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HUMAN NATURE:

A Monthly Journal of Zoistic Science.

FEBRUARY, 1878.

DARWINISM *versus* SPIRITUALISM.

Such of the English reading public as have paid attention during the past year or more to the Spiritualist literature of America need not be informed that there has been a good deal of criticism and correspondence upon the subject of Darwinism and its relation to Spiritualism. This originated, we believe, with the publication of a rather voluminous and neatly got-up pamphlet from the pen of Dr. J. M. Peebles, under the title of "The Conflict between Darwinianism and Spiritualism."

Mr. Hudson Tuttle, also well known in this country, a very clever exponent of the Spiritual philosophy, and an ardent believer in Mr. Darwin's notion of development, gave Dr. Peebles' book a pretty sharp review. Dr. Peebles, quick to see the weak points in the reviewer's positions, promptly and keenly reviewed his reviewer. Several passages at arms of the kind passed and re-passed, the last two of which are here subjoined, with some explanatory foot-notes.

REPLY TO J. M. PEEBLES ON "DARWINISM."

BY HUDSON TUTTLE.

My long-time intimate and esteemed friend, J. M. Peebles, has thought himself called on to reply to my criticism on his pamphlet on "Darwinianism." I should not write this rejoinder did he not demand it. He, as well as every reader of the *Journal*, knew the authorship of the criticism, and it was not from any desire to conceal it that I did not sign my name. It is best that the Review Department remain impersonal, as it is more free and impartial, and only to certain articles have I been accustomed to sign my name. This will assure Brother Peebles that it was not from any desire to attack his position in secrecy, and in fact I wrote him previous to the publication that I had been compelled to dissent strongly from his views. My friend "demands" further a reply, and a discussion, assuring me

that he is armed to the teeth and eager for the fray. As he is a "peace man," and a harmonial philosopher, and prides himself in being like the meek and loving John, will he tell me wherein such a rencounter will differ in *principle* from a pugilistic combat? If one should propose to decide the truth or falsity of Darwinism by a fist fight, it would be considered ridiculous; but should I accept this gauge of battle, would the result be more in evidence? In one case, one or the other might be physically weaker, and get punished; in the other some mental defect might trip and vanquish. A theological question may be settled by words, but a question of science can only be disposed of by facts. Darwin has several volumes, and Hæckel, and Huxley, and Lyell, and Wallace, and Gray, and a score of others, have written, and a newspaper column would be a narrow arena to discuss this question, vast as the realm of life.

Friend Peebles does not quite understand the province of a reviewer. This is not to enter into a discussion on the opinion the reviewer forms of the books under consideration. If this was demanded, there would be no end of wrangling. He simply gives his opinion, which should be honest, just, and impartial. It was in this manner I reviewed my friend's pamphlet. It was not a welcome task. The angels knew how much rather I would praise a book than censure. But unless honest, a review is worse than useless: it misleads the reader and destroys the character of the reviewer.

It was not because Mr. Peebles objected to Darwinism that I opposed him, but because he arrayed Spiritualism against science as expressed by Darwinism, and in the latter I thought he had made a great vital mistake. It was like arraying theology against astronomy or geology. Hence I do not feel called on to discuss the objections my friend makes to Darwinism. Those who are in anywise posted on the subject know wherein he speaks incorrectly, yet I would point to a few of his misstatements, simply because they somewhat impeach my criticism.

He says, "Darwinism is on the decline, is old and grayed with folly." Yes, Darwinism, or the theory of evolution, is not new. It first found scientific utterance through the immortal Goethe, Lamarck, Saint-Hilaire, and its profound approach towards demonstration through Darwin. It fought its way by its truth. Dr. Asa Gray, who since the death of Agassiz ranks first among the *savants* of America, in his late work "Darwiniana," says that the naturalists of England, Germany, and the United States, are to-day almost a unit for Darwinism, and Professor Morse's recent address at Buffalo before the American Association, shows how enthusiastically the theory is received. Agassiz is bitterly opposed, but all his most promising

pupils are now Darwinians. Lyell opposed at first, but is now a firm supporter.

"The evolutionists are successful along the whole line, as the absence of any champions to resist the arguments of Spencer, Tylor, Tyndall, Huxley, Hooker, and others, prove."

