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THE PROSPECTS OF MEDICAL SCIENCE.

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ONLY those who have attempted to effect a reform in matters religious or social, can have the slightest idea of the unreflecting contentment with which the great mass of mankind follow in the beaten tracks of thought and action. It is indeed very obvious, after a little reflection, that the many do not ask what is essentially true or right, but only what is customary. They are the born thralls of use and wont, and judge of the veracity and rectitude of things, not on any abstract principles, but solely by the extent to which they have been accepted and become established. Fundamentally, no doubt, there is great wisdom in all this. Such silly sheep are far better under the guidance of their shepherds, than in wandering at their own sweet will among all the snares of doubt and pitfalls of error. Moreover, the intensity of their bondage is being slowly mitigated; their fetters are growing lighter; and so, in the far distance of remote generations, there is the faintly dawning possibility of at least their partial enfranchisement.

Every age produces its own despotism. As this is an age of science, the spiritual authorities, once so resistlessly predominant, are of necessity waxing faint. The priesthood of faith are in the sere and yellow leaf. Their fasts are a ceremony, and their excommunication is a form,—few observe the former, and none fear the latter. But it is quite otherwise with the priesthood of health. Their decrees are still potent. Men, but yet more especially women, believe in “the doctor.” Like other sinners, they may occasionally violate his precepts; but it is only, with abject submission, to submit to the penances, most of them painful, and some of them mortal, which he imposes. The physician of the soul may be despised, as a credulous retailer of defunct myths, whose grand *sermo*, or discourse, is gradually becoming an unendurable infliction, absolutely insupportable

by all rationally-constituted mortals. But it is quite otherwise with the physician of the body. On his words hang the issues of life and death, and he is respected accordingly. Does he order the bath, it is taken. His slightest suggestions as to clothing, exercise, or diet are implicitly followed, as the directions of an infallible oracle. While should he order medicinally, the most noisome draughts, or most noxious poisons, they are swallowed *sans* enquiry or hesitation. He can starve, purge, blister, and bleed without the shadow of resistance from his much-enduring, and not seldom expiring patient, who, with more than saintly resignation, having placed his life in the hands of his "medical adviser," is thenceforward simply unresisting subject-matter for that mystery of mysteries, that archmagician's spell—a prescription. But there is something beyond a prescription—there is an operation, from the drawing of a tooth to the amputation of a limb; and in this, too, the doctor is omnipotent. Whether with pill or potion, knife or lancet, he reigns supreme—provided only he obey the edicts of "the ecumenical council" of the medical church, and does the thing *secundum artem*. It is doubtful whether any priesthood, sacred or secular, ever possessed greater power, or, to the extent of their opportunities, more stoutly resisted any unauthorised invasion of their stupendous prerogatives.

Such was everywhere, throughout the civilised world, the recognised position of the Faculty in the last century, and such it still continues in most remote and rural districts. But, unfortunately, on the outside of this orthodox school, like the Protestant Churches at the Reformation, sundry heterodoxies have sprung up, to the unspeakable annoyance and unutterable disgust of the ancient professors. Homœopathy, Hydropathy, and Mesmerism all unite in opposing the principles and denouncing the practice of the established system. And not apparently without effect, for the wholesale drugging and systematic bleeding of the last generation are now almost unknown, the tendency of orthodox practitioners being to do little or nothing, the safest possible procedure under the circumstances. For medical science is in a state of rapid transition. Like political Toryism, after a gallant resistance of some generations, it is at last yielding to the progressive spirit of the age, and, in the first rush of its young enthusiasm, threatens to outrun its former rivals in the facile acceptance and zealous advocacy of new truths. Here, for example, is one of its latest utterances, in the principal medical school of Scotland, and, we may add, through the lips of one of its most distinguished teachers and representatives (Sir James Y. Simpson), on the occasion of the ceremony of capping the graduates in medicine at the close of the summer session of the University of Edinburgh.

“Ordned this day as physicians, most of you will not, let us hope, be simply content to practise medicine as a mere means of livelihood and respectability. It is a progressive science and art which has lately moved forward rapidly, and which threatens to speed still more quickly onward for the future. Knowing this, the hearts of many in your ranks are, I doubt not, fired with the wish of assisting in its proud progress, and of advancing it by your own labours and discoveries. What subjects, then, are most patent for new researches? what fields of inquiry are most likely to bear rich fruits? Bear with me while I say a few words on this topic. During the present century the scalpel and the microscope have developed for us a vast amount of new and most invaluable facts in the way of morbid anatomy and pathology; and this field is by no means yet exhausted. Science has, at the same time, laboured most successfully to place in the hands of the medical practitioner means and instruments by which we can perceive and discover the pathological anatomy of various organs within the body of the yet living individual. Thus, for example, by the invention of the ophthalmoscope we can look into that dark inner chamber of the eye where shadows and soul, where matter and mind, so mysteriously meet and commune with each other; and can distinctly see the various diseases that may affect its walls or its fluid contents. The laryngoscope exposes fully in a similar way to our inspection the interior of the organs of voice. The endoscope reveals to us the conditions of other internal canals and organs. While to the instructed ear of the physician the stethoscope whispers back the diversified morbid conditions of the lungs, telling wondrous secrets as to their exact nature and precise seats. In this great line of discovery new victories are certain to be won. Do you search out other additional physical means of diagnosis for these and other viscera. Possibly even, by the concentration of electrical or other lights, we may yet render many parts of the body, if not the whole body, sufficiently diaphanous for the inspection of the practised eye of the physician and surgeon. But the future greatest conquests for you, and for the coming race of physicians, are probably to be gained by researches in pathological chemistry and therapeutics. Pathological chemistry contains, doubtless, a rare and rich, and most extensive mine of priceless ores and products for the future advancement of theoretical and practical medicine, and the only shafts yet attempted to be struck into its lodes have barely touched the mere surface of its boundless wealth. The most practical, however, and so far the most important objects for calm, earnest, and faithful researches, on your part, are probably to be found in the wide field of therapeutics. For the department of therapeutics, though the most important of all the departments of physic, has hitherto been the most neglected of all—the one regarding which we know the least. The physiological modes of action of medicine form a labyrinth, or series of labyrinths, to which we as yet in fact possess no clue. Will you strive to unlock its secret entrances? Besides, we know not enough of the simple powers of our drugs; though the practice of medicine is essentially and ultimately the practical application of therapeutic agents. In making this statement, do not misconstrue my meaning. The young physician trusts, perhaps, too much to mere drugs; the aged physician, perhaps, too little. The training of the philosophic physician consists in teaching himself when to give medicines, and what medicines; and in what cases, and at what times, he should abstain from all drugs, and trust to nature, or to nature and hygienic means alone. He knows that a masterly inactivity is sometimes far more safe for his patients than the most efficacious, but officious, druggery. But, when medicines are used, they should be the best and surest. We have a formidable farrago of them from the vegetable and metallic kingdoms—some inefficient, some doubtful, and almost all repulsive in character and form. A most extensive field for new investigations in this line lies temptingly open for the young and ambitious physician in the

almost innumerable series of new chemical compounds which modern organic chemistry has evolved. Among this world of new compounds will probably be yet detected therapeutic agents more direct, more swift, and yet more sure in their action, than any which our present pharmacopeias can boast of. It may be, also, that the day will yet come when our patients will be asked to breathe or inspire most of their drugs instead of swallowing them; or at least when they will be changed into pleasant beverages instead of disgusting draughts and powders, boluses, and pills. But that day of revolution will not probably be fully realised till those distant days when physicians—a century or two hence—shall be familiar with the chemistry of most diseases; when they shall know the exact organic poisons that produce them, with all their exact antidotes and eliminatories; when they shall look upon the cure of some maladies as simply a series of chemical problems and formulæ; when they shall melt down all calculi, necrosed bones, &c., chemically, and not remove them by surgical operations; when the bleeding in amputations and other wounds shall be stemmed, not by septic ligatures or stupid needles, but by the simple application of hæmostatic gases or washes; when the few wounds then required in surgery shall all be swiftly and immediately healed by the first intention; when medical men shall be able to stay the ravages of tubercle—blot out fevers and inflammations—avert and melt down morbid growths—cure cancer—destroy all morbid organic germs and ferments—annul the deadly influences of malaria and contagions, and by these and various other means markedly lengthen out the average duration of human life; when our hygienic condition and laws shall have been changed by state legislation, so as to forbid all communicable diseases from being communicated, and remove all causes of sickness that are removable; when the rapidly-increasing length of human life shall begin to fulfil that ancient prophecy, ‘the child shall die an hundred years old;’ when there shall have been achieved, too, advances in other walks of life far beyond our present state of progress; when houses shall be built, and many other kinds of work performed, by machinery and not by human hands alone; when the crops in these islands shall be increased five or ten fold, and abundance of human food be provided for our increased population by our fields being irrigated by that waste organic refuse of our towns, which we now recklessly run off into our rivers and seas; when man shall have invented means of calling down rain at will; when he shall have gained cheaper and better motive powers than steam; when he shall travel from continent to continent by submarine railways, or by flying and ballooning through the air; and when—to venture on only one illustration more—tiresome graduation addresses shall no longer require to be written by old professors, nor listened to by young physicians. In developing these and many other analagous discoveries that in due time will be made in the medical and in other sciences, there will necessarily be expended a stupendous amount of thought, with countless hosts of experiments, and trials, and inquiries. But some of the discoveries will, in all likelihood, be reached by simple routes. For within our own bodies, and on every side in the great world around us, are constantly at work numerous yet unseen and undetermined high general laws and actions. These laws and actions are, most of them, hidden and covered over by the thinnest films. They lie within our touch, and yet we touch them not; within our gaze, and yet we see them not. In future times some of them will be detected by you or others—as some of them have been detected in times past—almost by accidental glimpses. If any of these accidental glimpses flash across your path, try to note and fix the value of the vision.”

Truly a right noble utterance this from the respectable professor of an established system. It must, one would suppose, have taken the good old town of Edinburgh by storm. Such a

trumpet-blast of innovation has assuredly not been heard in its high-places for many a day. And yet when thoroughly "dissected" and carefully "analysed," it simply amounts to a super-refinement of the old system. It is only druggery and its abominations etherealised. We are to inhale poison in place of imbibing it, and have our rotten bones chemically decomposed, in place of being excised—that is all! The manner of the thing may be somewhat different, but there is no change in fundamentals. It is at best but the philosophy of disease, and even that is regarded from the standpoint of effects rather than causes, and hence the remedial processes proposed are curative and palliative rather than preventive. It is the all-important question of health, contemplated through the medium of an orthodox hospital surgeon's experience. It regards the world as one vast infirmary—filled with moribund patients—under treatment!

All this, however, is, doubtless, in accordance with the principles of the established system, which it is the business of the Professors of the University of Edinburgh to teach. But was it perfectly fair in an address to a body of young physicians, professing to give the most enlarged and liberal views of the future progress and possibilities of medical science, to omit all allusion to the principles and practice of those rising sects, whose adherents profess to have already accomplished much, which the learned professor only regards as remotely possible in the course of a century or two? As to the disuse of "disgusting draughts and powders, boluses and pills," has not Homœopathy long since accomplished this—to say nothing of its doctrine of specifics, and its protest against confounding symptom with disease, effects with causes? And in speaking of the possible treatment of fever, was it just to omit all allusion to what Hydropathy has accomplished in this way, by its wet-sheet packing and other instrumentalities,—to say nothing of its vigorous protest against the use of drug poisons in any form, more especially minerals and narcotics? And in a survey so professedly liberal and expansive of the impending triumphs of medical science, was it quite fair to omit all allusion to what Mesmerism has accomplished in the cure of insanity, epilepsy, neuralgia, spinal irritation, and other forms of nervous disease—to say nothing of its achievements in diagnosis, through the instrumentality of introvision, and its claims as a universal restorative, the veritable *elixir vitæ* of antiquity—the only known process whereby the life-power of the vigorous and healthy can be transfused into the system of the weakly and diseased? Were these omissions accidental or intentional? and, if the latter, what are we to infer as to the process of tuition, whereof this is a sample? It is said that at the Uni-

versity of Salamanca, they still teach the Aristotelian philosophy and the Ptolemaic astronomy—in blissful ignorance, or fearless defiance, of all that inductive science has discovered. Are we to understand that the world-renowned medical school of Edinburgh is sinking into similar ineptitude? Does it, too, feed its young noviciates so wholly on the husks of the past, that presumably they have no knowledge of the present? Is their curriculum so strictly orthodox in the cast and character of the tuition which it provides—is the range of facts and ideas which it communicates so circumscribed, that *graduates* can be addressed like schoolboys?—the master acting very prudentially on the goodly example of Him who so wisely said, “I have many things to say unto you, but ye cannot hear them now!”

But perhaps we regard this subject too seriously. The whole affair was simply “breaking-up day,” when the grave professor was expected to indulge in a little “high falutin” on the prospects of medical science, at which the students were permitted to quietly laugh in their sleeve! And on the supposition that this was so, we also will indulge ourselves in a similar flight of fancy on the hygienic futurity of “the coming man.” And in the first place, then, we must begin with better babies, which also means superior parents. No one knows better than Sir James how few men are fit to be fathers—to say nothing of the number of women, lamentably disqualified for efficiently discharging their duty as mothers. How indeed should it be otherwise with a generation reared on drugs and dosed with drams from the cradle to the grave? Alcohol, opium, and mercury are a trinity of evil, quite adequate to the utter destruction of a large, and the hopeless deterioration of a still larger percentage of their miserable votaries. We must alter our habits if we would improve our offspring. A virtuous parentage is the only recipe for a vigorous posterity; but of this more anon. Suffice it here, that the vices of society are its destroying angels, than which it needs no other.

And now we are about to advance on a subject, we should suppose, especially distasteful to Sir James and his auditors—we mean the employment of female physicians. We hear much of what Christianity has done for woman; yet, under heathenism, she was a priestess and a physician, while with us she is a tract distributor and a nurse! Of her systematic exclusion from every office of responsibility and honour in the church, we may speak hereafter, in another paper. Our business here is with her relationship to the healing art, more especially in connection with the peculiar necessities of her own sex. In all ages prior to those we term modern, as still in all lands not yet under the dominion of the Cross, woman was and still is

equal to her own requirements. She was so in obedience to a humanitarian inspiration—that is the voice of nature, which, translated into theological language, means the command of God. Now, this divine voice, ever welling up from the mystic depths of every unperverted woman's soul, is systematically disregarded under our existing medical practice, whereby her finest feelings are cruelly outraged, and that modesty, which is her crowning glory, the fairest feature in her spiritual beauty, is rudely invaded, and brutally violated. These are strong expressions. We know it, and therefore it is that we thus deliberately utter this stern condemnation of a system so unnatural and immoral, that its existence would have appeared impossible to our ancestors, and will some day, we may hope, seem all but incredible to our posterity.

This is a very important subject both morally and medically, and we shall, therefore, at the risk of appearing tedious, enter somewhat more minutely into its consideration. Of woman's *ability* to be her own physician, the experience of the ages affords ample demonstration. The question, therefore, is narrowed to one of propriety and convenience. Let us begin at the beginning. The girl, on approaching womanhood, passes through an important constitutional crisis, in reference to which she usually receives the advice of her mother, or some other female relative, with whom she can communicate freely on the subject, without the slightest violation of the proprieties, because they are all *women*. And it would be the same with a *female* physician. But it is quite otherwise when the physician is a *MAN*. Then one of two very grave evils must ensue. Either the young lady goes without the advice she needs, or the virgin bloom of her soul, the Papilio glories of her spirit, suffer in the consultation. We are aware that in properly regulated families mamma or aunt often acts as a go-between, but the very necessity of having recourse to such a circuitous arrangement, is more effectually condemnatory of the system which requires it than anything we could say in the way of reprobation.

