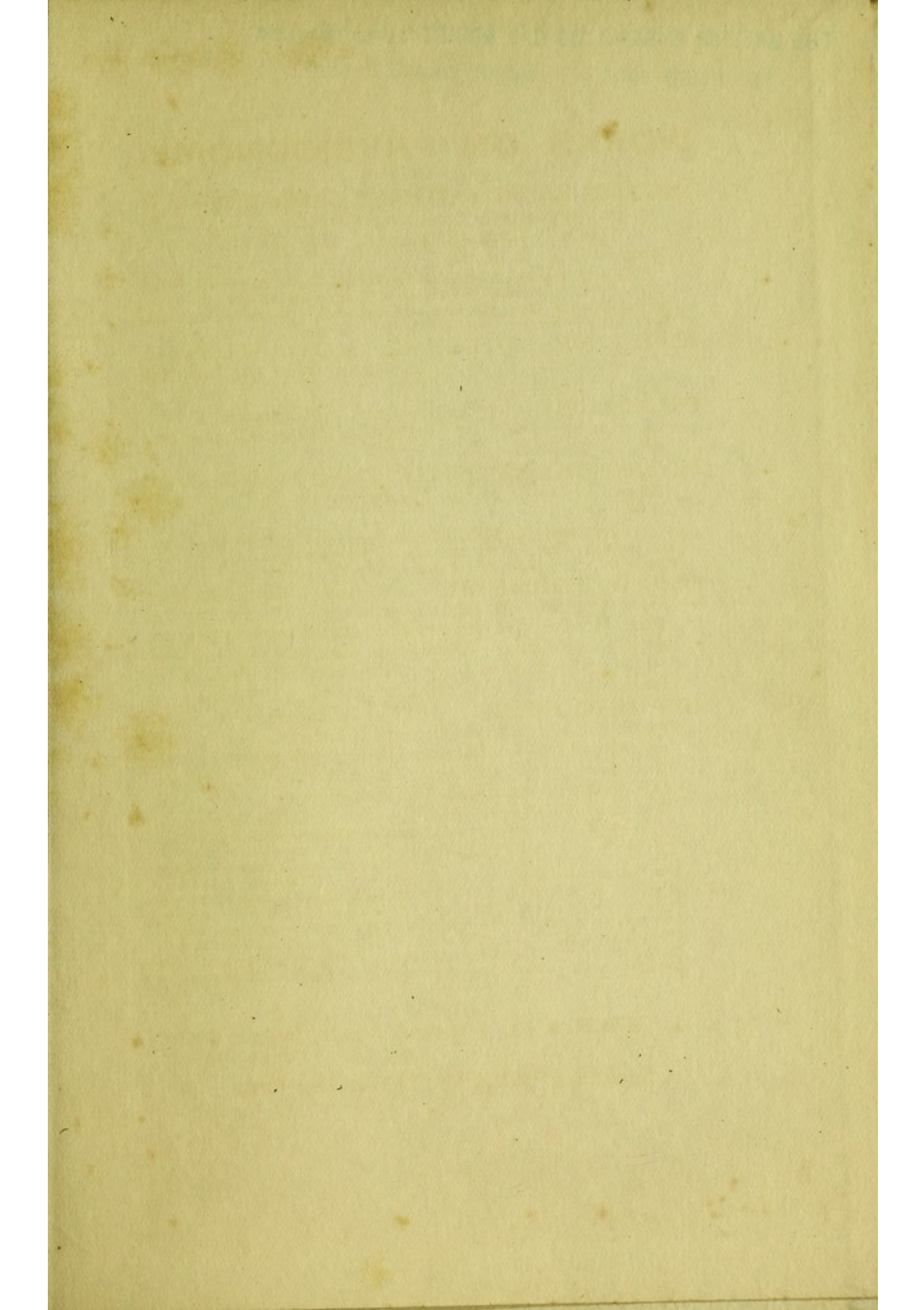
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