Hæckel, Buchner, and all German naturalists, the leaders of the Royal Society, and of the American Association of Science, after a lifetime study, have accepted the theory of creation by evolution, as expressed by Darwin. Mr. Peebles, after reading some of their writings, sits down to attack single-handed the banded scientific world, and calls these leaders, after calm deliberation, "surface thinkers." It is certainly brave and daring, perhaps some might think Quixotic.

He states the theory, but we dare say Darwin would never recognise it as his own. Darwinism does *not* teach that "Ascidians or one-nostrilled lampreys," can "become men," nor that "iron" is "intellect," or that "phosphorus" can "think," or that "man proceeded from monkeys."

Mr. Peebles has strongly misunderstood the theory. He makes a distinction between "evolution" and "Darwinism," and according to his definition of the former, there certainly is. He defines the same in his pamphlet, but I failed to understand, nor does the present definition make the subject less dark.

"Evolution implies pre-existing God-atoms, soul-germs, cells, monads, types, physical matter and spiritual substance, all these and more to be evolved from; and further, that a superior force, which I denominate divine spirit, acting upon, evolved therefrom the various forms and individualised entities that people worlds and measureless spaces."

What are "God-atoms?" What are "soul-germs?" "Evolved from"—from what? Did not the "Divine Spirit" act through laws and is not Darwinism an attempt to indicate those laws?

This is not scientific language, my friend. It is cheap and unmeaning, while science is accurate in its statements.

"Precious little respect can I have for this Godless, Christless, irreligious, I may add blatant Darwinism," says Mr. Peebles, wherein he shows that the virus of his early theological training still festers in his blood. Oh, my friend, if you seek the high lands of science, do not talk in the language of the priest. Do not suppose your prejudices will decide the question, nor calling pet epithets lead to final decision.

Mr. Peebles says, "My reviewer's efforts to press A. R. Wallace into his service, really amuse me. I have the honour of that gen-

tleman's acquaintance and friendship. He is an evolutionist, but not a Darwinian."

Professor Schmidt, in "Descent and Darwinism," one of the volumes of the International Scientific Series, says, p. 164, "We have already incidentally mentioned a man who, although not so eminent as Darwin, has the glory of having independently discussed the law of natural selection, and of having, after Darwin had come forward with his fundamental work, supported the theory of selection, by a profession of original observations. This is Alfred Russel Wallace." Priority of discovery has always been claimed for him, and admitted by Darwin himself, but he failed to publish his theory first. (See "Contributions to the Theory of Natural Selection," A. R. Wallace). What has the *character* of the Darwins to do with the truthfulness of this theory? What weight has Carlyle's spleen in science, wherein he knows next to nothing?

"That prince of scholars," says Mr. Peebles, "pronounces them atheists" all? That is like Mr. P.'s reasoning in regard to the writer's dog. He is an ugly, mean dog, hence he can't reason? But ugly, mean men reason? Darwin is an "atheist," hence his theory is false!

But in the mention of these unimportant objections, I am filling space which should be devoted to the main subject. Darwinism as I said, was not the issue. That was the opposition of Spiritualism to its exposition of creation.

We saw this with regret, for it was choosing an unfortunate battle ground. Spiritualism is already beset with difficulties. It has been dragged down by selfishness and rascality, and the rubbish of the past has been taught as its philosophy. It has been made to accept re-incarnation, and the vagaries of occultism in the face of science, and now it is brought in direct antagonism.

Darwinism explains the process by which man was evolved, and Spiritualism should explain as a direct continuance of that theory, how spirit is evolved by and through humanity, and the laws of its existence. One complements the other. All in all becomes, as S. S. Jones has admirably expressed it, the Philosophy of Life. There is no antagonism, no contradiction. Admit Spiritualism and the evolutionists will have to correct their theory by the new light, but it will remain essentially the same. This is the only course for a scientific accurate study of spirit.

If this method is rejected, we drift into the fog of speculation, and sail a chartless sea. Does Mr. Peebles or anyone else think this desirable? Creation is a unit; there is no change in the plan of causation, from "sea-slime" (*amœba*) to spirit

Mr. Peebles is urbane gentle, sincere, and we do not believe he would knowingly make a misstatement. To us the tone of his reply is incomprehensible. Had he carefully read, it is not possible he would have written, "Darwinism derives entity from nonentity—the unconditioned from the conditioned—motion from inertia—consciousness from unconsciousness—moral reason from blind instinct—spirit from matter, and Caucasian men and women from long-tailed apes." Impossible, because everyone of these statements is erroneous.