We now come to maternity. By an almost ludicrous misapprehension, the public have come to regard parturition as a *surgical* operation! And what wonder, since the Faculty seem to think that their presence on the occasion is absolutely necessary. A more preposterous claim on their part, or a graver delusion on that of their patients, could scarcely be conceived. Here again, as in the case of the girl, the woman's feelings count for nothing. She is expected to have no reservations with her medical man—which would be *FALSE delicacy*—and she is taught to regard his advice as of more importance than that of all “the mothers in Israel.” For, be it remembered,

that, according to orthodox medical notions, the civilised woman of modern Europe is the weakest and most incompetent specimen of femininity that has ever existed. She is supposed to know nothing of her own especial ailments, and is presumably as ignorant of those of her children. Not only is she regarded as immeasurably inferior in these respects to the venerable matrons of Assyria and Egypt, of Greece and Rome; but, at this very moment, the imperfectly-educated women of Asia, "the slaves of the harem," the negresses of Africa and the Indian squaws, put her to very shame by their superior knowledge of the duties, and their greater aptitude for the higher labours and weightier responsibilities of true womanhood. But this cannot last. The foul and unnatural usurpation, of which she is the unhappy victim, as it was the product of the licentious court of Louis 14th, so it very properly prevailed during the grossly material and thoroughly demoralised age of our own Georges. But we are now slowly yet surely emerging from the shadow of this dun eclipse; and already in Paris, New York, and London the claims of decency are being heard, and the sanctity of womanhood is, in certain cases, respected as of yore.

And now, then, having our baby born, according to programme, with all the proprieties—the mother, if necessary, being *soothed* by mesmerism rather than *inebriated* by chloroform—would we deliver him over, during his infantile weakness, to the tender mercies of a masculine M.D.? Most assuredly not; for we should violate nature in so doing. She has everywhere appointed the MOTHER as the guardian of the *child*, both in the bestial and the human sphere. The employment of a *male* creature in connection with babies is, as Talleyrand would have said, worse than a *crime*—it is a *MISTAKE*—but a mistake, we fear, too often fatal to its little victims. The truth is, no man can thoroughly understand a child, as all rightly-constituted women do, *intuitively*. Structurally, he has not the organisation; spiritually, he has not the inspiration. Moreover, the established system, whose drugs and blisters would weaken an Ajax and damage an Achilles, cannot fail to prove especially fatal in the case of children. Let us clearly understand that while the radical error of the orthodox school in *principle* is the confounding of symptom with disease, its mistake in *practice* is attacking the disease *through* the patient. Now, while this process may prove *slowly* destructive to the adult, it is but too often *rapidly* fatal to the child.

The rate of infant mortality is something absolutely frightful. Were any stockmaster to lose the young of his horses, cattle, and sheep in a similar manner, he would be ruined in a few seasons. Now, without affirming that this is wholly or even

principally due to "the fallacies of the faculty" on the one hand, or the employment of male in place of female physicians on the other, we think it can scarcely fail to be greatly aggravated by both of these very grave mistakes. The truth is, we begin with a needlessly large per centage of constitutionally enfeebled children, and then we drug and blister them to an early death.

In all this, however, to the duly gifted eye, there is simply a terrible manifestation of Rhadamanthine justice, under the law of compensation. An age that defiles its streets with prostitution, and fills its nurseries with disease and feebleness, very properly resorts to a medical system whose processes are destructive rather than restorative. As drugs and drams are but the Janus-face of the same delusion, that mistakes stimulation for strength, so the vices by which we are polluted find their counterpart and compensation in the prescriptions by which we are destroyed. The truth is, the great mass of mankind are not worthy of a better medical system than that under which they suffer. It is simply the appropriate Nemesis of their vices. Why should not the profligate be salivated with mercury? Why should not smokers be narcotised by opium? Why should not drunkards and gluttons be bled, blistered, and purged? Do they deserve any better? Speaking, indeed, from the higher, that is, the spiritual standpoint,—*can* a body of men, whose aims are selfish and whose pleasures are sensual, be other than the blind and unresisting victims of a medical system that depletes when it should invigorate, and poisons where it should purify; and whose lancet, slaying more than the sword, is the sickle of the mystic reaper, thrust into the yellow harvest field of a ripened and expiring world?

And this lands us in the only effectual remedy for the manifold evils of needless disease and premature death under which humanity now suffers: we allude to the development of a new phase of faith, that shall give the perishing multitudes a law of life for their temporal and material salvation. This matter goes down to rather profound depths. Christianity in the West and Buddhism in the East were the product of theological reaction against the stereotyped creed and overformulated law of a previous era of edification, represented more immediately by Judaism in the one case and Brahmanism in the other. These old faiths belonged to an age when creeds and codes were one—the edicts of the latter being sanctified and sustained by the authority of the former. We see this in the Mosaic economy, where the minutest regulations respecting food, cleanliness, and other matters of a hygienic and sanitary character, are all propounded as of absolutely divine authority. The advantage of this was that they were laid upon the conscience of all true believers, and did not need the constant

supervision of police authority to ensure their effectual observance. We see the effect of this among the Jews, Hindoos, and Mahommedans to the present day. Now, from all this the Buddhists and Christians required to be made free. They were relieved from the burden of observances, whose exacting tyranny in the minutest affairs of life had gradually become intolerable. Moreover, by being thus lightened of the weight of a ceremonial law, these faiths were rendered more suitable for diffusion among the various races amidst whom they now prevail. In truth, as we have shown elsewhere, they were the appropriate product of an age of racial confusion unexampled in authentic history. Now authority and liberty are simply the opposite poles of the social and political system; and as the former, when carried to an extreme, becomes aggravated into tyranny, so the latter under similar circumstances, degenerates into license.

This is the present condition of Christendom. We have long rejoiced in "the liberty of the gospel,"—the Mosaic law of meats and drinks and personal purifications being, as we say, "*abrogated*." But supposing that this Sinaitic code be but a formulated expression of the law of nature, what then becomes of your abrogation? In so far as any of these old codes were based on nature, is not their re-enactment sooner or later inevitable? Is it indeed possible for a Caucasian people to exist permanently as a higher type, without some such restraining and directing influence? Without this, is there not ever a tendency, more especially on the part of their ruder and more neglected classes, to degenerate into a Semi Negroid or Turanian type, as we may see in the Irish peasantry of the South and West, and in the criminal classes of London and most of our large towns? As a fact, were not dietetic and other regulations the rule of most Caucasian communities at the dawn of authentic history, and is not their disuse one of the features of dilapidation characteristic of these comparatively latter ages? And what are our Boards of Health, and our Temperance Societies, and our Vegetarian and other sanitary and dietetic movements, but a groping in the dark after what Moses and Menu "*enacted*," and what their true disciples have obeyed to the present hour? "Liberty of the gospel," translated into "license of the sty," is obviously becoming insupportable by all rightly constituted persons, and consequently a reaction towards "law and order," even in the regulation of private life, in the really important though seemingly insignificant matter of meats and drinks, to say nothing of manners and morals, has already commenced. Slowly, and with much recalcitration, it is beginning to be admitted, that not only what cometh *out*, but also what goeth *into* the mouth of a man, "*defileth him*,"—all

"gospel liberty" to the contrary, notwithstanding. Let us confess the truth. Drunkenness and gluttony, to say nothing of grosser vices, are pre-eminently the characteristics of Christendom. Nor are these things of recent development. They at least ante-date the Reformation, and attached to the old Church as well as to her daughters. It could scarcely be otherwise in the decrepitude of a system based on a spiritual liberty which implied that every man should be "a law unto himself." Just as Pharisaic formalism, "the paying tithes of mint and cummin," characterise the decrepitude of a system based on law, and of which we have an example on the grandest scale in modern India, where the miserable Fakeer illustrates Menu in his ultimates. But we need not fear,—action and reaction are universal. Christian license, which excites the disgust of the Moslem and the horror of the Hindoo, will find its complement in a law of life, happily embodying all "the wisdom of the Egyptians," that is, the science of modern times, in reference to matters sanitary and hygienic.

We are fully aware that such ideas as we have just propounded are by no means popular. The orthodox, having Moses and the prophets, Christ and his disciples, want no more. For the "marriage" of law and gospel they have no desire. Nor when they speak of "the second advent," have they apparently any definite idea that it must necessarily come with "authority." While, of course, the heterodox scout the very thought of another religion—having, sooth to say, had quite enough of the present! They don't seem to know that there is "a science of religion," which is a perennial product of the human mind, like philosophy, literature, and art; and that what we now see is simply the senility of one phase of faith preparatory to the birth of another, and that to look for an end of religion is like waiting

Till the streams shall cease to flow,
And the grass forget to grow.

Secularism in this matter is quite as short-sighted as orthodoxy, and neither of them seem able to see over the little hedge of to-day into the somewhat wider field of to-morrow.

Thus, then, we also anticipate an improvement in the physical condition of man; but not so much by increased power and subtlety in the remedies for disease, but rather by such a change in regimen and morals as shall go far towards the prevention of disease altogether. We mention *morals* advisedly in this connection. For while we would by no means undervalue the importance of increased knowledge in reference to matters medical and hygienic, we nevertheless regard an improvement in morals as of vastly greater significance—even in its bearing upon health. Men often perish by their vices in

spite of light and knowledge. The intellect alone is not adequate to the restraint of the passions. To effectually raise man above the bestial plane, there must be a disciplined action of the moral sentiments, otherwise he will say with the Roman, *video proboque meliora, pejora sequor*; a never failing characteristic, we may remark, of all ages of declension and transition, when principles are unsettled, and an epicurean self-indulgence takes the place of the heroic self-denial of other and better times.

These matters go down to great depths, which the learned and accomplished Professor could not be expected to fathom, considering the time, place, and circumstance of his address; but we are under no such limitations. Our intrusion on the Editor's space, however, warns us to conclude; and we will therefore only remark, that neither the diseases nor the remedies of this transitional time, frightfully destructive as they both are, need give us any serious fear as to the future of humanity. Such periods of moral chaos are normally recurrent, and apparently suffice for that purging of the garner floor, that burning up of the tares, which always accompanies the end of an era, when weak things pass away to make room for the strong, and the foolish are destroyed that the wise may inherit the earth. Let us remember that the old Phoenix always perishes in the flames. She is *consumed*. This, while the Nemesis of her crimes, is also the process of her renewal—she being thus purified, “though as by fire.”

THE SCIENCE OF MAN.

[CONTINUED.]

BY CHARLES BRAY,

Author of “The Philosophy of Necessity,” “Force and its Mental Correlates,”
“Education of the Feelings,” &c., &c.

So far, I think, I have advanced nothing but what observation and experience will verify, and the inferences are most important.

1. It is essential that the forces I have described should be equally distributed throughout the system; this depends upon the bones and muscles and the vital and the nervous systems being all equally well developed. This can only be brought about by the same attention to breeding and culture which we have already bestowed upon plants, fruits, and animals. Breeding is most important; for who, by “taking thought, can add one cubit to his stature?” Exercise may do something, but it will not turn five feet six inches into six feet; it will not much expand a narrow chest, or a narrow forehead. Anthropologists, instead of dwelling on fossil “jaw,” should establish the laws of hereditary

qualities; and common-sense and public opinion would carry them out. The doctrine of natural affinities, spiritual wives, &c., and all the ferment now going on in America on these subjects, so well described by Hepworth Dixon, may be only the shadow of a great truth thrown before—the breaking ground for a more rational union between the sexes than now exists. No doubt natural affinities do exist, and that one man and one woman might, by the union of their vital and nervous forces, become really one; but how far this would tend to the improvement of the breed facts only can determine. In what is called the Anglo-Saxon, in Britain, the vital forces greatly predominate; while in his descendant in the United States of America, owing to the effects of climate—the dry atmosphere, Nathaniel Hawthorne tells us, and vicious habits of life—the nervous system so greatly predominates as to cause a considerable deterioration of race. James M'Grigor Allen, in his very excellent paper on Europeans and their descendants in North America, says—"The precocity of American children—the early age at which marriage is contracted—the greater rapidity with which the course of life is passed over, as compared with Europe—are all interesting anthropological facts, testifying to the effect of climate on transplanted races;"* and testifying probably quite as much to training, education, and peculiar social conditions and institutions; "John Bull, on the other hand," says Hawthorne, "has grown bulbous, long-bodied, short-legged, heavy-witted, material, and, in a word, too intensely English." Both states are probably as much owing to habits of life as to climate. If, as Dr Hunt says, "We have exhaustion and degeneracy, but no real acclimatation;" and if, as Mr Allen concludes, "The modern Saxon may be destined to learn practically that the teachings of our science are not to be despised, and that in these lines, which seem to suggest the scientific theory of distinct racial realms for *man*, as well as for other animals, and plants, and that the various races cannot overleap their respective natural limits with impunity,"† it will probably be because Anthropology at present has no *science*, but merely a history, and a very limited collection of facts. Science will inquire more intimately into the causes of climatic differences—if, for instance, as Mr Hawthorne tells us, it is the dry atmosphere that tends to develope the nervous system at the expense of the vital, we want to know in what way it acts? We know how the forcing mental process, and the restless activity, consequent on habits of life, tend to this end; and probably they may have the greater influence. The question is, will not science be able to counteract both tendencies—the physical quite as much as the moral? How much of the change observed in the Americans

* Journal of the Anthro. Society, p. 133, July, 1868. † Ibid, p. 142.

is owing to the air, the mental forcing system, or to tobacco, it will be for Anthropology to determine, and not merely to note the change and sit down with the belief that it is irremediable. Science will inquire into both cause and remedy.

2. The quantity of force, as well as its distribution, should also be attended to. This depends not only on the digestive and alimentary apparatus, but much also upon the stoking. A goods' train may do with coke, but an express will do better with coal. Our mode of cookery and our dietary tables are at present very imperfect; and it is of little use that beef-fat and cod liver oil contain the largest amount of force, if it is to be nearly all consumed in conversion or digestion. Little, comparatively, is yet known of the direct action of different foods and drinks and gases upon the nervous system, and through it upon the mind. It is true we are familiar with the effects of tea, and coffee, and alcohol, and tobacco, and opium, and absinthe, and hashish as stimulants and narcotics, but doubtless there are many things that would directly promote the growth of the nervous system, and thus strengthen the mind. Almost all mundane agents act differently and powerfully on different constitutions. Some persons cannot pass over metal, or water, or subterranean current, or chemical action, without being powerfully affected. People so constituted are retained by American Mining Companies to indicate the exact position of both metal and water under ground. Hence the secret of the hazel rod.

3. When there is any defect in the human machinery by which the correlation of force, from physical to vital, from vital to nervous, takes place, there is not only great derangement, but often an escape and a blow-up. The mode of action, or the effect of this escape, depends upon "the mundane force to which it may stand in some mysterious relation, which acts and reacts within it," as reported by Arago in the case of the girl *Angelique Cottin*. In this case the force was merely physical, and mechanical, and electrical, and unattended by consciousness; but the different forces of this organism may stand in relation to other mundane forces both physical and what have been called spiritual, and may act and react upon them at any distance. Our bodily force of gravitation is in connection with the whole universe, so may our other forces be; and what we have to discover are the conditions under which peculiar manifestations of this "action and reaction" take place. This would introduce us at once into the whole field of miracle and magic, of inspiration and prophecy, of witchcraft and priestcraft, of revivals and rewifeals, of mesmerism and spiritualism, without the aid of either angel or devil, god or spirit, or any physical or mental fetish which assumes a separate personality behind merely natural phenomena.

4. When this force proceeds from the spine or sympathetic

nerves it is unattended by consciousness, but when it is connected with the brain as well, then both consciousness and will attend it, but not always; indeed, when these abnormal forces are in connection with the brain and have all the effect of intellect, the action is most often of an automatic character—that is, unattended with consciousness. Mr Home, the spiritualist, reports that the singular phenomena that have been connected with him from his childhood are altogether without his own control.

Our little individuality is thus very imperfectly partitioned off from the great forces around us, and even that partition is often partially removed. The senses which are thought to be the only inlet to knowledge are in reality the barriers that protect us from a too great influx of such force, and thus help to keep us to our allotted but narrow sphere. Our bodies are always mixing with all around, of which we are made painfully conscious if shut in a close room with any of the “unwashed.” Our vital forces, like water, are constantly trying to find their level, and in mesmeric action two lives often become inseparably blended. There is a direct emanation from the brain, carrying with it our mental states, and in this way directly “evil communications corrupt good manners.” Through our vital forces we take health or we take disease, and through our mental forces the mind is raised or lowered in tone, according to the persons with whom we habitually associate. The communion of the saints is a great present fact. Each particular organ has, in the body, not only its natural language, but its own peculiar emanating power, influencing imperceptibly all around. In our intercourse with our domestic animals and children, even infants, this is very evident, and, joined with the other influences we have named, it is the cause of those strong personal likes and antipathies to which we are all liable. These things indicate only the normal conditions of body and mind; let us, however, notice briefly, some of the phenomena where, in cases of disease, the ordinary thin partition wall of our individuality is broken down and their forces act abnormally. It is a great mistake to suppose that the mind is acted upon from without only through the senses; where people are sensitive from the nervous force greatly predominating, it is acted upon through the nervous system by almost every variety of mundane influence, as well as by the general atmosphere of nervous or mental emanation everywhere surrounding us. Mind may be set in motion—that is, force pass into consciousness—either by the action of the force within or without, either by the will, the sense, or other agency acting *directly* on the brain. Thus people can see without eyes. Light upon the retina ordinarily brings the powers of vision into action, but the brain

may be brought into similar action, and the same ideas elicited by the subtler action of odyle or other agent on other parts of the body.

In "thought-reading," that only is seen by the patient which is clear to the mesmeric operator. I have seen a mesmerised child, with eyes completely closed and turned upwards, give the number of three watches consecutively, and each number consisted of five figures; but when there was not light enough to make things clear to the operator, there was either no answer, or it was equally obscure. Here was a transference of *thought*, not of a mere action of the brain, and mental and nervous force, therefore, must be different things.

In electro-biology, the mind of one person seems to take entire possession of both the mind and will of another. These experiments illustrate forcibly some magnetic influence at work, for at a single pass of the hand of the operator along the body from head to feet, the body is made so stiff that when placed on two chairs it will bear a great weight, and yet, by a single word of the operator addressed to the *unconscious* subject—that is, by a mental action of will, all this stiffness is dissipated, and consciousness restored.

Then there are all the wonders of mesmerism—of introvision, prevision, and clairvoyance, not to be doubted by those who have either studied their history, or who have experimented themselves. Some people are so constituted that they can read people's thoughts, and tell what is going on at a great distance. Some can act upon others a long way off, and, by will-power, throw them into trance, or compel instant obedience. Some, as in Zschöкке's case, can read the whole history of a past life. The fact is, our forces, both physical and mental, are only partially individualised, and we are not only associated with, but we act powerfully upon, forces without ourselves; and the question is, through what medium or media does this take place? Gravitation, we know, unites us to all around. Odyle, Reichenbach discovered to be an equally common force, and electricity and magnetism are universal; and may not mental force—the highest and most concentrated of all, and which we find to be compounded of all the others—exist in an equally free state, forming an atmosphere of its own? Heat, and Od, and Electricity, are constantly emanating from the human body, and why not mental force, the most powerful of all? Individual will-power could act through this medium, and, as mind is the most concentrated force of all, if we had faith, "we might even say to this mountain, Remove hence to yonder place, and it shall remove." "Howbeit, this kind goeth not out but by prayer and fasting." We have less faith in, and knowledge of, the occult powers of nature than even the magicians and necromancers of old. They

knew that this kind goeth not forth but by prayer and fasting, and they studied and cultivated the conditions of body necessary to put them *en rapport* with what are still to us *occult* powers. The pretensions of the ancient magician were not all fictitious; he was acquainted with, and used most of the powers we have mentioned above, and probably many more; and the initiation into his mysteries was probably only the training required to unite his mental and bodily powers more intimately with the forces without. Alas! we have no conjurors among our present men of science, and a "nervous epidemic" called Spiritualism, in ignorance of our bodily and mental constitution, based on a gigantic assumption, and propping an ancient superstition, takes the place of the power and mental advance we might attain, if we had only a real Anthropology, and the *whole* nature of man became, as it ought to be, a real science. We agree with the *Pall Mall Gazette* (May 2, 1868) that "Mr Home ought really to be set apart, kept at the public expense, and carefully examined by the first experimental philosophers of the day, until the laws of these anomalous phenomena have been satisfactorily determined." Instead of being Lyon-ised by the spiritualists, he ought for a time to become the Lion of the Royal Institution, whose members should be satisfied at first with observing facts, without dictating in any way the conditions under which they were bound to appear. Of course if these phenomena only take place in the dark, the investigation becomes difficult, if not impossible; and without investigation every one has an equal right to his opinion. As Professor Faraday truly said, "How could electricity, that universal spirit of matter, ever have been developed except by rigid investigation?—and if these so-called occult manifestations are not utterly worthless, they must and will pass through a like ordeal." Very little light has as yet been thrown upon this subject by mere physicists.* Du Bois Rey-

* On the question of these so-called Spiritual Manifestations, among a press of other evidence, Mr C. F. Varley, consulting electrician of the Atlantic Telegraph Company, and of the Electric and International Company, says—"About nine or ten years ago, having had my attention called to the subject of Spiritualism, by its spontaneous and unexpected development in my own family, in the form of clairvoyant visions and communications, I determined to test the truth of the alleged physical phenomena to the best of my ability, and to ascertain, if possible, the nature of the force which produced them. . . . I have examined and tested them with him (Mr Home), and with others, under conditions of my own choice, under a bright light, and have made the most jealous and searching scrutiny. I have since then been in America, where the subject attracts great attention and study, and where it is cultivated by some of the ablest men, and having experimented with and compared the forces with electricity and magnetism, and having applied mechanical and mental tests, I entertain no doubt whatever that the manifestations which I have myself examined were not due to the operation of any recognised physical laws of nature, and that

mond, and after him Humboldt and other philosophers, detected an electric current excited during his contraction of the muscles of the arm, producing a deflection of the needle. Humboldt says:—"The fact of the experiment affecting a magnetic needle by the alternate tension of the muscles of the two arms,—an effect due to volition,—is established beyond the shadow of a doubt. Notwithstanding my advanced years, and the little strength I have in my arm, the deflections of the needle were very considerable."* Here was volition, *i.e.*, will-power, affecting the needle through the arm, but without contact. Faraday also showed the magnetic power of oxygen, and that this power was set free in the body upon the union of the oxygen with the carbon of the system, and, as this is constantly taking place, as this union is the original source of all power in the body, there must be always a large and constant supply of magnetic power. The nerve power, upon which the strength of each organ depends, must also bear a strong relation to electricity, as was shown by Dr Leger's instrument.

"Action and reaction are equal and contrary," and, consequently, the mind being a force, for every action from without upon the mind there must be a corresponding reaction; to whom, and how far extending to other minds, we cannot tell. Also, "as every event in time and space is a change of matter (or depends upon it), and every one change of matter is related to every other change of matter in space and time, it must follow that the change in the matter of the brain bears a relation to every other change of matter, whether *past*, present, or *to come*—whether *here* or in the stars."†

Mr Atkinson, treating of the same subject, says—"Consciousness and reason, after all, seem but as one outward sign of an inward principle, which sees as in a glass at once, and through phenomena to laws, without the process of induction: whereas,

there has been present on the occasions above mentioned some intelligence other than that of the medium and observers." Mr Varley further says in a letter to Professor Tyndall, dated May 19, 1868—"I have endeavoured, whenever opportunity, health, and business would permit, to ascertain the nature of the force by which these phenomena are produced; but I have not progressed much farther at present than to find out the source whence the physical power is abstracted, *viz.*, from the vital systems of those who are present, and especially from the medium. The part of the subject under discussion, therefore, is not yet ripe for publication." In this stage of Mr Varley's investigation, Spiritualists have no right whatever to claim him as one of themselves. It by no means forwards the interests of truth to represent all who believe that they have witnessed phenomena "not due to the operation of any of the recognised physical laws of nature," as also believing that these manifestations are caused by disembodied spirits who have had a previous existence on the earth.

* Annual of Scientific Discovery for 1856, p. 115.

† Roger, p. 252. See Walther, the Prof. at Landshut, quoted by Gall.

by consciousness and reasoning, we have to use signs, and take up nature by parts and degrees: and, after all, can see but in part and superficially. We cannot see, like the sun, into every corner, but go about like a candle moving from place to place, and shall see clearly only when we have noted our facts, placed them in order, and inferred from them general laws. I have heard men say, 'We are men of facts, and do not believe in *clairvoyance*.' I have replied, 'You are not men of facts—or at least men of these facts. You are like machines which spin out only one kind of fabric. You are men of one language and one country;—prisoners, with a window to the north, and declare there is no moon.' ”*

The forces of nature are only known to us as modes of motion or action, and they are all correlates, or pass readily into each other,† *i.e.*, from one mode of motion to another; matter, which Huxley calls “a balance of forces,” being merely the instrument by and through which this change takes place. Thus force is not *inherent* in matter: it simply “conditions” it, producing what we call its properties or qualities. Force is erroneously supposed to result from the action of matter, whereas the reverse is the case—the action of matter being always dependant upon force. Matter is said to exert *force*, but this is a delusion consequent upon the fact that every phenomenon, every event in time and space cognisable by us, is attended by a change of matter. Force is persistent, and all present force is previously existing force in another form, and matter in no way increases or diminishes this: it is simply the medium of its correlation or transformation from one mode of action to another. It is said that the properties of matter are inseparable from its existence. True; properties, qualities, and functions—that is, *particular modes of action*—are inseparable from that which caused, not that action, but that particular form or mode of action. We have throughout treated force as an entity, the common term for both matter and spirit, and to us it is the only entity: inseparable, however, from its supreme source, as motion is from that which moves. Baron Dupotet says, “There is an agent in space, whence

* Man's Nature and Development, p. 149.

† Gravitation has hitherto been thought to be an exception to this law. and Professor Tyndall has declared that he should think a man mad who believed that a body could lose its weight, although Huxley pronounces himself willing to investigate. We believe with Mr R. H. Paterson, “that Heat and Light are simply forms of the great cosmical force which we call gravitation: they are not sent travelling through the abysses of space by the solar orb, but are generated when the great cosmical force enters and acts upon an atmosphere such as surrounds the planets.” Thus Heat and Light “are forms of the grand cosmical force which in its simplest form we call attraction,” its correlation or transformation being brought about by the matter of our atmosphere, *i.e.*, the emanations from our earth.

ourselves, our inspiration, and our intelligence proceed; and that agent is the spiritual world (not would-be individual spirits) which surrounds us." In this we most thoroughly believe. Mental force or thought—its "form" determined by the brain—may float as free essence, or in a medium of its own, until it meet with some structure or body through which it is again changed, and again reduced to its primitive physical condition; or having been once transformed into spiritual force, it may never be retransformed, but may await its transmigration into new bodies.

"Much more, if first I floated free,
As naked essence, must I be
Incompetent of memory.

"Yet how shall I for certain hold,
Because my memory is so cold,
That I first was in human mould?

"It may be that no life is found,
Which only to one engine bound
Falls off, but cycles always round."—*Tennyson*.

"Spirits seem buried, and their epitaph
Is writ in Latin by severest pens;
Yet still they flit about the trodden grave
And find new bodies, animating them
In quaint and ghostly way with antique souls."

—*George Eliot*.

What power over this atmosphere of mind, or spiritual free essence, the human will has it is impossible yet to say, nor, as this mental atmosphere increases and intensifies, what may be its future power; but here, no doubt, is the spirit world of the Spiritualist, and in this will-power and unconscious action of mind the hidden cause of most of the spiritual phenomena. There is spirit—the agent in space mentioned by Dupotet—but no spirits; the personality is the thing wanting. Force is persistent, and both body and mind are indestructible, except in form; and what new form they may take in the future it is impossible to say; but, if it be such as has been assigned to them by the Spiritualists, it is a dark look-out for us indeed. What is the nature or essence of that Agent, or Substance, or Being, or Entity, or Force, underlying all phenomena, but whose mode of action only is known to us, we do not know. By force or power we mean the cause of all things—that which can and does produce all phenomena; but this power is as inseparable from its source, or that to which it belongs, as motion is from the thing that moves. If unity is claimed for the mind, it lies in that which underlies *all* phenomena, and not in its mode of action, alone known to us; and however varied these phenomena, it may be that a few simple laws underneath—attributes of the Source of all power—produce all the variety: "Pleasure

and pain being to voluntary motion what attraction and repulsion are to inorganic matter, and the Science of Morality to the analysis of pleasure and pain what the Science of Chemistry is to the different substances that compose this globe.* This unity of the noumenon, &c., may also account for all that at present seems so mysterious to us in clairvoyance and other normal and abnormal conditions of mind.† Whether we have any powers or intuitions which enable us to see "through phenomena to laws," and through laws to the Lawgiver, is yet matter for investigation. It would seem as if there were occasional gleams through small chinks which will widen with the ages. We have "a noumenal integer phenomenally differentiated into the glittering universe of things;" and to pass from one to the other, to be absorbed in universal being, is the great aim of the Buddhist, whose one infallible diagnostic is the belief in the infinite capacity of the human mind. The natural eye, he says, takes account only of appearances; it requires the severest discipline for a man to behold the reality. Prayer, fasting, and solitude constituted this discipline, and certainly as the brain is emptied of its natural force by these means, it is filled with force from without, often inducing a state of trance in which the barrier between individual and general mind seems at least to be par-

* Philosophy of Necessity, p. 21, second edition.

† Professor Tyndall says, "The passage from the physics of the brain to the corresponding facts of consciousness is unthinkable." Probably that is because the Professor has inverted the problem, and turned it the wrong way upwards. Let him turn it the other way and it may be more intelligible. The objects of knowledge are ideas, not things; as Hume says, "We never really advance a step beyond ourselves, nor can perceive any kind of existence but those perceptions that have appeared in that narrow compass." Neither do we require to know any other kind of existence. We have not the least reason to suppose that "the physics of brain," that is, the power of the brain, differs in any way from the force or power which underlies our consciousness. The passage we have to make is from consciousness to the powers of the brain, and not from the brain to consciousness, and this is intelligible in the same sense as all other things are intelligible. All things among physicists are gradually resolving themselves into force; as Huxley says, "Every form is force visible; a form of rest is a balance of forces; a form undergoing change is the predominance of one over others." Now, force and power are the same, and all power, as far as we know, and in all that we know, is derived, not inherent or self-created; and when we are asked "who or what impressed upon molecules the necessity of running into organic forms?" we say, I think truly, will-power, because this action upon molecules has a definite purpose. I think we are obliged to agree with W. R. Grove, that "All power is will-power,—the will of God," that "Causation is the will, creation the act of God;" and, judging from the analogy of individualised minds, may we not infer that this will, which originally required a distinct conscious volition, has passed, in the ages, into the unconscious or automatic, thus constituting the fixed laws and order of nature, and making intelligible the passage from our own consciousness to the unconscious "physics of the brain?"

tially broken down. But whatever may be the powers of man, and the relation of the concentrated forces which constitute his identity to the natural forces around him, we can scarcely be said yet to have placed their investigation on anything like a scientific basis; and Mr Le Gros Clark, in a lecture recently delivered to the council and members of the Royal College of Surgeons, said that the nature and functions fulfilled by the electric fluid in the sustaining of animal and vegetable life is still as profound a secret as was the law of gravitation before the days of Kepler and Newton. When this is done, and the light of science is let into this department, we shall at least be able to do for the onward progress in mind as much as steam has done for mere material civilisation. The power of the ancient magician, the miracles of all religions, the powers of clairvoyance are real, and we have only to bring them under law to make them serviceable,—not, as heretofore, to chicanery and superstition, but to a great advance in mental science. Surely this is the legitimate function of the Anthropological Society. The Society's *Review*, April, 1867, says, "To whatever cause it may be attributed, let us begin with the rather humiliating confession, that anthropology, both in its classification and terminology, is in a miserably confused and almost chaotic condition." This, I fear, is too true, although the last number of the *Review and Journal* (July, 1868) shows a more living interest. Would not the objects of the society be better promoted if "The Science of Man" were divided into departments, and committees were appointed to *investigate* and report not on what man *was*, and how and when and where he began, but on what he is now, here present, and what he may become under scientific development?

ON LIGHT AND ITS CORRELATES.*

BY HONESTAS.

WHY, says Grove, are the nights dark? why should the sum total of light emanating from fixed stars and our sun not illumine the world equally at all times? In a word, What does shade mean? why do I cast a shadow? Dr Jencken† gives us the following theory of light—one which the intuitions of Goethe‡ had in part suggested—namely, that shade is a negative state of light. He says that the universe is filled with the efflux of the ether element from central cosmic bodies, but that this ether is more

* Correlation and Continuity.

† Licht und Farbe, 1867, and MS., 1850-1852.

‡ Goethe's Farbenlehre, vol. i.

primary than light, swifter, more penetrative in its action, and only becomes light on being checked by passing through a denser medium; that the act of contact centralises the dark ray, gives it the final plasticity, and henceforth it becomes light. Shadows are something prior to light, and this brings me to reconsider the dynamic character of light, the third class of properties I made mention of in the introductory part of this essay.