I regret he demanded a reply, for otherwise we should have allowed him to have presented his subject in silence on my part, considering my office as critic performed. That "shepherd dog" lies tranquilly at my feet, never having been "brutally beaten" by me, and promises that whenever our friend sojourns again with us from the fatigues of travel, he will under no provocation "growl" at him. He says it is true that at the various times you have been here, you and he are always quarrelling, and that he now deeply regrets it, as he forgot the advantage you had of him, for you could write him up in the papers, and he cannot reply on you.

J. M. PEEBLES' REVIEW OF HUDSON TUTTLE'S "REPLY."

"It is the ardour of the assailant that makes the vigour of the defender."—*Emerson.*

"The army of liberal thought is at present in very loose order; and many a spirited free-thinker makes use of his liberty mainly to vent nonsense. We should be the better for a vigorous and watchful enemy to hammer us into cohesion and discipline."—*Huxley.*

Just two days before going aboard the steamer "Zealandia" at San Francisco for Australia, and thence to India, Ceylon, and South Africa, I received, with extra copies, the *R. P. Journal* of Chicago, containing Hudson Tuttle's criticism of my review. The subject-matter in dispute is Darwinism and its relation to Spiritualism.

Mr. Tuttle, though tauntingly, yet rightly, awards me the honour of being a "peace-man." And so I am in regard to foreign wars, civil wars, and all kinds of muscular pugilism; but not so much inclined that way when truth and moral principles are at stake. All have their weaknesses, and it is just possible that I may be as proud of "being like the loving John" as he is of being or wishing to be the "Aristotle of the Spiritual dispensation." Friend Tuttle should remember that as the Grecian shield had two sides, so the Apostle John, while aflame with love, was called Boanerges—an earnest teacher—a "son of thunder." Accordingly, if his vigorous blows made the Pharisees wince, his love administered a balm that healed their wounds.

Mr. Tuttle sagely inquires wherein a friendly controversy upon the subject of Darwinism would "differ in principle from a pugilistic combat?" It would differ just as much as muscle differs from mind; or just as much as Mace, the clownish pugilist, differs from Emerson, the refined and cultivated philosopher.

It is Mr. Tuttle, we think, who "does not quite understand the province of a reviewer," inasmuch as he fails to discriminate between a review and a criticism. A review, unsullied by prejudice, is the equivalent of analysis—candid discrimination and correct judgment. Criticism from the Greek *krino*, signifies to judge, to separate, to condemn. Mr. Tuttle, whose abilities I admire, condemned my pamphlet written against the Darwinian theory in the most wholesale manner. Naturally, and justly too, I defend it. Though generally criticising, Mr. Tuttle is capable in his more inspirational moments of reviewing books.

"I opposed Mr. Peebles," says Mr. Tuttle, "because he arrayed Spiritualism against science as expressed by Darwinism." And, pray, what is "science as expressed by Darwinism?" It is this, just *this*—the descent of men and women from anthropoid apes.* But where are the teachers of this "science?" Has it colleges and universities? But more seriously—the Darwinian theory, which Huxley very sensibly denominates an "hypothesis"—this theory with its "missing links," and admitted "chasms," a "science" is it? To Mr. Tuttle be the honour of thus dubbing it. Will future lexicographers take notice and define Darwinism—the "science" of evolving men from monkeys!

My critic, after telling the readers of Mr. Jones's journal that he "does not care to discuss the objections I made to Darwinism," proposes to "point to a few of my misstatements." It is well, Brother Tuttle, and equally well that I follow you.

It will amuse, if not astonish, American scientists to be informed by Hudson Tuttle that Asa Gray "ranks first among the *savants* of America." The truth is, he is just a well-informed botanist—nothing more. In reading his "Darwiniana" I failed to notice this passage: "The naturalists of England, Germany, and the United States are

* This theory, rigidly considered in all its labyrinthine bearings, and especially as elucidated and enlarged by Hæckel, amounts to just this:—moral and spiritual men from brutal apes! To treat of the laws of variation—to treat of "forms" and their modifications—is one thing, but of noble aspirational souls quite another. It is the soul, with its intellectual and moral attributes, that constitutes the *man*; and just so far as Darwinism pretends to account for the origin of man—spiritual and immortal *man*—by direct ancestral procedure from monkeys—it is a failure and a falsity.

to-day almost a unit for Darwinism." Will Mr. Tuttle do me the pleasure, and himself the justice of specifying chapter and page where this passage he quotes may be found?

Respecting my previous position that Darwinism is on the decline, I reiterate the fact that its noisiest advocates are *surface-thinkers*, dealing with phenomena rather than causes—with the shell rather than the soul of things—with fossils rather than psychic forces, and with appearances rather than the principles of life.

"This question can only be disposed of," says Mr. Tuttle, "by facts." And "every fact is not only serviceable," writes Mr. Sedgewick, "but is to be used." A stale egg is a *fact*, but most people would beg to be excused from using it. These shilly-shally statements, and the slipshod logic of most Darwinians excite sorrow and tenderest pity. But about my reviewer's reference to facts! As a butcher's shop and a country store are not the equivalents of a dinner, so facts, *per se*, prove nothing, "dispose" of nothing. They are but hints and helps. It is reason that "disposes" and demonstrates, not facts. But what is singularly unfortunate for Darwinians, they have not, by self-admission, got at the bottom facts; while their generalisations are lame, their organic "links" are wanting, and many of their "chasms" remain unbridged.

Clutching and hurling at me a handful of great names, such as Lamarck (born 1774, rather along ago authority), Tylor, Buchner, Hæckel, Tyndall, Gray, and others, my reviewer continues: "Mr. Peebles, after reading some of their writings, sits down to attack, single-handed, the banded scientific world." I am not frightened. Galileo stood alone in his time.

As to how extensive my Darwinian "reading" has been, readers of the *Journal* will be able to decide before the controversy is concluded. They constitute the jury. And at this point I may say that it was a close critical reading of Darwin, Hæckel, and others, that made me an anti-Darwinian, just as a critical reading of the Bible made Emerson and Parker free-thinkers.

In this "banded" list of scientists how did Brother Tuttle come to forget Prof. E. Ray Lankester, who, while the persecutor of Dr. Henry Slade, is the most brazen-faced Darwinian in London. There is certainly a "conflict" in the London Courts just now between Lankesterian Darwinism and the phenomena of Spiritualism. Again, in hurling at my head that list of "banded scientific men," Mr. Tuttle quite innocently failed to mention such anti-Darwinian scientists as Prof. Owen, Sir Wm. Thompson, the Duke of Argyll, Bauch, Weker, and their school, Milne-Edwards, Dunvernay, Janet, Gratiolet, Alix, Bert, M. de Quatrefages (Professor of Anthropology and Natural

History in Paris), Prof. Dawson of the Montreal University, Prof. Dana of Yale College, Prof. Winchell of the Michigan University, and others equally distinguished. Remember that I am an evolutionist, but not a Darwinian. Strange as it may seem, Mr. Tuttle as yet fails to "understand" the distinction between them. It has often fallen to my lot to have dull pupils. Soul-germs "evolved from what?" inquires my critic. Not from the spermatozoa of monkeys, Mr. Tuttle, as you, a disciple of Darwin, believe; but from physical and spirit-substance, which might be denominated albuminous bioplasm, the Divine Oversoul being of course the acting and moulding power. In protoplasm we find the physical basis of physical man. And the "God-atom," that is, the divine germinal principle, pre-existing and eternal, was incarnated in man only. This may not be "scientific" language to Mr. Tuttle, to Mr. Lankester of London, or to Mr. Hull of the *Crucible*, who gave me an adverse review of some thirteen columns. Nevertheless, it is the language of spiritual science, and all cultured Spiritualists will readily comprehend its significance.

Twitting me of once having been a clergyman, Mr. Tuttle says—"The virus of his theological training still festers in his blood." This may be; and still I think with Rev. Theodore Parker, that a clerical education, where the curriculum includes the natural sciences, mathematics, and the classics, is better than little or no education at all. Did the early theological training of Bacon and Sir Isaac Newton seriously injure them? Was it greatly to the disadvantage of Copernicus, of Bruno, and Dr. Priestley, the discoverer of oxygen, that they had a theological training? This persistent snarling—this pent-up spleen so often manifested towards Christian ministers, some of whom are quite as cultured and scholarly as many professed scientists, seems to me not only petty, but really wanting in true manliness. It is the true life rather than the true theory that tells upon character here, and condition thereafter.

"For modes of faith let graceless zealots fight,
His can't be wrong whose life is in the right."

Oh, my friend, if you would rise to the towering "high lands" of spiritual science, and drink at the fountain of moral philosophy, do not longer talk and write in the language of the pseudo-scientists *à la* Lankester. No, no, your gifts can be applied to nobler and more exalted purposes.