Where does light not exist? where is it absolutely wanting?—In light itself. The beam of light from a fixed star alternates in light and darkness, twinkles, because it enters the solar atmosphere. The stripes of darkness in the solar spectrum, the feathered form, with luminous jets darting from point to point, all indicate the busy, active agency of a transition. The absorption of light is but a transition. The prior ether state* is shade, so also the onward state is shade—not light: it is heat, or some other form of transition. The theories of pent-up light, and latent heat, and arrested motion, are grave errors of principles. Great nature breathes forth its life-breath in endless forms of metamorphoses, undulates, in never-ceasing progress, all the forms of the phenomenal world into life. Movement, progress, change, not rest, nor permanency, is the all-pervading law of nature. The crude notion of an unchanging permanency of the material, belongs to the dust-covered shelves of the past.

What was light before it became light? is a question I must repeat: to reply to this the spectroscopic analysis needs being called into aid, and we shall have to go to the sun and the flame of candle to learn what this prior state is.

The discoveries of Fraunhofer (1814)—the dark stripes or bands he noticed dividing the colours of the solar spectrum, and which appear so regularly in one position, so uniformly that he gave to each dark bar a letter of the alphabet—these dark streaks in and between the coloured belt of the spectrum he not only observed at the edges, but also where the colour and light are the most intense. What are these dark bars? Kirchhoff and Bunsen, following up the idea of Fraunhofer, and according to the permanency of these dark streaks the importance they merit, suggested that these dark streaks represent the negative state of light, rendered so by the absorbing presence of a cloud or vapour through which the solar beam had penetrated on leaving the nucleus of the sun. Their researches resulted in their theory of the classification of certain substances supposed to be present in solar bodies; other substances, again—such as gold, silver, mercury, tin, &c., are not supposed to exist in the dark kernel or nucleus of the sun—that is, are not represented by dark bars, which are produced by allowing a ray of solar light to impinge upon the spectrum of an artificial light.

* Dr. Jencken.

The sunbeam in one instance kills the brilliancy of the colour produced by the incandescence of a metal; the negative phase, darkness, sets in, and in the other it does not; and the invariable position of the dark streaks led Kirchhoff and Bunsen to the conclusion that the metals so affected had their representatives on the sun's surface. It is somewhat bold to give to the theories of Kirchhoff and Bunsen a denial; nevertheless, I cannot admit the sun to be an incandescent body, surrounded by vapour clouds, which neutralise the light emitted from the central fire. On the contrary, I conceive the solar body to be centrativè cold, if the parallel will hold.

The observations of the eclipse of 8th July, 1842, gave rise to farther perplexity: a third atmosphere surrounding the sun was observed. These protuberances, what are they? Flame points, 80,000 kilometres long. M. Janssen, the French astronomer, has confirmed their existence in his report on the total eclipse of the sun, 18th August, 1868. Red protuberances surrounded the disc of the moon. These protuberances were found to be, by spectrum analysis, gaseous. I have not space to do more than give in outline the theories, and render abridged statements of observations. Suffice, then, if I name that the sun spots, and which since the days of Galileo (1612) had attracted the attention of savans, measure enormous surface areas; that they are jagged in outline, with a dark centre of irregular shape, traversed by "faculæ," or luminous streaks, which, wavy in form, appear like the bright side of a mountain ridge. Some of these flame points are, according to Lockyer and Carrington, 70,000 miles long. Prof. Tait and Schwabe, the latter during forty years, measured the equatorial position of the spots, established their recurrency, and made observations on their changeability of form. In some instances they close up in the space of an hour. Faye* attributes these spots to an uprush, and the darkness to feebler radiation. Carrington says that the upward current of hot air and downward current of cold air causes the spots;† and William Herschell resorted to volcanoes to explain the phenomenon, which, forcing a cloud of vapour through a photosphere, distorted its uniformity. Arago and Herschell allowed a thickness of 2500 miles to this photosphere. I am merely instancing the theories of men of great penetration, to show how they varied and guessed as they groped forward through the dark pathway of a new field of research. The theory of a dark central body of the sun, according to Herschell, Kirchhoff rejected, substituting, as already mentioned, his theory of an incandescent central body.

* Faye, *Comptes Rendues*. 23rd January, 1865.

† R. C. Carrington's *Observations on Solar Spots*.

One word as to the polarisation of solar light, and which Arago (1811) showed belongs only to flames emitted from solid and liquid substances, and not to those from gaseous bodies. The polariscope proves that the sun light is not polarised, and *a fortiori* that its light is emitted from a gaseous substance. Are not these conclusions too hastily made? Are not perhaps other laws present that regulate the phenomena of the spectrum? With all its apparent simplicity, the theory of a cold and dark nucleus of the solar body, and a burning photosphere surrounding a burning central body (but of a less temperature, cooler than the envelope), leads us step by step on to very uncertain ground. To burn, means to consume—to waste. Whence the supply? Surely not by the accident of meteorolites falling in upon the solar body. (*Mayer.*) The parallel of an incandescent body on earth does not hold, and proves the danger of generalising phenomena. I have already said that every material substance has a light of its own. There is a light of growing bodies, a light of decaying bodies; but even here the parallel can hardly be sustained. The sun is a body placed at the vortex point of the influx of the supplying ether and cosmic powers, and the source of its supply must not be sought in ponderable matter. The cosmic ether, the “urelement,”* centralising at the central focal point—or, to repeat a term I have previously used, the ether stream from the intro co-existing world—focalises at the sun, and pours forth from thence as light into space.

The experiments of Kirchhoff and Bunsen, and the physicists who have adopted their opinions, have led me to totally different conclusions respecting the solar spectrum. The solar spectrum results from a polaric expansion of the ether influx,† and the experiments with the spectroscopie only confirm that the coloured boundary line of light is marked by dark streaks. But where the presence of an incandescent atom of metal in the flame adds an element of check, aids arrest, the ether influx accumulates and transforms by this very accumulation into light, and from light into colour. But why, it will be asked, do not all metallic substances visible in luminous rays become extinguished by the brighter solar ray? The law here is that of polaric similarity. If we regard the sun light as expressing in its rays the positive and negative solar forces united into a focal point, and that in the artificial flame a parallel form of phenomena exists, we at once arrive at a law of the polaric conditions of the two, and are enabled to group the positive or negative substances together, by the respective extinguishment or non-extinguishment of the bright bars of colour light in the spectrum;

* Dr Jencken. 1852. † Ibid.

but to assume an absolute identity of the substances is, to say the least, premature.

The repetitive character of "fundamental phenomena," and to which class light essentially belongs, is observable throughout nature. It matters not where light appears—on the sun, in the candle flame, at the points of the electrodes, in odic light, or in the aurora borealis—its properties remain unchanged. And why? Certainly not because light is of one common origin, emanating from incandescent bodies, and in which state of "burning" the solar body is supposed to exist. No, on the contrary, the law is one of general application—namely, that the dynamic phenomena that accompany the growth and development of organic and inorganic bodies, and the law that regulates the resolution of these, are parallel, and light and heat and electricity accompany each transition step by step.

I propose to explain the correlates of light in my next and concluding paper, and the consideration of their nature, with which I shall have to deal, will lead me to the farther inquiry into the correlates of physical dynamic forces, and the inner, the intro forces that evolve themselves from the ether world within this ponderable and visible world. Before, however, entering upon the question of the correlates of light, one word of apology for having extended the papers on light to the length I have. My excuse is the extreme interest attaching to the investigation of this subject; and, farther, the position light holds, placed so to speak on the very boundary line of the transition from the intro ether elements. Heat, electricity, magnetism, wonderful as they are, bear no comparison to light and its luminous spheres, with which space is filled. It is the most marvellous of all phenomena, and the least understood.

THE IDEAL ATTAINED:

BEING THE STORY OF TWO STEADFAST SOULS, AND HOW THEY WON THEIR HAPPINESS
AND LOST IT NOT.

BY ELIZA W. FARNHAM,

AUTHOR OF "WOMAN AND HER ERA," "ELIZA WOODSON," ETC.

—o—

CHAPTER XLI.

IN the morning, Mrs Harding was assisted to her own room. John came in to see us, very much softened from the fierce demeanour of the evening, and evidently more than ever admiring the intrepid spirit that had braved and defeated him. Eleanore could scarcely raise her arms, and was at last obliged to send out and hire a working woman to come in for that day. There was that to be done up stairs which neither of

us, if quite able, would have been willing to undertake; and so we the more readily consented to the self-indulgence of hiring a drudge. When this was settled, and young Peters, who was still there, had gone for her, John sat down and poured out, but in respectful and more measured terms, his indignation and grief—mixing them up with earnest apologies for some rudeness he feared he had been guilty of last night. He said the funeral was to take place that day, at two o'clock.

"And what," asked Eleanore, after he had said all, "shall we do with Mrs Harding?"

"If you would oblige me so much, ma'am, as never to call her by our name, I would be thankful."

"Well, Caroline, then—that is her Christian name, I think?"

"Yes,"

"What is to become of her?"

"God knows, ma'am; I don't, I'm sure."

There was a long silence, in which he looked troubled, as a man does who knows that something is expected of him, which he has not the grace to perform nor the courage to refuse.

"Shall I advise you?"

"If you please, though I can't promise to follow it."

"She is not implicated in this dreadful affair before the law, is she?"

"No."

"Then, send her home, Mr Harding, to her family."

"She will be wanted as a witness, when he is tried."

"Yes, I suppose so. But do not set your heart too much on his punishment. He will get clear, I have no doubt. Nobody is punished here for anything they do. But I advise you earnestly, if she has not already means to return, to furnish her with them—your brother had money, you say—and, as soon as her presence is no longer necessary, to urge her going back."

"I will never speak to her!" said the man, doggedly.

"There is no need you should. It would be painful to both of you. But be a man, Mr. Harding, and open the way to self-redemption to her. She is very young, and will be, in all true senses, helpless and friendless in this dreadful country. There is but one fate before her, with the difficulties which now surround her, and that is such as one shudders to think of. She is not yet wholly lost, and be you the good angel to her future. Miss Warren and I will act with and for you; and ten years hence, if you both live, and she should be saved, how great will be the happiness of reflecting that you acted nobly, instead of revengefully, and thereby saved, instead of driving to desperation, a poor misguided woman!"

"I believe," he said, acknowledging, with a dangerous precipitancy, her influence, "that you could bring me to do anything."

At this speech they both coloured, and Eleanore said, hastily: "I have no wish or thought of trying what you could be brought to do, sir. I only appeal to you in this matter as my conscience bids me, in view of the ends before us, and as I would to any stranger so related to an unfortunate and helpless woman. Will you do it?"

"Yes; but you or Miss Warren must explain why, and by whose advice. I don't want her to understand that I did it myself. I loved my brother very much, and I don't forgive her his death"—tears filling his eyes—"though I do take your counsel about her."

"Miss Warren and I," she answered, "will do whatever is possible to farther this plan. Let us know where you will deposit money for her, and I will send a friend of ours to see to her safe embarkation when the time comes."

"I don't believe she will go," he said, "if this wretch gets clear; and if she doesn't, I'd kill them both if they touch a dollar of his. It's not the money, ma'am—but I would burn it, or sink it in the sea, before she should see it, if she goes back to him!"

"Yes, undoubtedly; you could not contribute to render her infamous; the object is to save her; and if that cannot be done, I approve your feeling. She will have to go elsewhere to-day. It is not desirable to Miss Warren or me that she should stay here longer, for reasons which need not be named; and in an hour or two, we will let you know how you can serve us in disposing her in some proper place."

He looked at her, in a sort of helpless astonishment at finding himself thus called on to act in a manner so opposite to his feeling, but went out without speaking.

"We must arrange for her," said Eleanore, "before the funeral. He may be less disposed to aid us after. Now, will you go up, dear, and tell her it is necessary she should remove to-day, and ascertain if she has money, and if she knows of any place to go?"

To all which I came back shortly with a negative reply, and an imploring prayer not to be sent away destitute, among strangers.

"The Marsdens," said Eleanore, "we know nobody else—shall I go up and see them? I thought the reports in the papers would have brought Mr M. down before this time. Are not they the best people to consult?"

"I think so. Only, pray, do not stay."

"You may be assured I will not, Anna, nor rest, now, anywhere, till this poor creature is safely housed away from us."

The people were filling the streets as she went out—a few on their

way to church, but more to other places of quite different character. In a few minutes, to my great satisfaction, she returned, bringing with her Mr Marsden, whom she had fortunately met near her house.

The story was told, Mr Harding called into counsel, and it was settled, finally, that, in case Mrs Marsden would consent to receive her, they should signal us from their upper window, by putting the red curtain outside, as they had more than once before done; and if she did not, then the good man was to return to us for further consultation. Mr Harding agreed to deposit to Mr Marsden's order money to pay her expenses for two months, and her passage home after the trial was over, which it was thought must take place in that time. If she did not go, he said, Mrs Bromfield and I might draw and bestow it upon any needy and deserving person we should find.

When they left us, Eleanore said: "Now I will go up and see that poor soul, and if she is ready, bring her down here. It will be less dreary than waiting up there alone. And I owe it to her and myself to atone, in some manner, for my almost harshness last night."

"Let me go, Eleanore," said I, "unless you particularly wish it. She may have some packing to do, and I think she would feel freer in accepting my assistance, just now, than yours."

"Very well," she replied; "only do not stay too long, Anna. I must have a few minutes with her before she goes, and I feel persuaded Mrs Marsden will receive her."

I accordingly soon had Mrs Harding down stairs, when Eleanore received her at the office-door with some tender words of compassion for the utter misery written in her face, and led her to our bedroom.

"Poor child," she said, as she seated her, "I hope you are a little better than you were last night. I spoke with less tenderness to you then, than your suffering called for. Forgive me. I would not be harsh, but the dreadful consequences of your—delusion—appalled and shocked me beyond expression, and I was powerfully wrought upon, at the moment, by a sense of our exposure, through it. I am not often so harsh, and I shall feel happier if you tell me you do not cherish a recollection of my ungraciousness."

"Oh, Mrs Bromfield," she replied, speaking with great difficulty, "do not say so many kind words! They hurt me worse than the others! Oh, what would my poor mother say? Oh, what can I do?"

"There is nothing you can do, child, to repair the terrible wrong that has been done," said Eleanore; "but in the time to come, you can heal some of your own wounds, by doing right. It is not so bad as if you had shared the fearful deed."

"Oh no, no! I never thought of it, though I was dreadfully fright-

ened when *he* came; but I didn't know that Mr Gray had a dagger, and I never thought of their hurting each other worse than with blows."

"But now," said Eleanore, "you see that he was a bad man, who went prepared for the dangers he might provoke."

She was silent for some moments, and at last faltered: "But, Mrs Bromfield, he didn't mean to do it. He said so afterward, and I know he didn't."

"We will not talk now of what he meant," said Eleanore, unwilling to hear her vindicate the murderer. "We are making arrangements for you to go to a quiet house, to stop till the trial is over—at which, you know, you will be required to give your testimony."

"I don't want to," she said, choking, and looking with such piteous, tearful eyes at us. "I can't."

"But you will have to," said Eleanore; "and I am afraid you may be put in prison if you say you can't to other people. Be calm, now, for a few minutes, and let me tell you how it is."

And then she went on to tell her all that pertained to the case, and her part in it, avoiding all expression of opinion as to the probable results, but assuring her that it was in every respect better she should not shrink from what was demanded of her.

"But his life, Mrs Bromfield!" said the girl, with ashy lips. "I wouldn't speak against his life for the world."

"Poor child!" said Eleanore, drawing near to her and taking her hand; "poor child! Is it so, then, that you love this wicked, dreadful man? I pity you, indeed. Do you not see that it can only be wretchedness and shame to you, and every one that cares for you?"

"Nobody will care for me now," she replied, "and if they did, I—I could not go away from him."

Eleanore turned to me in despair.

"You should remember," I said, "that he has killed your husband."

"I never loved *him*," she answered. "I married him because my father and sister Elsie wanted me to, and I didn't know any better. I didn't want to come here, and I wouldn't, if they hadn't made me."

Eleanore rose and walked away, deeply pained and disheartened. I took her seat, and with all the eloquence of heart and tongue that I possessed, I expostulated, entreated, and warned, but all in vain. Nothing would shake her loyalty to this wretch; and she declared, at length, that if he were punished, she would share his punishment.

Eleanore was walking up and down the floor as she said this, and turning suddenly to her, she asked: "Do you dream of the awful fate before you, if you adhere to him? Have you any idea how cruel he can be—how he can shame and torture and trample on you, by-and-bye?"