Alfred R. Wallace, whom Mr. Tuttle quoted as a Darwinian, is proving troublesome authority. Relative to my reference to, and quotations from, Mr. Wallace, Mr. Tuttle, as I expected, is dumb; and yet, raising just enough dust to hide under, he quotes something that Professor Schmidt is alleged to have said of Mr. Wallace. Well,

what of it? Does Mr. Schmidt's opinion invalidate these strong anti-Darwinian words of Mr. Wallace? Listen:—"In that case it will be a fair argument that just as he (man) is in his mental and moral nature, his capacities and aspirations, so infinitely raised above the brutes, so his origin is due to distinct and higher agencies than such as have affected their development."—(Glasgow Address, p. 3 of "Difficulties of Development as applied to Man.")

My reviewer thinks if I had "carefully read" I would not have written this paragraph. "Darwinism derives entity from non-entity, the unconditioned from the conditioned, motion from inertia, consciousness from unconsciousness,* moral reason from blind instinct, spirit from matter, and Caucasian men and women from long-tailed apes." Will my friend permit me to assure him that I read and pondered well the above passage; and, though still meeting my approval, it can be bettered by adding that, inasmuch as apes and gorillas are less than men, Darwin derives the greater from the lesser, the complex from the simple, humanity from brutality, and the human soul from the animal.

Mr. Tuttle pronounces "every one of the above statements erroneous." On the other hand, I pronounce every one of them a legitimate deduction from the Darwinian theory. Let us take the most important one and see: "Darwinism derives Caucasian men and women from long-tailed apes." This statement of mine Mr. Tuttle pronounces "erroneous." He further says, in reply to me, that "Darwinism does not teach that men proceeded from monkeys." If this statement of Mr. Tuttle be correct, he not only stultifies himself but impeaches several of the greatest authorities upon the subject—Darwin, Hæckel, Lamarck, and Lankester.

Here follow my proofs, showing Darwin's theory of the monkey-origin of man:—

"To man I give a pedigree of prodigious length, if not of noble quality. The most ancient progenitors in the kingdom of the vertebrata, at which we are able to obtain an obscure glance, apparently consisted of marine animals, resembling the larvæ or grubs of existing Ascidians. Now, Ascidians are invertebrate, hermaphrodite, marine creatures, permanently attached to a support." Now, from these Ascidians or hermaphrodite creatures Mr. Darwin professedly traces the chain through tadpoles, fishes, ganoids, reptiles, birds, mammals, marsupials, lemuridæ, up to the simiadæ, a generic name for apes and

* Though neither Mr. Darwin nor Hæckel has used these terms, yet such is the upshot of the theory when shorn of its externals and lifted up into the realm of reason, logic, and metaphysics.

monkeys. Then, says Mr. Darwin—"The simiadae branch off into two great stems, the New World and the Old World monkeys; and from the latter, at a remote period, man, the wonder and glory of the universe proceeded. Unless we wilfully close our eyes, we may, with our present knowledge, approximately recognise our parentage, nor need we feel ashamed of it."* . . . "Man is certainly descended from some ape-like creature, a hairy quadruped, furnished with a tail and pointed ears, probably arborial in its habits, and an inhabitant of the old world."† . . . "The early progenitors of man," he again says, "were no doubt well covered with hair, both sexes having beards, their ears were pointed and capable of movement, and their bodies were provided with a tail having the proper muscles."‡

Lamarck says, as quoted by Hæckel, that "as giraffes got their long necks by stretching them at high trees to pick the leaves off their branches," "humming birds and ant-eaters their long tongues by fetching their food out of narrow and deep crevices," "frogs and aquatic animals their webbed feet from striking them against the water in their endeavours to swim—so men originated out of *men-like apes*, by the latter accustoming themselves to walk upright."