Did you ever hear anybody describe a devil? and do you know that a fiend would be merciful compared to what this man will be to you, when he is ready to cease lying and deceiving you? Did you ever hear of hell? and do you know that it cannot, at the worst, exceed the torments you will suffer in the life he will lead you to? Imagine your good mother here, speaking to you, Caroline, and do not answer us, but think of what we have said. It is time you were going now, to the house where you will have a home for awhile. They are excellent persons, both Mr and Mrs Marsden, and they have consented to take you because Miss Warren and I have entreated them to, that you might have a quiet home, among good and virtuous people, till the time comes when you can see more clearly than you now do. I hope you will not trouble or grieve Mrs Marsden, who will be gentle with you as a sister; and when all is over, I trust you will conclude to go back to your father's home. If you do, there will be money for you to go with, and our kind wishes will attend you. Antonio shall go up with you—you see, Anna, the signal—and I shall be very glad to hear that you are feeling and thinking better, after a few days. Good-bye now."

And we let her go reluctantly, feeling as if she were possibly plunging away to ruin as she went.

REUNION.

Thou spirit departed, whom once I called brother,
 Thou dearest beloved of our once joyous home;
 Thou pride of thy father's heart, joy of thy mother,—
 Oh! say, my fond brother, where now dost thou roam?"

We followed thee dumb to thy lone narrow dwelling;
 We rained the hot tear-drops of grief o'er thy bed;
 And heard the dull earth on thy coffin-lid telling,
 The sad solemn tale that our brother was dead.

We left thee a prey to corruption's foul creatures;
 We thought of thee there in thy cavern of gloom,
 Disfigured and crumbling to dust thy fond features,
 To loathsome vile earth, thy fair form in the tomb.

We thought of thee then as one dead to affection,
 To life all unconscious, insensate, undone,
 And only to live in our fond recollection,
 A love-link of joy till our life-race was run.

But years have been born, have been lived, have been buried,
 And left their deep traces on life's chequered way;

Yet through all their changes thou seem'st to have tarried
A still living presence about us each day.

For not thy fond mem'ry alone do we cherish,
That something still nobler exists seemeth sure ;
For how should we deem that thy *spirit* should perish,
And yet thy remembrance thus firmly endure ?

Ah no ! to my spirit thou still art my brother,
Thou still art the loved one of years long ago ;
Thy presence is near me, and somewhere or other,
Thou dwell'st in the regions of being, I know.

'Twas not *thee* we laid in that damp hollow chamber,
'Twas not over *thee* that our hot tears were showered,
Thou wert far away from what could encumber,—
Away in the home of the angels embowered.

No more should we mourn thy pure soul resurrected,
'Tis but for a season thou'rt hid from our sight ;
When earth and her sorrows and sins are rejected,
We'll meet thee again in the regions of light.

Glasgow.

JAMES BROWN.

PSYCHOLOGICAL INQUIRIES.

SPIRITUALISM AND SCIENCE.

I AM sorry to find the old cry from writers in *Human Nature* to the effect that "If it is not spirits, what can it be?"—and I am asked to do the very thing that I have denounced—that is, I have been asked to produce a theory before a sufficient number of well-ascertained facts have been accumulated on which a theory may be founded affording a satisfactory solution. All I wish at present to do is to check the old and unphilosophical habit of hasty generalisation ; for novel facts are presenting themselves to our notice every day, so little have we as yet got to the end of our tether. But, if in the end, it is shown that many of the facts are accounted for without the agency of spirits, but that others cannot be so accounted for, I am sure that I shall be very pleased ; for I care not what the truth may be : all I desire is, that we should not, in our impatience of doubt, jump to conclusions, and thus, by anticipation, obstruct the way of real scientific progress by correct and careful interpretations. Now, Dr Chance, in his very interesting article, says, that he cannot conceive how "mere emanations," &c., "can produce the phenomena." But I would ask him whether, in writing that sentence, he had any conception of how that wonderful phenomenon was accomplished ? No doubt the thing is very easy, seems very simple, the writer not sensible of any effort ; but have we the least conception of how it occurs ? We know there are mental and physical facts

concerned, but how the one acts in relation to the other is yet a problem to be solved; and it is by these exceptional instances in our so-called spiritual phenomena that I hope to solve it, and explain the real nature of mind, the cause and nature of the physical action concerned both in brain and muscle, and the reason of the influence upon pen and paper, which has seemed to be so simple because so familiar, but in reality presenting the same difficulties of solution as the extraordinary instance of a table moving by an "emanation" without the agency of the muscles, or again, of a pen writing without the intervention of the hand, and conscious thinking and intention. In the first place, what are our thoughts but mere phenomena, and mental correlates of the physical actions which give them birth. When Mr Bray talks of the phenomena of consciousness as a form of force—his force being only another term for matter—his words convey no meaning, for it is unintelligible nonsense. The perceptions are not powers at all, but the mere ordinary mental concomitants and the sense of power, but in themselves mere sensation, beginning and ending as such; but the physical action that produces them may go on without inducing the mental correlations at all—which all our unconscious actions throughout life proves. Here, then, we have the chief element required—the unconscious but intelligent power, so to speak, or formative process, fitted for our purpose. But then comes the question, How can the objects be moved without the intervention of the muscles touching and so moving the object? But, in ordinary action, does the hand touch and so move the object? Most certainly not; bodies never absolutely touch. Then in principle there is no difference—it is a mere question of distance, of degree, and, in the ordinary action of moving a table and in the extraordinary one, the effect is equally produced by an emanation conveying the power through a distance; and as for the non-intervention of the muscles and the "muscular power," the fact is that the muscles rather use up the force on themselves as they convey it than create it, as I can prove by certain experiments under mesmeric action. Now, let it be clearly understood that I am advancing no theory, not even an hypothesis, but merely stating a few facts that seem to bear upon the question—but enough, I hope, to show that my notions on the matters in question are not quite so shadowy as my objectors seem to suppose—the fundamental facts which we observe in nature are objective existences—existences or bodies producing effects according to fixed laws—that is to say, that under similar conditions similar effects will always occur in a similar way. But, besides the objects of material nature, we find there is a universal medium which, for distinction's sake, we may call spiritual; and it is by this agency that all action whatsoever occurs—whether it be gravitation, or light, or mechanical or muscular force, or any other power or action whatsoever. Then we have the mental phenomena—the sense or perceptions of such facts either immediately perceived or by inference; and all perception is instinctive and a clairvoyant power, having a material basis. Such are the facts of nature, but I have not yet detected a spirit; and, if I had, it must have had a substantial or material form and nature of some kind, or it would be a mere unintelligible, meta-

physical abstraction that could not be detected. Spirit can only be conceived of as a rarer character of matter. Then there is no escape from a material base or substratum; for, in the notion of a mind disembodied, you have to embody it again in a spirit, a fiction clothed by fancy, but no escape from substance, which can only be a material of some kind, or it would not be any conceivable entity at all. Then, why all this senseless talk about materialism, as unphilosophical as it is foolish? The nature of matter and of the intervening medium is of such an inconceivable subtlety as far to exceed even that of the sense or understanding, and all your conceptions of spiritual bodies are gross in comparison; and if this wonderful material be endowed with, or in its very nature possessing, under special conditions, the property of thought and feeling, or of the still more astonishing instincts of the lower animals, it is but a question of fact, whether we comprehend it or not. We must accept the nature and correlations of facts as we find them, whether it be agreeable to our pride and foolish fancies, or not. Had we the ordering of things, no doubt the mode of our birth and of our death in this poor life of ours, so gross in the beginning, and yet more so in the ending, would have been very differently fashioned; but no good comes of trying to escape from our nature to rise in fancy above ourselves. Let the poet do what he may, the philosopher must hold by the truth, and make the best of the facts as he finds them; in that lies all his power and usefulness, and all our hopes of progress. The really only spiritual, by which meaning metaphysical fact in regard to man is his mind—and by mind I mean simply and solely the phenomena of consciousness. The power attributed to the will is the physical correlation and concomitant of which the mental correlate we call will is the mere sense. It was the confusing of the physical condition with the metaphysical accompaniment that has been the cause of half the difficulties in philosophy, as well as in morals and religion. I shall have to explain this more clearly and fully of course, for the matter is deeply and fundamentally important. But, to return, the term spirit does not convey to my mind the notion of anything more subtle, or rare, or capable, or sublime than the magical, incomprehensible wonderment of material nature as we find it, and are able to inspect it and operate by its means. I have been challenged on the question of design, but fear that I have already trespassed too long. Sir William Hamilton abandoned the argument from design, and so have the deeper-thinking theologians, such as Dr Irons, in his work on final causes. As to Mr A. B. Tietkens, from his discourteous expression I doubt his ability to appreciate what I might say in reply in reference to the moral principles that have actuated the noblest lives; and, to end, as an explanation has been required of me, who have no theory to offer, I think I may return the compliment, and ask for an explanation of the theory of the spiritualists; for their theory, in fact, has yet to be explained in its very first assumption. I have asked George Combe over and over again why he believed in a spirit enclosed within the body as a bird in a cage, and, as he expressed it, "using the body to show forth its powers"—how he could reconcile such a notion with phrenology and physiology, and the nice and exact reading

of character and conduct that he professed, and no explanation was forthcoming; and I do now repeat the question, though perfectly sure that I shall not get any intelligible and satisfactory reply; and, failing which, what comes of the spiritualist's theory? The bird must be in the cage before it can come out of it; and, if it be there, how did it get there? where did it come from? and what is to be attributed to it in its relation to the body?—and unless this can be satisfactorily shown, there can be no science of phrenology or of physiology. And it was for stating this that our noble countryman Sir William Lawrence got into such ill odour with the ignorant and the bigoted, but he died Sir Wm. Lawrence, Bart., for all that—not that I would designate the believers in spirits as ignorant or bigoted by any means, but only rather hasty in their conclusions.

HENRY G. ATKINSON.

N.B.—The kind readers of my "Letters to Miss Martineau" must remember that they were written before the occurrence of the later phenomena which we are now considering, and were merely intended as a slight exposition of scientific method applied to the study of man, suggesting some new means of experimenting, and the kind of facts essential to the enquiry.

MR DAVIS'S "ARABULA."

(*To the Editor of Human Nature.*)

Dear Sir,—In your interesting number for July of the present year, at page 321, I find an article, headed as above, containing two columns from authors, widely separated from each other—the one dated Boston and the other London—and placed in juxtaposition, so as to exhibit the similiarity of both, yet bearing dates of three years apart; the question being asked by "J. F.," the mediumistic writer of "Primeval Man,"—"How it is that Mr Davis could have fallen into this *plagiarism* which to her is unaccountable?"

From this distant standpoint, isolated from all seances, and from what are commonly called spiritualists and spirit-land, surrounded by all that is commonplace, material, and commercial, I am unable to answer the query of your fair correspondent, or to throw the least glimmer of light upon the subject; but possibly I may add a little interest to it, and show that "*plagiarism*" is not a term that can be properly applied to it, if a short quotation from an old writer may be permitted, and I may not have been forestalled or anticipated.

In 1847 there was a valuable little work published in New York, by Mr John Allen, 139 Nassau Street, entitled "Mesmer and Swedenborg; or the relation of the Developments of Mesmerism to the Doctrines and Disclosures of Swedenborg. By George Bush." In the preface, the author confesses to have little to say in the discussion of the purely physical effects of mesmerism, and proposes no theory of the nervous influence, or any other by which to account for the phenomena, his aim being altogether different; but he wishes to show that certain psychological facts are strikingly illustrated by the statements of Swedenborg in regard to the phenomena of the spiritual world. But my object in alluding to this work of Professor Bush, is not to speak of its contents

or to comment on its arguments, but to refer the reader to Appendix A, where the writer, by way of confirmation and illustration to his previous remarks, dwells at considerable length on the "Revelations of Mr A. J. Davis," making long quotations from Swedenborg's "Animal Kingdom," "Arcana Cœlestia," and other works, and placing them also in juxtaposition, or the one close to the other, with Mr Davis's presumed writings, showing a wonderful similarity, even to a whole line of figures as used by the Baron to distinguish his sections, and answering to similar results as conspicuous and novel, already alluded to at the commencement of this subject. Puzzled at these strange manifestations as we all seem to be, even for twenty years afterwards, the Professor solicited an explanation, and received unexpectedly the following letter, which he gives with all its "grammatical imperfections on its head" at page 175:—

"Poughkeepsie, June 16, 1846.

"Dear Sir,—Yesterday morning, after eating breakfast at 49 Washington Street, where my friend Mrs Lapham lives, I went down to the book store, to get some paper to write a letter to ———. After buying it, I visited several persons about the street, staying only a few minutes at each place. Soon I had a desire to go down to the river. What caused it I don't know; but went down, called on one or two friends on the way.

"I soon lost all knowledge where I was; recollect of being about the river somewhere, and also ascending a hill. I am conscious of meeting the same person that I had seen in the graveyard in Hyde Park. I also remember conversing with him, and taking out my pencil and writing all the thoughts given me. I remember him leaving me suddenly, and I came out the state. I was surprised to find myself wet with rain; the paper on my lap, and dry; and being in the mountain opposite Poughkeepsie, about 4 miles, where I had been before two years ago.

"I came directly home; it was six o'clock in the evening. I was wet and muddy, and very hungry. The paper had *not* been wet. The very moment I came into the natural state, I *felt* you should have the paper immediately. I do not understand the meaning, nor the letters A. C., and them *figures*.

"It appears now that I knew it then, but can't recollect what it was. As I felt impressed so strongly to send it to you, I do so, for it must be right. The friends here can tell about it. I am at Mrs Lapham's, 49 Washington Street. If you can tell me about the meaning, please write me at the above No. I copy the writing exactly from the paper, as written by me then. Yours, &c.,

A. J. DAVIS."

If this be deception or cunning, it is more remarkable or plausible than that exhibited by "the foolish boy who perished in his pride" when he copied the "Rowleyan relics" from the vaults of the old Bristol church. But the Professor is cautious and painstaking in the object of his research, and "though well assured himself of the claims of Mr D.'s statements to entire confidence, arising from the general conscientious honesty which governed his deportment, yet does not say that this quality exists with him to such a degree as absolutely to secure him from the inroads of false impressions." And so he wrote to his former employer and received as follows:—

"Poughkeepsie, October 17, 1846.

"Dear Sir,—Circumstances have prevented me from giving you an earlier answer to yours of the 9th inst. than could have been desired.

"In regard to A. J. Davis, and your inquiries respecting him, I am happy to give the information desired. He was an apprentice to me, and boarded in my family for nearly two years. I was daily and hourly in association with him, and under circumstances which enabled me to form a clear and perfect estimate of his character, the leading trait of which was integrity in its broadest and best sense. His education was very limited—that, I mean, which is acquired at school; but I employed him to keep my books, which improved him somewhat in writing and casting accounts. In his own statements you may place the most unbounded confidence. I never knew him to deceive or equivocate in my life. His character before I knew him can be traced in this neighbourhood from his infancy up to the time he left me like the lines on a map, and it is all of a piece. His reading was also very limited, and mostly confined to books of a juvenile or narrative description.

"IRA ARMSTRONG."

Although doubtful on some points, and unable to confirm others, Mr Bush is unwilling to resist his testimony as to the powers of the "medium." In a foot-note at p. 182, he states:—

"Of these lectures, I have heard two or three delivered, and have heard read from the manuscript parts of forty or fifty more. They are certainly very extraordinary for the extent of ground they occupy—touching upon nearly all the great themes of human knowledge—and for the soundness of the conclusions on subjects of which he was previously utterly ignorant. In ordinary circumstances it would be impossible for such topics to be treated, even as ably as he has treated them, without a wide range of reference to books. In this case I am positive he has consulted no books whatever. I can scarcely expect this will be believed upon my assertion; nevertheless, it is unquestionably true."

On another occasion Mr Bush describes an interview, p. 180:—

"Throughout he spoke with a clearness, calmness, and discretion which was truly admirable, and elicited expressions of wonder from all who were present, as they were perfectly satisfied of his utter incapacity to talk in such a style in his natural state. And, what is remarkable, although I had my manuscript with me, from which I wished to propose certain queries relative to the correctness of my interpretation, I found I had no need to refer to it, as he was evidently, from his replies, cognizant of its entire scope from beginning to end, though all the time closely bandaged and unable to read a word by the outward eye. This will appear incredible, *but it is strictly true.*"

In all probability, since 1846, if his natural talents have not improved, Mr Davis's mediumistic powers may have greatly expanded. Who therefore can now fathom the depths of these spiritual mysteries, and where is the glossary to interpret them? The investigation may prove a source of delight and profit to all who may have the leisure and interest to pursue it, a privilege not falling at present to the lot of,

Dear Sir, your obedient servant,

Cape Town, S. Africa,

W. L. SAMMONS.

Aug. 19, 1868.