Hæckel (the translation of whose works was revised by E. Ray Lankester, the persecutor of Dr. Henry Slade), says: "The most ancient ancestors of man, as of all other organisms, were living creatures of the simplest kind imaginable, organisms without organs, living Monera." . . . "The first of these Monera originated in the beginning of the Laurentian period by *spontaneous generation*, or archigony, out of so-called 'inorganic combinations,' namely, out of simple combinations of carbon, oxygen, hydrogen, and nitrogen." . . . "That the ancestors of man really existed during the primordial period in the form of these Himatega [sack worms], is distinctly proved by the exceedingly remarkable and important agreement presented by the ontogeny of the Amphioxus and the Ascidia," or larvæ of the "simple sea-squirts." Tracing these stages of development through "gliding worms," "skull-less animals," "single-nostrilled animals," "mud-fish," "marsupials," and "semi-apes," Hæckel finally says:—"The tailed apes, with narrow noses (Catarrhini Menoserci), originated out of semi-apes by the transformation of the jaw, and by the claws on their toes becoming changed into nails; this probably took place as early as the older tertiary period. The certain proof of *our derivation* from tailed

* "Descent of Man," vol. i., pp. 196, 203, 204.

† *Ibid.*, vol. ii, p. 372.

‡ *Ibid.*, vol. i., p. 198.

Catarrhini (apes), is to be found, therefore, in the comparative anatomy, and the ontogeny of apes and man.”*

No intelligent person can mistake the meaning of the above quotations; and yet, in the face of these testimonies from Lamarck, Hæckel, and Darwin, Mr. Tuttle has the unprecedented hardihood to say that “Darwin does not teach that men proceeded from monkeys.” That he may the more clearly see himself and his environments, we thus logically mirror him:—

I. Either Lamarck, Hæckel, and Darwin are incapable of writing English in a manner to be understood; or,

II. My reviewer is intellectually incapable of comprehending the letter and spirit of their writings; or

III. Darwin, and others of his school, teach that man proceeded or descended from monkeys and long-tailed apes.

Mr. Tuttle may repose upon just which horn of this trilemma he finds most comfortable.

Most conscientiously do I believe in the law of evolution—creation by evolution—but not in the Darwinian method of development. In fact, the dust-of-the-earth theory of Moses and the monkey theory of Darwin both fail to rationally account for the origin of man. The majority of Darwinians are athiests or materialists, believing that *men*—noble, aspirational men, came through monkeys, marsupials, ascidians, amœba, and protoplasmic sea-slime, from matter to again return to cold thoughtless matter! There is no conflict between Spiritualism and true religion, no conflict between Spiritualism and true science, and no conflict between Spiritualism and evolution; but there is an irrepressible conflict between Spiritualism and Darwinism, and this will deepen as the years multiply.

In my previous review appearing in the *Religio-Philosophical Journal*, I casually mentioned Thomas Carlyle’s estimate of Charles Darwin, to which Mr. Tuttle replies—“What weight has Carlyle’s spleen in science wherein he knows next to nothing?” Thus recklessly writes my friend of England’s great man! Opening that magnificent volume of English literature, entitled “Thomas Carlyle,” by the distinguished author and reviewer E. Paxton Hood, the first passage of the first chapter read thus: “Thomas Carlyle, Thinker, Poet, Historian, and Prophet, in every sense the most remarkable man of letters of the England of our time, is yet a writer of whom many readers desire some compact and distinct information.” Is not Mr. Tuttle *one* that truly needs this “compact and distinct information?” Professor De Morgan, when at Cambridge in 1825, praised Thomas

* Hæckel’s “History of Creation,” vol. ii., pp. 278, 284, 292.

Carlyle in his "Budget of Paradoxes" for his attainments in mathematics and the sciences. In 1865, Mr. Carlyle was elected to the Lord Rectorship of the Edinburgh University, and yet this critic of mine tells us that Carlyle "knows next to nothing" of science! I have only to say that more reading and deeper research will help Mr. Tuttle to be more exact in statement, and correct in judgment.

Mr. Tuttle thinks the "tone" of my reply to him "incomprehensible." Possibly a reference to his review of my pamphlet may, while refreshing his memory, give the key to the "tone." In said review he tells the readers of the *Journal* that I did "not understand the Darwin theory," that my "authorities were of the past," that I "betook myself out of harm's way into the fog-enveloped redoubt of metaphysics," that "my *forte* was quotations," that I "resorted to old hackneyed objections," that "my ideas were confused," that I "imitated the theologians of a thousand years ago," &c. Now, all this may be not only dignified in a book-reviewer, but it may be Friend Tuttle's ideal of style in the treatment of those who, however conscientious, presume to differ from him! Still, it is just possible that reflective minds will see in his chosen style of criticism more of burlesque than brilliancy, more of flippancy than profundity, and more of dogmatism than philosophy. Mr. Tuttle being the aggressive party, and having furnished me the key that "toned" my reply to him, he must not whimper at the handling he has received. Set for the defence of the truth, I shall sustain it at all hazards.