"NATURE'S DIVINE REVELATIONS."

(To the Editor of Human Nature.)

SIR,—In Davis's clairvoyant work, "Nature's Divine Revelations," published twenty years ago, part 2, sections 41 and 42, are several statements regarding "attraction" in which it is laid down as a prin-

ciple, that the tides are not caused by the moon's attraction, but by some other cause not specified, for the reason that "it does not become the character of this book to discuss previous opinions, incorrect hypotheses, or points of philosophy thought to be established" "upon the appearances which things have presented, for then the discussion would be almost without end."

I wrote to Mr Davis on the 9th September last asking for further explanation, and this is what he has written in reply, dated 26th September:—

"Since the delivery of 'Nature's Divine Revelations,' I have not received the least additional ray of information concerning the 'tides.' The theory may be true, or not; I wait, *seek* more light. If it comes, it will be my first duty to let the world have it. But I think the scientific world is now going to school, and the wisest are learning new lessons respecting 'attraction, repulsion,' &c.; so that, ere long, even the periodicity of the *tides* may be accounted for upon principles of *MOTION*, instead of gravitation and attraction, as in the system of the noble Newton. I see that by the recent eclipse of the sun astronomers have discovered with their instruments what clairvoyance reported concerning the constitution of that central orb twenty years ago—its condition similar to the central part of the earth, fiery, &c., as evinced by the rose-vapour flames or protuberances visible in its atmosphere. If Force is the primal cause of all 'Motion,' everything, including tides, must be referred to that motion, while the effects called 'attraction' and 'repulsion' must be accepted as *co-incidental* therewith, and *not as primal cause*, which, perhaps, is the mistake in the Newtonian theory. But, perhaps, the mistake was in *my* clairvoyance, and the subject can remain an open question, tabled for the present."

Newton, in speaking of gravity, said, "It exists and acts, but I have not yet found out the cause of it."

In the *Banner of Light*, Boston newspaper of the 24th October last, is an article written for that paper, "On the causes of tides, and other physical phenomena," which bears directly upon this interesting question.

Professor De Morgan says,* "The time may come when a step nearer to the first cause shall raise a smile whenever gravitation is mentioned; the time may come when attraction shall be saddled with some contemptuous nickname, say the *pully-haully crankum*. But this will only be done by the pseudosophs. The number 999 of the day, when he writes against number 1001, will twit him with being one who 'ought rather to have lived in the days of our well-meaning but blinded ancestors, who were duped by the notion of matter attracting (!) matter.'"

A. B. TIETKENS.

PSYCHOLOGICAL PHENOMENA.

MR HOME'S MANIFESTATIONS.

THE FIRE TEST.

WE have at last resumed our meetings; long vacation, like everything else, must end, and wintry showers have driven truants back to their

* "From Matter to Spirit," preface p. 25.

homes. On the evening in question, seven of us met, and, after the usual forewarnings of spiritual power, a cold current of air, like the draught from a half-open window, having passed over our hands; loud raps came upon the semigrand, which moved six to eight inches off from the wall into the room. A sentence was then spelt out, in answer to some remarks made by a young friend, who complained of the violence and inferiority of the manifestations in his presence; though really a medium gifted with considerable power, he had been frightened. "Would you dare do so to mortals?"—meaning, would you be rude and incite anger by absurd remarks addressed to your fellow-men as he had done at seances? The table we were seated at now raised itself fully twelve inches off the ground, and remained suspended in space for about one minute. Mrs J—— was then touched, so also Lord —— by a spirit hand; and the oval side table, at some ten feet distance, tilted and trembled, though no one was near nor touching it.

Mr D. D. Home had by this time gone off into a trance; after a short pause, he awoke, and, walking to and fro, took hold of *Glavill's* book on *Witchcraft*. He then appeared to be angrily conversing with spirits who were holding intercourse with him. On opening the door of the room, his whole gestures and manner betokened the presence of invisible guests he was introducing into the room. Then he pointed to *Glavill's* book,—his face glowing again with an expression of sorrow and pain. He then re-opened the door of the room, as if though to usher in other guests; then, taking the candle, he proceeded to the measure of the elongation of his body we had made on the wall of Mrs H.'s drawing-room on the 8th December last. Walking into the middle of the room, he said, "See, I am being lengthened; I want to show the elongation" (this I estimated at perhaps four inches). After this he seated himself on the hearth-rug, having arranged a chair for an unseen guest, and, stirring the fire, commenced explaining the *fire tests*. These tests I have had the good fortune of witnessing; in all three times.

Rising from his seat at the hearth, he stepped up quickly to Lord ——, and placing *Glavill's* book underneath his extended hand, made several passes over Lord ——'s hand; and, after balancing the book on one finger, gently withdrew his hand. The book, only just touching Lord ——'s outstretched hand, remained *suspended in space* for three minutes, and only fell to the ground upon Mrs J—— passing her hand underneath the book and Lord ——'s hand. My friend described his feeling as if a cushion of steam had held the book in its position. Fortunately the full clear light of the wax tapers on the mantelpiece enabled us to watch this phenomenon with the utmost precision, and enabled us to verify the truth of what we were witnessing by our own eyes. This manifestation was repeated twice.

Mr Home now left the room, and, proceeding to the library of Mrs H——, returned with Volmer's *Geschichte der Mythologie*—a well-known and learned work on mythology—then, re-seating himself at the table, arranged the books he had collected in the form of a cross, Volmer's book forming the centre, and *Glavill's* book and *Incidents of my Life* (D. D. Home) the cross pieces. He then, addressing us, delivered a most interesting oration on the religions and superstitions of mankind.

The notes I have taken are necessarily imperfect. I am no stenographer, and to follow the words spoken in rapid succession, is a task difficult to accomplish; but I render to the best of my ability. From notes made, he said: "What was the religion of mankind in past ages? Gross, impure, dark. Blood to appease an angry God (pointing to Volmer's Mythology); blood to appease mankind (pointing to Glavill's book); men weltering in blood, weltering in fierce torture, persecution; the pages of the history of the progress of the Christian religion are filled with blood, fire, and torture. These horrors were to answer, were to gratify the ignorance of the age. Oh! what a page—what a terrible strange page in the history of the development of mankind! Men created in their wild fantasy an image of their own, and worshipped it; this even the early Christians did, and with blood they baptised their own made, brain-created idol image, butchering their fellowmen. Men feel the inborn love of the Creator, and yet to worship him, set up objects of depravity, shed blood, innocent blood, in their wild, terrible worship. But men are not to blame; it is their teachers, their priests, who have kept them ignorant, and withheld all, all they well knew, and bound the human intellect down by meaningless words—by the cobwebs of their mysteries. Who dares to sweep them away? who dares to be the reformer? not we—no, not we! The change must come from the material side, from your side; and though blood, and fire, and sword are no more the weapons used, a moral persecution meets all who dare to move forward. Despite all your vaunted advance, your age is as dark as the periods of the past, and men are as priest-ridden as ever." Mr Home then again placed the three books in the form of a cross—"Mark what men have done these last two thousand years. Shed blood to appease a God—an idol of their fantasy; blood to appease mankind; blood they have shed in the darkness of the heart, and in violation of the law of God; truth has been spurned, blasted, kicked about by whosoever willed; and the ignorant have erected a symbol of faith—a symbol to be hung about the necks—a material symbol of the soul—not a symbol of their worship of God; no, the symbol of strife, of battle with one another; a symbol of sacrifice, the sacrifice of human beings—a sacrifice to their own intense selfishness. Relinquish self, give up self; this is the true, pure sacrifice asked by a loving Father—the sacrifice of self, of our selfish passions. The blood was not shed for any good; no, it was blood shed to appease a superstition, it was a baptism of blood, of suffering. But enough, it does no good to gloat over the horrors of the past."

A pause now occurred. Mr Home appeared to be occupied with several spirits present, and, addressing us, explained that so many strange spirits had come, they rather disturbed. He then explained to the invisible guests the extraordinary elongation he had undergone on several occasions, and pointed to the measure marked on the wall, taken on the 8th December last by the Hon. Mr ——— and several others present. He then resumed his address, and said:—

"Suppose a man had created the earth with infinite labour, infinite thought, and had then to destroy his handiwork, would he not weep at the sacrifice of so much labour lost, so great pains to no purpose?"

And God who has created, formed, fashioned all to the last grain, the smallest leaflet, would he destroy his work, destroy part of himself? Why, God's nature permeates all creation, everywhere is his presence; his spirit, like the leaven, acts on the lump of dead matter, until it breathes into life, until, like a ray of light, it shatters the walls of darkness. And the great mystery, the wondrous marvel of all, puzzles, overwhelms you. Are you not aware that archangels are like you, are awe-struck at the immensity of the mystery, the veil of which they cannot raise—that the wider the expanse of the view, the greater the wonder? We, too, have to learn; the highest of the high are only students, only children of God. We would fain tell and teach you all, but you are not fit to learn; your organism cannot receive the impress from our minds, the lessons of *truth* we would teach you. You regard nature as powerless, dead, a mere materialism, without purpose, aimless! Why, great, glorious nature is a harmonious whole, an organism perfect in its parts—as perfect, and infinitely more so, than the organism of the human body. Each atom, to the very last, plays its part—is made, sustained, for ever sustained, because it is infinite in its creation. God created, God sustains, and, amidst all this grandeur, man's ambition stands forth and hinders; for he bids to be master over all, to lord the world. In his conceit alone he is wise, not else; and in his conceit he paints a God to suit his ambition, his hatred, his vice and ignorance—a material God. And God, the great Creator whom none have ever seen, ever can see, whom only our soul knows of in prayer by the intuitions of our inner self, men depict and paint an idol of *theirs* to fit the weakness of their brain. Suppose you had to paint the highest peak of the Himalaya mountains, never having seen it, how each of you would differ in *your* paintings from the other; each would draw it differently, none rightly. And so it is with God: each conceives a deity according to his idea, an ideal, a standard of his own; but none are perfect, none can give more than a reflex from the brain of a man. But how are you to know of God? Begin to study him in every atom, in each flower, in the fleeting clouds, in the stars of the firmament; study his works printed on the pages of nature, and you will then learn the true worship of God in the truths of his works—worship him in his deeds. Bear in mind that you desire to realise all without study, without self-denial. The child is sent to school—the poor send their children to the Sunday-school—and things are taught you yourselves do not understand. You are so wise in your own conceit, you send your children to school, and close your eyes to all truth, bar out nature. The world-wise philosophers stand aside and disavow the phenomena they witness, because it wounds their pride to say that they do not understand them; and yet, with all, you must own your utter inability to explain even the most ordinary phenomenon before you. For instance, can you tell why the colour of the hair of some is dark, and in others light? No, you cannot explain this! And yet you seek to appease a God whose very nature you do not understand; you seek to appease him by bloody sacrifice, by persecuting others who only peradventure differ—have done as you, created a brain image of God for themselves.”

Mr Home then again arranged the books in the form of a cross, remarking that they had been disturbed—"Do you know that moving the books made a gap, a hollow in the electric fluid? Mr H. taking the book on his knee quite made a gap;" then pointing to the work on mythology, said, "Here we have true materialism in its purest form—a religion of material gods, purely material." Pointing to Glavill's book—"Here we have materialism in its most dangerous form—irrational materialism of religion, the terrible persecutions, the bloody sacrifices of man to his own material idea of religion, the sacrifices of priests." Pointing to D. D. Home's book—"Here we have materialism spiritualised—a first step towards the ascent into a higher, freer atmosphere, unfettered by the materiality of narrowing thought—yet imperfect, only a dawning after a long night of darkness and ignorance." His address now became interrupted, saying, "There are spirits present arguing with Dr Elliotson and Dr Jencken; they have brought many here to witness the manifestations, and they are dissatisfied with the result. They want to see the *fire test*—I will show it them; they won't believe it possible."

Mr Home then proceeded to the hearth, and, breaking up the back of burning coal with his hands, placed a lump, the size of a very large orange, on the palm of his hand, and then, still addressing the invisible guests, continued to explain what was going on. After carrying the coal about for three or four minutes on his hand, having allowed each of us to test the intense heat, he put it back on the grate, and, to further satisfy us, showed his hands, which were not even blackened, and, strange to say, emitted a perfume, to which he called attention. After a moment's pause, in which, evidently, a discussion was going on between the invisibles themselves, Mr Home said, "They still doubt the phenomenon; I must take another lump of burning coal; they say one side was black." He then proceeded to the hearth, and selected the hottest incandescent lump of coal, not quite so large as the last, but burning hot; then turning round to us, said, "Only imagine, they will not allow it possible." He then thrust his head into the grate, holding his face over the burning coals, and receiving the flame points on his hair. To those who have never witnessed this there is something awfully solemn, I might all but say terrible, in this ordeal, the dread fire test, that stands on the highways of the past warning mankind of the horrors of the power of superstition. Withdrawing his face from the flames, "See," he said, "Daniel has not burnt a fibre of the hair of his head." I cannot conceal that I shuddered. But the *fire test* did not terminate here; walking slowly up to Lord —, who was seated next to me, he said, "I will farther convince you of the truth of the phenomenon. Now, my lord, if you are not afraid, I will place the coal on your hand." I interrupted and proffered my hand, but was soon warned that my power could not shield me; though I only touched the burning coal on the dark side, and that for a moment, I burnt my finger. With singular *sang froid* Lord — put out his hand, and received the burning coal upon his palm. I closely watched what was passing; the heat of the coal was intense, sufficient to have charred an inch plank right through. Mr Home said, "Now, I will further convince them (mean-

ing the invisible guests), and, taking the other hand of Lord —, pressed both hands firmly upon the glowing ember. The heat permeated through the back of the hands, which felt as if on fire; I could hardly bear it. After two minutes, the grasp was relaxed, and, on examining the hands of Lord —, not a trace of injury, or burn, or even blackness was visible. Fortunately we had a good clear light in the room, and those present, by their quiet and thorough investigation, aided to satisfy beyond doubt that the marvellous fire test applied to a guest who was not a medium was really being witnessed.

Mr Home then again addressed us, and said—"I have convinced them now; their incredulity is pretty well conquered; but they want some other spirit to try, who does not understand how this is done. Well, let him, but they must not hurt Daniel; but I do not think he (meaning the spirit) knows how to manage the experiment." He then proceeded to the hearth, and, taking a small piece of coal, not thoroughly hot or glowing, said: "Just see, Daniel has hurt his hand; the coal has blackened the hand—burnt his hand." Mr Home now stepped up to a side-table, upon which was placed a flower-stand, and, holding his hand about eighteen inches to two feet above the flowers, extracted the moisture and perfume—the finger tips becoming bedewed with large drops of perfumed liquid. Again speaking to the spirits, he said: "You see this also can be done; we can extract the perfume from flowers, and carry fluids through space."

He then appeared to be speaking to some of the invisibles, and, opening the door, made the usual parting salute; then, conversing with his spirit friends, he appeared to enjoy a laugh, and reiterated his satisfaction at the result, which had puzzled some of the spirits; after which, he re-seated himself and addressed us:—"Are you aware, do you realise that the phenomena you have seen to-day is what mankind call a *miracle*; that you have witnessed the *fire test*—the terrible, traditional *fire test*? Will you now be more in earnest to teach the truth? will you now be more sober in your investigation, more prayerful, more truthful? Yet what you have seen is no miracle—no suspending of the laws of nature, of the laws of God. This cannot be; we only passed currents of what you call electricity round the coal, and prevented the heat from attacking Daniel's hand. Mankind do not know their power—they, too, ought to be able to do this; their power over all materiality is boundless, only they do not know how to use their power. Faith is a patent force in nature; how few of you understand this, and yet every page of the history of the past teaches this. We repeat, we performed no miracle, nothing supernatural; all we did was by arranging the electrical currents to shield the hand from injury. Look at the hand; no harm has been done, the epidermis is as uninjured as ever—not hardened nor covered by an artificial coating. From all we have told you, you will learn that it is a natural law that has produced these phenomena—one of the laws God has created. You little dream of your own power; but you can use it only when guided by reason. Then you may listen to us. If, for instance, a spirit told you to place your fingers into the flame of the candle, would you do so? Certainly not; your reason would rebel, and, by violating a law of nature, you would incur the

penalty of an injury. God protects you by giving you reason. The great error of men is to yield up their reason to others; to allow men in authority and *priests* to guide, when only our reason ought to be the ruling element. Now, this evening we made passes over Lord ——— hand; these shielded him from injury, whilst Mr J——, though willingly proffered his hand, burnt it, and yet he only touched the members for a moment with the point of his finger. In the first instance, preparatory measures had been taken, and all understood this, whilst those who had not been protected were certain to sustain injury by contact. The selfsame coal placed upon an inch plank would have burned a hole through it. Are you now satisfied?"

Mr Home by this time showed signs of exhaustion, and, sinking back into the arm-chair, said—"Remove the books; do not tell Dan of what has occurred, and let him wash his hands; purified by water, the contact becomes broken. You will understand the high significance of water baptisms by and bye; we will explain this some day. The *fire ordeal* you have witnessed, and it has been explained to you."

He now awoke, staring about quite bewildered: the pupils of his eyes dilated, and for a time immovable. Our circle having broken up, and several of the guests having left, we seated ourselves for a moment around the drawing-table just to have a final chat, when loud raps came, answering to some mental questions. Mrs H—— had her chair pushed back two or three feet, and the table vibrated and tilted a greeting as we finally parted for the evening.

I have to apologise for occupying so much of your valuable space but the subject is so replete with interest that I may be excused for having given the account of this remarkable seance *in extenso*. Fire ordeal, fire tests stand at the portals of the past: what they meant whence they came—those dread fantasies of a superstitious age, we had need to ask to what use they were intended. What a flood of light the phenomenon we have just witnessed throws upon the subject. We thus are enabled to understand their meaning.

But enough; your space has indeed been trespassed upon beyond all bounds. In my next, I will give you an account of an equally remarkable seance.

HONESTAS.

MESMERISM A SPIRITUAL POWER.

THE following extracts from the letter of a former pupil of the Glasgow Curative Mesmeric Association, now in New York, will doubtless interest many of our readers:—

"I have just returned from hearing a trance oration on 'Curative Mesmerism—How does it Act on the System?' For the last three weeks I have been attending lectures by Mrs Fanny C. Allen, in connection with the Society of Progressive Spiritualists. She is a woman about 25 years of age, apparently, with nothing very remarkable in her appearance, except her dress, which is in the Dr Mary Walker style. The skirt of her dress reaching to her knees, and knickerbockers, cut short by boots reaching six inches above the ankle, is about the style in which she walks the stage. Mrs Allen is a first-rate medium, and

speaks like a book—shooting forth sarcastic thunderbolts, diving deep into her subject, and then, torpedo-like, scatters her opponents by her irresistible facts. The subjects for her lectures and poems are given by anyone in the audience, in writing, and she at once goes into the subject without the least hesitation. Gathering up half a dozen papers with poem-subjects, she glances at them, shuts her eyes, gives a few spasmodic movements of the head and body, as if she felt cold, and then pours forth a poem abounding in poetic thought of a high order, and destitute of meaningless words, touching on the various subjects submitted, and lasting, on the occasions on which I heard her, ten to fifteen minutes.

“When I saw her advertised to lecture, I thought I should like to hear her speak on the subject mentioned above, and carried it in my pocket these last three weeks, waiting the opportunity of having as large an audience as possible; and as there were at least 500 present to-day, I gave in the subject, and anxiously waited the result. Of course, in the time allotted for the lecture (an hour and a half), she could not say very much on the many subjects submitted, but fortunately she selected my subject as the one for her lecture on this occasion, passing the others with a few words, and devoting thirty-five minutes’ rapid and unhesitating exposition, praise, and defence to mesmerism.

“I felt my want of phonography very much on this occasion, as I should like to have re-delivered to you, for the benefit of the Glasgow Curative Mesmeric Association and others, this *trance-atlantic* oration; but I shall try and give you the spirit of some of her remarks. She must have read the subject as being divided into two parts, whereas I intended the ‘How’ as the subject, and not, as by her remarks, the first part, which she appears to have interpreted, *What is Mesmerism?* What I wanted was a definition of how it affected, physiologically, a sufferer brought under its influence. Some of her definitions do not quite agree with your ‘What is Mesmerism?’* but that’s not your fault (nor her’s, perhaps). I will place the remarks in my own order, as I think the spirit sometimes took one leap forward and two backward:—

“‘Mesmerism is a power and force of the mind. It is the disembodied spirit acting on the embodied. What is a mesmerist? A reservoir into which disembodied spirits convey this power, to be in turn distributed as required. Does that take away the individuality of the mesmerist? No more than did last night’s sleep. The curative power is great. When we go to an agricultural or cattle show, we gaze on the animals, and are mesmerised by them, and throw off our disease. It is a well-known fact, that if we take a dog into close intimacy with a sick child, the child will often recover and the dog die. Thus are we mesmerised by the inferior animals. Mesmerism is good for the soul as well as for the body. Try it at home; it will ennoble you; it has healed (in Spiritualism) many a wounded soul. Mesmerism is the parent, the foundation of Spiritualism. Mesmerism shall reveal more than has yet been done; its revelations are inexhaustible, and will never cease; as

* *Human Nature*, volume i., July number, page 227.

clairvoyance, it will bring treasures out of the earth that have never been dreamed of.

“O ye strong men who do not believe in the mighty healing power of Mesmerism—out to the fields, out to the sunshine, the flowers, and the running brooks! inhale the pure and fragrant breath of Nature; then back, back to your homes! to the homes of your friends, where some poor sufferer cries for that which you—ay, you! can give; but which, in your stubbornness, with padlocked eyes, you *will* not see! And your only *give* is pity! Pity! 'tis not pity that they cry for, 'tis help! help! And will you, who say you *love* them, calmly sit and delegate to others—strangers, most like—that which you, and you, and you, as loving fathers, as loving mothers, as loving sons and daughters, *ought* to do? No, no! you have *some* little spark of man and womanhood left in you! Show it! in *deeds* of love; your love thus prove! Stretch yourself on the earthly form of the poor stricken one, breathe into them the breath of life; take them by the hand, and command them to arise! And when brought back to health, they kneel, and smilingly kiss your hand, think of the angel hosts that have witnessed this noble act of yours, think of the reward that awaits you in the spirit land. Then may you proudly raise your heads, and walk like men! then, *then* may you tell us that you *Love*!”

“Mrs Allen concluded her lecture by prophesying a great millennium in the Mesmeric line; when missionaries would go forth laying on hands, etc., and teaching a religion that would make a heaven of earth, and be no *death-bed* religion only. Throughout the whole lecture, broad, liberal, warm-hearted expressions abounded, and were received by an intelligent audience with unmistakable symptoms of appreciation.

“Mesmerism here is a thing of the past. This city goes in for dollars too much. Every one has heard about Mesmerism, and many seen it in operation, but I never heard its name mentioned on any occasion, unless I introduced it. Mrs Allen touched on this part, and said that, like a giant refreshed by slumber, it would arise, and prove the truth of the saying, that ‘Truth is great, and *will* prevail.’

“A. A. ANDERSON.”

HAUNTED HOUSES.—A Scotch correspondent states in a recent letter:—“I have had many proofs lately of a spirit which haunts a house situated in one of our sea-coast towns. The spirit is supposed to be that of an old lady to whom the house formerly belonged. When on earth she was not a very good woman, and was characterised by a vile tongue. The sounds heard are knockings and footsteps, with continual grunting and mocking laughter. The house belongs to a friend of mine, and is only occupied during the summer months. I have proofs of the above statements from five parties who heard the sounds; two of them being my sisters.”

Another asks, “Are there spirits of the brute creation in the spirit land?—as I heard a strange story of two parties who heard (unknown to each other) during many a summer morning the sound of the hoofs of a pair of horses and wheels of a coach. One of the parties was a bath-keeper who went early in the morning to prepare the baths. The

other was an old lady who lived on the premises. The sounds of the carriage and pair were heard so plainly that the parties were invariably attracted by them. They seemed to rattle down the gravel walk and stop at the door of the bath rooms." [Any explanations of such phenomena will be welcomed.]

Referring to the very wonderful testimonies in a recent number as to the identity of spirits and reliability of communications coming from them, a correspondent thinks the supposition that our spirits, or "intuitive faculty," can thus falsely personate the spirits who purport to manifest on such occasions, to be a powerful argument in favour of "total depravity." He considers that such a theory is offensive in the highest degree to the moral feelings, and notoriously incompatible with facts. After much experience at the spirit circle, he has seldom found the "double" to communicate. On one occasion, the usual communication from a friendly spirit was not received. A clairvoyant explained subsequently that the spirit of a living relative who opposed Spiritualism was present and prevented it. This person privately watched to see whether circles were held in the rooms of our correspondent; and hence the interference of his "double" at the circle. If this theory be tenable, the influence of materialistic, orthodox, and other bigots, must be highly prejudicial to the manifestations of spirits, and reception of truthful communications. It is well known that the presence of individuals of certain temperaments and mental attitudes at the circle, interferes much with the phenomena produced, in some cases suspending it entirely.

REVIEWS.

A WOMAN'S SECRET: A Tale of Great Interest and Educational Power.
By MRS CAROLINE FAIRFIELD CORBIN.*

THIS is a large and handsome volume recently published in Chicago, and dedicated to John Stuart Mill. It is a clever champion of woman's domestic rights, not advocating her infringement upon the position of man, but pointing out what the sphere of the feminine really is, and enumerating the dangers and difficulties which beset her in carrying out her true destiny. Though it is replete with principles and didactic teachings of the highest qualities, yet it is entertaining and exciting as the most sensational novel of the day. The plot is very well conceived, and all the characters and incidents are worked out with life-like fidelity, illustrating truths and teaching principles connected with the social and domestic relations of the sexes; yet there is no expression or allusion in it that can be offensive to the most refined taste or pure morality. In fact, its mission is to refine and elevate, which it does not simply by moral exhortations, but by exhibiting the workings in real life of opposite systems of action. In the preface, the following

* London: J. Burns, 7s 6d.

sentence occurs: "It has seemed to the writer that the ideas of the relative positions of the sexes, the status and work of woman, the nature and office of love, require a new setting forth at the hands of this generation. The old method of expressing these things, and the old faith concerning them, were wise and good in the olden time; but now, as in the days of Christ, new bottles must be fashioned for the new wine of advancing civilisation;" and the publisher adds—"The story is intensely interesting, and is developed with a skill which only years of literary experience could have imparted to the author. The characters are life-like and noble, and illustrate with rare fidelity the grave, the gay, the tender, the profound, the evil and the good in human nature. Certainly no man or woman, youth or maiden, who aspires to a thoughtful and critical understanding of the great Idea of the Emancipation of Woman, can afford to be ignorant of the results which genius and learning have embodied in this book."

The *Morning Star*, in reviewing the work, amongst other appreciative and critical remarks, says—"The tendency of the work is thoroughly and unmistakably good—is specially adapted to the domestic circle—and contains an abundant supply of love, babies, and womanly gossip, and has some of the most striking illustrations and arguments on woman's rights that we have ever read." It is the kind of work for young and old, especially those who are about to enter upon the important mission of marriage and parentage. As a lover's gift-book, it could not well be surpassed.

THE LORD'S COMING IN THE AIR TO REIGN UPON EARTH.—A small tract abounding in Scriptural phrases, theological nominatives, and oracular expressions. The author means to teach that the gospel does not annul the law in any respect, as far as the requirements of chastity, rotation of crops, food, cleanliness, and other physical relations dictate, but that the only evidence of "grace abounding" in the heart is the exhibition of these laws in the life. He lays great emphasis on sexual continence and pure food. And if his style were more scientific and elucidatory, and less mystical, the tract would be more useful.

HEALTH TOPICS.

THE HYGIENIC SOCIETY OF GREAT BRITAIN AND IRELAND.

The Hygienic Society of Great Britain and Ireland have issued the following prospectus:—

Since the introduction of the Hydropathic system, great progress has been made in the treatment of disease by means in harmony with physiological requirements and the laws of health. Those engaged in teaching and practising this mode of treatment have hitherto been isolated in their work, so that much effort has been lost from want of method and co-operation. A few friends, having discovered how much use they were to each other in the furtherance of health reform, have resolved on organising themselves into an Association, and inviting others to take part with them in this great movement. This Society considers that hygienic teaching and habits are

the basis of man's progress and happiness in every respect, since all phenomena and action which man exhibits are indissolubly connected with his bodily organisation and conditions. The Society perceives that the body has a great number of relations to surrounding elements in Nature, which must be properly maintained and supplied: hence it recognises no partial methods, panaceas, or one-idea'd schemes for attaining its object. This may be stated in one sentence:—To promulgate a knowledge of the laws of health throughout society, and the adoption of such personal habits as will prevent disease, and remove its temporary presence with the greatest benefit to the patients.

For these purposes it is desirable that an organisation should be established all over the country, by means of local secretaries or agents, and members, who would exert themselves in circulating instructive publications, arranging for the visits of lecturers, establishing baths or other institutions, keeping a sharp eye on sanitary matters, that the operation of Acts of Parliament in respect to the public health may have full scope, and in such other means as will recommend itself to their tastes and judgments.

Another object will be to collect statistics illustrating the benefits derived from the adoption of hygienic measures, as contrasted with the absurd practices of medical systems founded on traditional ignorance rather than on scientific knowledge. The Council respectfully and earnestly invites the co-operation—

1st, Of sanitary reformers of every grade, who are interested in the building of improved dwellings, drainage, economisation of sewage, ventilation, lighting, heating, &c., &c.

2nd, Dietetic reformers who, by adopting a pure diet of fruits, grains, and vegetables, may have benefitted their health and improved their mental and pecuniary circumstances.

3rd, Those who have interested themselves in the cultivation of articles of food, so as to increase the returns of the labourer and augment the quantity of food in the country.

4th, Temperance reformers who, by abstaining from alcoholic liquors and artificial drinks, stimulants, drugs, and unnatural substances of all kinds promote their own health and moral development and that of society.

5th, Those interested in gymnastics, and teachers of physical culture and rational recreation whereby the body may be developed and the mind harmonised by a profitable and pleasant employment of leisure moments.

6th, Mesmerists and medical electricians who, by animal magnetism or other means, can promote health and normal action by directing and harmonising the vital forces.

7th, The proprietors and promoters of Turkish Baths, warm baths, and other public institutions of the kind.

8th, Hydropathists, proprietors and medical officers in health institutions who, from their great experience, would be able to compile statistics similar to those collected in hospitals, which might be compared with the latter so as to afford illustrations of the superiority of the hydropathic system.

9th, Hygienic reformers, in the full sense of the term, those who, by a judicious application of air, light, temperature, water, diet, work, recreation, action, rest, cleanliness, magnetism, passion, social, mental, or moral influences, strive to harmonise the bodily and mental operations and teach the invaluable truths whereby these great results may be effected.

The Council of the Hygienic Society think that concerted action amongst such may be easily and profitably effected, and by judicious co-operation a powerful influence may be exerted upon the country by lectures, the circulation of cheap publications; by keeping up correspondence or practical teachings in newspapers and journals; by the establishment of a quarterly periodical or report of progress; by the establishment of local institutions, hygienic hospitals, and the introduction of physiological teaching into

schools and families. A central hygienic college is urgently wanted, and it is hoped the operations of the Society may soon lead to its establishment. There are a number of excellent works already published lying idle on booksellers' shelves for want of some energetic association to put them into circulation. The Society suggests that members be left entirely at liberty to adopt or reject whatever means their intelligence or experience may recommend. No test questions will be asked, but all will be accepted as members if their proclivities incline them to make application for that purpose. A nominal subscription of one shilling per annum is solicited to maintain the present operations of the Society.

If those interested in the above reforms would do all they can to secure members, a great amount of money might be derived from this simple subscription. Donations are earnestly solicited from such as may be able or willing to give. The names of members and local secretaries, with subscriptions, should be sent in to James Burns, Secretary, pro tem., 1 Wellington Road, Camberwell, London, S.E.

THE NEW EARTH CLOSETS.

To the Editor of the Cork Examiner.

"In God's Providence there is no waste."—Rev. H. MOULE.