Darwinism, with its "chasms" and "missing links," with its unwarrantable assertions and erroneous generalisations, is to me illogical, irrational, atheistic, and decidedly anti-spiritual, while the unity of the universe aflame with the Divine mind is, to my conception, sublime truth, and evolution, rightly understood, the necessary deduction of physical and moral science. But such evolution does not consist in evolving something from nothing, consciousness from unconsciousness, intelligence from non-intelligent matter; nor does it consist in the transformation of lower into higher species; nor in the derivation of men from apes and monkeys!*

* Am I asked what it does consist in? I reply, Evolution consists in the act, the process of evolving, or the bringing out from the atom, the germ, the cell, by the application of such agencies to the germinal principle of life contained in said atom or germ as shall aid in and continue the growth, progression, and higher perfection of the given type within the line of its natural tendency. The corn seeds held in the withered mummy-hand for 3,000 years germinated and produced the full corn in the ear when such agencies as warmth, moisture, and sunlight were brought to bear upon them. They produced, remember, *corn*, not *cocoanuts*! Everything after its own kind is the law of nature. When figs grow from thistles, and orange-trees from acorns, it may be conjectured that man as a totality—man,

Upon receiving the next reply of my friend Tuttle, I promise him, as before, a prompt rejoinder, in which I hope to find room to embody, partially at least, my ideas of evolution, and the origin of the human species. And to further elucidate this subject, and get Mr. Tuttle to more fully express his Darwinian conceptions of development in relation to man's origin, will he do me the favour of answering the following inquiries :—

I. While Prof. Webber pronounces Darwinism an "attempt to account for the origin of species;" while Huxley denominates it an "*hypothesis*,"* which, says he, "I accept in the same way, provisionally, that I do any other hypothesis;" and while Darwin himself admits that "the great chasm between man and his nearest allies cannot be bridged over by any extinct or living species,"—why, I ask, when the masters make such damaging admissions, do *you* (Mr. Tuttle) pronounce Darwinism a "science"?

II. Do you believe that man's mind—man's *immortal* soul—has descended or been derived from the monkey-mind, just as man's body, according to Darwin, has been derived from the monkey-body?

III. When or during what geological period did the monkeys and "long-tailed apes of Asia" cease to be *such*—becoming, or their offspring becoming, rational men endowed with immortal spirits, and destined for eternal progression?

IV. You say that "Darwin does not teach that men proceeded from monkeys." Then what *does* Charles Darwin teach that man proceeded from?

V. If man did not descend directly from monkeys, but from intermediate series between them and men, will Mr. Tuttle tell us what kind of *creatures* they were—where their fossil remains may be found—and why they became extinct, since both monkeys and men survive?

spirit, soul, and *all*—proceeded from apes and monkeys. While under this head of evolution, I might just hint that evolution implies *involution* as well. This thought, actualised as it evidently is in the divine economy, makes the circle of being complete.

* I am credibly informed that what Mr. Huxley once pronounced an "*hypothesis*" as touching this matter, he now considers proven to be true. Be it so. Still, any man writing as follows of Spiritualism :—"But, supposing the phenomena to be genuine, they do not interest me. * * * The only good that I can see in a demonstration of the truth of Spiritualism is to furnish an additional argument against suicide. Better live a crossing-sweeper than die and be made to talk twaddle by a medium," &c.—is unfit, in my estimation, to pronounce a decision, and especially a decision involving a finality, upon any subject requiring unprejudiced and patient study. It requires no very great intelligence to here see the "conflict" between Huxley-Darwinism and Spiritualism.

VI. From what, or through what, creatures do *you*, Mr. Tuttle, say that man descended—or otherwise worded—how do you account for the origin of immortal man?