SIR.—While acknowledging it is impossible too fully to recognise the importance of popularizing the knowledge of the use and quality of the air—its influence on health—the advantages of cleanliness, &c.,—subjects which should be the daily lessons of youth, instead of being left to the uncertain gropings of adult age—the slight practical teaching on those points in the lectures now occasionally delivered in the city, must strike those interested in sanitary questions with regret. For, as things are, it seems nearly as useless to preach clean linens to the denizens of a wretched city lane, as to recommend exercise to a cripple; and the most earnest philanthropist may almost feel justified in turning away without self-reproach from the consideration of what appears, at first sight, the inevitable consequence of extreme poverty. But every day shows it is man's ignorance, not God's Providence, which produces the worst evils we deplore. That there is no difficulty which might not be overcome by honest exertion, is strongly proved by the invention of a truly benevolent English clergyman, which bringing with it comfort, decency, and health, is one of those discoveries for which his country must always remain his debtor.

One is happy to be able to state that this is no new discovery to be sneered down by the incredulous as impracticable, but one which has received the highest commendation from authority, is in full and continuous use in many places, and, as lately stated in a report, is now under the consideration of the Board of the Lunatic Asylum, where it is calculated the saving of expense it would produce may be estimated at £200 per annum.

The utilization and deodorizing of night soil is the object of the Rev. Mr Moule's invention, removing the necessity of sewage, and rendering the most noxious substances inoffensive to the senses, harmless to the health, and a source of constant and certain revenue. To any one of ordinary means, those "earth closets" are of easy attainment, varying in their least expensive make, from £2 10s. to £3 15s. in price.* To the poor man the discovery in a simple shape brings incalculable good, requiring only a galvanized iron bucket, value from 2s to 3s; or for the still poorer, an earthen crock, with a little wooden frame to stand over it, to serve as a seat; and a box or basket of dried earth, placed close by, with a scoop or porringer in it,

* Moule's Patent Earth Closet Co., Limited, No. 29 Bedford Street, Strand, W.C., London.

that will take up a pint or a pint and half of earth, which quantity should be thrown *at once* on the pan or bucket every time it is used. "Earth thus mixed even once is very good manure, but if after mixing you throw it into a shed and dry it, you may use it again and again, and the oftener you use it the stronger the manure will be. I have used it some seven and even eight times." Mr Moule goes on to say, "and yet after being so often mixed, there is no bad smell, and no one, if not told, would know what it is."

The value of this substance, either as a top dressing or for garden purposes, is apparent. For garden use it is recommended, "either to powder or sift it in small quantities over seed beds of cabbage, &c., or, in putting in peas or beans, mix about $\frac{1}{2}$ lb with 5 or 6 gallons of water. Do the same for putting in plants, make a hole with a setter, and fill it with the thin mud. 1 lb weight of that which has been mixed five times is quite enough if used in this way for six dozen brocoli or cabbage plants."

If I trespass too much on your space, my apology must be that it appears sinful not to give this principle publicity in our poor country. In work-houses and hospitals it would be of priceless value. If adopted in schools the knowledge would be spread to the poorest houses. It wants no expensive machinery, no municipal sanction. Every man can adopt it for himself, certain of success, if he only attend to the one requisite, of using dry earth which may be mixed with ashes.

Years ago Liebig said England could not compete with the Continent if she did not economise her night soil. The subject probably shocks the false delicacy of some, but we may safely leave the decision to the purer-minded. Our rivers are polluted, the water we drink often fatally injured, the air we breathe daily poisoned; and though every one recognises the evil, few care to seek a remedy. Knowledge is not the want of our day, but that conscientiousness which would make us work out the good we know of.

PROPRIETA.

[This system was adopted at the great Volunteer Rifle Match at Wimbledon this summer (1868) with the most complete success. If the old plan had been followed there would have been something little short of a pestilence in the camp on account of the great heat and scarcity of water. The practicability of the system may therefore be considered established. Mr Craig has also adopted a very ingenious method of using the ashes from the fire grates in similar closets. We hope to discuss his arrangements soon, also his improved means for ventilation. Could not companies be formed in towns for the purpose of introducing this system and selling the guano? Soap suds could also be utilised by being converted into oil, candles, manure, &c., as we saw them at the Wakefield Industrial Exhibition.—*Ed. Human Nature.*]

The Consumption of Tobacco (says *The Public Health*) increases steadily and rapidly. There are now being imported annually into this country about fifty millions of pounds, or two pounds to every inhabitant. If we deduct women and children, and a tenth of the male population, who do not smoke, the average consumption by smokers, snuff-takers, and tobacco-chewers is about ten pounds per individual annually. This consumption, however, varies according to individuality. The many thousands who smoke their ounce a-day, or a dozen of cigars or more a-day, and thus pass through their lungs the carbonised vapour of some twenty odd pounds of the weed annually, pay for that unnatural pleasure (unnatural because nature resisted the infliction till forced to submit by daily habit) at the rate of from five to ten or more pounds

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sterling yearly. But it is not the gigantic waste of capital we wish to revert to to-day, although it seems an appalling fact, in the face of the misery which stares us everywhere in the face, that the greatest commercial and most philanthropic nation in the world should puff away and expectorate twenty millions sterling per annum! If the matter rested there, if the pleasure derived, however unprofitable, had no detriment in its wake, we should not have much to say, but when that pleasure is growing into a national vice which threatens to dwarf our race, stunt our intellectual faculties, and enervate the vigour which has given this country pre-eminence in the world, it is time to enter our strongest protest, where the peccant multitude, with its softening brain, stands listlessly by, each pointing to his neighbour as his prototype, and none having the manliness to break through a habit, which, to mention only the least of its noxious consequences, renders our breath loathsome. What, we ask emphatically as the guardian of the public health, are the *advantages* derived from tobacco? Are smokers happier than non-smokers? Have we not created another artificial and unnatural want? Should we not be better, more comfortable, more healthy, without it? Would it not be better if the millions of acres now covered with the tobacco plant were producing cereals, tea, coffee, and cocoa, and thus our food cheapened, and our poor better fed? Lastly, would the gradual disuse of tobacco not prove an inestimable boon to all, removing a fearful source of evil and ailment? Would not its total abolition induce a death-rate far below that which the wise and philanthropic of our age have striven and are still labouring for? These questions we calmly leave, one and all, to the consideration of thoughtful minds, in the ardent hope of their co-operation, and assured of the ultimate issue of this great question, however remote at present the solution of the difficulties which surround it may be.

AMERICAN EXPERIENCES.

SOME time ago, we received a letter from our friend Mr J. H. Powell, giving a lengthened account of his experiences in America, from which we give the following extracts:—

“I have been pretty considerably worked since I have been here, and, although I have not ‘feathered my nest,’ I do not lose heart. The Spiritual cause is really alive in this continent; some of the very best minds are engaged in its advocacy. I have of late attended several open-air gatherings of spiritualists, and realised at all of them ‘a full feast.’ At Abington Grove, I met Dr Gardner, one of the most earnest and indefatigable workers in Boston. Lizzy Doten was present, and followed me with an interesting inspirational address. She is bodily no giantess, but her spirit is a jewel, as her various poems and speeches testify. I visited Waldon Pond, Concord, on the occasion of a spiritualistic pic-nic. Among the company was Dr A. B. Child, who has written so much on Spiritualism. The doctor did not address the meeting: I understand he does not feel his strength on

the platform. I offer here no opinion on the doctor's peculiar views, which, in private, he maintains with great ability. I like the atmosphere of spiritual meetings in this country. There is no spiritual censorship or Napoleonic code to gag free expression. Every speaker is expected to speak for himself, and he or she generally does so to the advantage of Truth. Dr H. B. Storer was present, and made a most effective speech. He is one of the earliest inspirational speakers, and is as full of humanitarianism as of genius. I likewise attended a camp meeting, which lasted six whole days, at Pierpont Grove, Melrose. It was quite a novel proceeding to me, you may be sure. The Grove, named after the venerable Father Pierpont, is situated some six miles from Boston. No quieter or more beautiful place could be chosen for such an encampment. Some fifty tents were pitched, in which several scores of the visitors took nightly repose. There was also a large tent, in which Laura V. Ellis, a girl of 15, gave cabinet manifestations, similar to the Davenports in some particulars. She is a good medium, her manifestations being marvellously quick. Dr Uriah Clark, author of 'Plain Guide to Spiritualism,' was the first speaker; I followed him. During the camp meeting, a goodly number of speakers took the stand. A pleasing incident I think worth recording is this: A party, consisting of Dr Storer, E. A. Carpenter, State missionary for Massachusetts, Mrs Carpenter, Agnes Davis, and Dr Uriah Clark, ascended through the wood a rugged promontory, on which we all stood enchanted with the magnificence of the varied scenery reposing around, distant and near. It was just before 'the shades of eve,' previous to the evening session; the sun had just dissolved in liquid gold, gilding the horizon of the west. We had each expressed our admiration of the whole scene, when our invisible friends reminded us that we were not the sole intelligences on that glorious mount of transfiguration. Dr Uriah Clark was entranced, and he was made to deliver an address, full of poetry and power. Although delivered to the whole company, baptising us to the great work of Spiritualism, I could not help taking most of the discourse to myself—it so exactly met my condition, ministering to my soul-needs. I had toiled and toiled, and at times doubted myself, and felt that life is at best only a farce, and Reform agitation but a terrible troubled dream, because I could not see the 'end of things.' Just at this time I needed encouragement, and it came fresh from the angels. Never in my spiritual experiences did I listen to such honied eloquence from medium lips, and on such a glorious platform at such an auspicious time. We descended the mount, and took our seats at the meeting. The grove was lit up with lamps, suspended to trees. The general stillness, the interesting shadows, and the blue canopy above, together with the motley assemblage of men and women—all had a strange effect upon me. I was called upon for the opening speech. I spoke one hour—never with more power. I verily believe the baptism on the mount had its full effect. I ran over a good deal of ground, making prominent the idea of woman's rights—don't laugh, I have not taken hold of that speciality, it has taken hold of me, and my Spiritualism rests on the basis of *Social* as well as *Political* and *Religious* Reform.

In America there is no lack of interest in the Woman question. I hope to see the Spiritualists engaged more efficiently in all social questions. There is a danger of them setting their affections on things above, to the neglect of things below. A weekly journal, *The Revolution*, conducted mostly by women, published at New York, is about the best thing I have yet seen. I hope the Spiritualists in England, at least all who have souls obedient to Nature, will speak out and act naturally, fearless of Mother Grundy in all the insidious disguises of creed and caste. Spiritualism, to be of use, must be practised. If so, our duties on earth must not be overlooked.

"The other day I met Professor W. Denton, author of 'The Soul of Things,' a book well known and appreciated by some of the best minds in England. He has just issued 'The Past and Future of our Planet,' a most valuable contribution to science. The Professor is an Englishman, an out-and-out spiritualist, a first-class lecturer, and a man armed at all points with facts and philosophies, that make him a tower of strength. He does not affect the impossible task of coalescing geology with the Bible records. Hugh Miller signally failed in doing so, and you know the fatal result.

"By the way, have you seen *The Spiritual Harp*, published by the Banner people? It is just the thing for circles and public gatherings; full of fine poetry and appropriate music. It fills a gap long existing, and, if I am not mistaken, will become a household guest amongst Spiritualists.

"A word now of myself. It is just about twelve months since we landed in New York. Were I to detail all my experiences during that brief period, your Magazine would not contain them. The hopes, sufferings, struggles, and sickness through which I have passed and am passing, I have philosophy enough to believe are necessary to my growth. I believe I may say truthfully that I have in this one year grown mentally, and I may hope spiritually, more than I could have done in five years in the old land. I press on unflinching, because I know that there is a power at back of me. I have lately been inspired to write a spiritual poem, which embraces the religion and philosophy of Spiritualism, and is built up of spiritualistic material. It is entitled 'Life Pictures,' in three cantos, and contains over 3000 lines. The composition of the entire poem was in itself a marvel, as the whole production cost little more than 70 hours, embracing a period of less than two months. I have the poem ready for the press; but unless some generous soul aids me I fear it will be a long time in MS. I cannot get an American publisher to look at it, much less to risk its publishing. The general remark is—'Only Longfellow and Whittier pay.' I am gradually getting subscribers, at 1 dol. 50 cents per copy. It takes a long time to wear away rock with water; but the thing is done by constant application."

The employment of soldiers on public works in India has resulted in making the men healthier, happier, better in looks, and purer in morals—a very significant hint to all diseased, discontented, immoral, and ugly people. Work and be well.

AN EXTRAORDINARY WORKER.

"Elfin," in the *Newcastle Chronicle*, says:—A correspondent informs me that there is at Messrs Stephenson's factory, in Newcastle, a workman who has been with that firm 43 years out of the 45 during which that establishment has been in existence. Connected with this long servitude are many instances of the powers of endurance possessed by this worthy artizan, one or two of which are rather remarkable illustrations of industry and perseverance. During the 43 years he has been at Messrs Stephenson's, he has been paid for 19 years and 11 months overtime—or for nearly one-half more than the full period of ordinary working hours. The largest number of days he worked in "one pay" amounted to 25½. In other words, with the exception of two and a half days, he did a month's work in a fortnight! During the principal part of his long life of labour this man worked at a drilling machine, and is at present a fresh-looking, hearty person of 73 years of age. For the information of those who may imagine that such a hero must be of great bulk and muscular prowess, it may be added that he is rather short in stature, thick set across the chest and shoulders, but possessed of indomitable patience and plodding pluck. In fact, it is not at all uncommon to hear his fellow-workmen say that "Sandy thinks nothing of working three weeks at a stretch without stopping"—that is, without absenting himself from the factory. The familiar title by which this hardy son of toil is usually designated is "Old Sandy," and few men at Messrs Stephenson's establishment are better known or respected. He is by birth a Welshman, and to all appearance "there is lots o' good stuff left in the old boy yet."

[It would be interesting to know what Sandy's personal habits have been as respects diet, beverages, sexual impulses, &c.; and a more definite description of his physiological make-up, including the development of the brain, would have been useful. Perhaps some of our readers can supply us with the information. The two noteworthy points are, that he could stand so much work, and that he could be satisfied with such a life of incessant labour.]

 REPORTS OF PROGRESS.

Dr Griffith, of Cork, has been fined for not having his child vaccinated. His eldest child had been injured by the operation, and being a thorough hygieio-therapeutist he demurs on scientific grounds to all insane and anti-sanitary blood-poisonings.

A coachmaker in Cork has handed a donation of £1 to the manager of the People's Turkish Bath, in acknowledgement of the benefit it had conferred on himself and his workmen. This is an encouraging fact, and ought to stimulate our Hygienic friends to steady progress in their noble work.

OTAGO, NEW ZEALAND.—A discussion on Spiritualism has appeared in the local papers. A correspondent of the *Argus* gives the rules recommended by the Glasgow Association of Spiritualists for the production of the phenomena, and states that he has had the most satisfactory results from following them. There are a great many Spiritualists in the colony, but they keep their convictions quiet.

The late Rev. Chauncy Hare Townshend, M.A., has bequeathed £2000 to Mr Charles Dickens, and begs him to publish, without alteration, so much of his notes and reflections as may make known his opinions on religious matters, which he verily believes would be conducive to the happiness of mankind. As Mr Townshend was author of "Facts in Mesmerism," we may expect some liberal and scientific views of man's religious relations in the work when it appears.

ANTI-COMPULSORY VACCINATION.—A LETTER FROM MR GLADSTONE.—In reply to R. Griffith, Esq., Cork, Mr Gladstone says: "he feels the great interest attaching to the question of Compulsory Vaccination," but does not explain himself farther. Mr Gibbs, honorary secretary to the Anti-compulsory Vaccination League, gave a lecture before a most enthusiastic audience in Northampton, on Nov. 5. He had letters of apology for absence from the members of Parliament for the district, and Dr F. R. Lees and other gentlemen spoke quite forcibly after the lecture. It was altogether a success; and we earnestly wish that Mr Gibbs could have a similar meeting in every important town, till this obnoxious and murderous law is repealed.

DUST RETURNING TO DUST.—It is asserted by scientific writers that the number of persons who have existed on our globe since the beginning of time amounts to 36,627,843,273,075,256. These figures, when divided by 3,095,000—the number of square leagues on the globe—leave 11,320,689,732 square miles of land; which, being divided as before, give 1,314,622,076 persons to each square mile. If we reduce these miles to square rods, the number will be 1,853,174,600,000; which, divided in like manner, will give 1,283 inhabitants to each square rod, and these being reduced to feet, will give about five persons to each square foot of *terra firma*. It will thus be perceived that our earth is a vast cemetery. On each square rod of it 1,283 human beings lie buried, each rod being scarcely sufficient for ten graves, with each grave containing 128 persons. The whole surface of our globe, heretofore, has been dug over 128 times to bury its dead! How literally true the declaration of the poet:—

"There's not a dust that floats on air
But once was living man."