VII. When the distinguished naturalist, Alfred R. Wallace,* speaking of an over-ruling intelligence, of man's "moral nature, capacities,

* Alfred R. Wallace, in a recent communication from his pen, gives this brief and general definition of Darwinism:—"It is the theory of the origin of the countless species of plants and animals from ancestral forms by means of natural selection." And to the elucidation of this theory, so far as it relates to the physical—to plants and animals—Mr. Wallace, as modest as he is scholarly, is entitled to quite as much, if not more, credit than Mr. Darwin. I say *more* because, in my opinion, Mr. Wallace, of the two, manifests far more of what might be termed intuition and logical acumen. But when Mr. Darwin, and more especially his imaginative disciples of materialistic tendencies, came to apply this theory to *man* as a spirit—to *man* as a moral, religious, and immortal being—it broke completely down. These disciples were better acquainted with shells than souls, with fossils than forces, and with the habits of monkeys than the spiritual marvels of mediums. A theory that however plausibly may explain the origin of "forms," and that naturally relates to environments and external variations, is ill adapted to account for that moral consciousness, for those spiritual aspirations, and for those divine principles that constitute *essential man*. For Mr. Darwin (as I said in my "Conflict between Darwinianism and Spiritualism") I entertain a profound respect (see page 15), but these pretentious American, English, and continental disciples of his, whom I denominate narrow-gauge Darwinians—disciples such as Clifford, Lankester, Hæckel, and others, being, if not avowed and scoffing atheists, downright materialists, see only objective and outward forms, or the material side of this great question relating directly to the origin of man, and remotely to the destination of the soul. With these noisy surface-thinkers, all life and all the forms of life begin and end in matter. But Mr. Wallace, seeing with a clearness akin to inspiration the psychic or spiritual side of this question—and seeing it, too, as *the* essential in the origin and make-up of man—said in his great Glasgow address: "In that case it will be a fair argument, that as *he* (man) is, in his mental and moral nature, his capacities and aspirations, so infinitely raised above the brutes, so his origin is due to distinct and higher agencies than such as have affected their development." And further, Mr. Wallace in his late communication to me (which I took pleasure in showing to you, Mr. Editor), says that "Darwinism may be true as far as it goes, but not be the *whole* truth. Darwin's laws of natural selection and variation are true laws, which will account for much—perhaps for all—the material organisations of plants and animals. He admits an influx of life from the Creator at first. I think an influx of a *higher life* occurred when man appeared. He does not *think* this necessary. This is the *real difference* between us." The above, even to the emphasising, are Mr. Wallace's last words upon the subject; and, to show how perfectly they correspond with my position, I quote the following words from my pamphlet, "The Conflict between Darwinianism and Spiritualism," page 15:—"Nevertheless evolution is true; and development means that the less thing, or life-germ, serves as groundwork and conditions for the *influx* of new and *greater spiritual forces*, whereby it is enabled to expand in the directions of its natural tendencies." Evolution, from the Latin *evolutio*, is defined by the best lexicographers to be the act of evolving, of unfolding, the expansion of a germ in the

and aspirations," says, "Man's origin is due to distinct and *higher agencies* than such as have affected their development;" that is, the development of monkeys, apes, and brutes generally—do *you* agree with him?

VIII. To be practical; how, or in what way, can the Darwinian

theory of generation. Accordingly evolution is a far more broad and comprehensive term than Darwinism. That is, just as the greater includes the less, so evolution includes all that is true in Darwinism, and then pursues that wider sweep of thought that relates to mind, to moral science, and the spiritual unity of the universe. It may interest those English readers who were so delighted a few years since with the profound lectures of Mrs. Cora L. V. Tappan (now Richmond) to know what view her controlling intelligences take upon this subject. In a discourse delivered last summer in Chicago, U.S.A., and reported in the *Religio-Philosophical Journal*, these spirits say:—"But that Darwin or any of his cotemporaries have succeeded in establishing the theory of the transformation of one type into another, we must emphatically deny. There is approximate evidence in the resemblance between man and the lower mammals, and this approximate resemblance may extend as far as the reptile, we freely admit; but that interblending types have been discovered that successfully account for the difference in a single type of nature, we shall deny until Mr. Darwin has more successfully proved it. * * *

* * * Professor Agassiz was of the opinion that Nature is strictly jealous of her primordial types, and that no one species or form of existence transferred into another can either perpetuate its kind or remain long as a type or species. If by blending, two types are united to form another or third type, there exists no creative power or permanent function in that for perpetuation; that all primary types of nature are strictly preserved. The destruction of some is to give place to those that follow after. * * * No more can the spirit of man exist without the spirit-germ than can nature exist without the spirit of that life which caused intelligent shape. The spirit of man did not emanate from the ape, monkey, or any special form of life beneath him. The ape, the monkey, and chimpanzee, and various orders supposed to be intermediate links, are merely the result of impulses of nature toward perfection. But the body of man is for the *spirit* of man."

[Dr. Peebles in the title to his work, which has formed the basis of this discussion, has used the term "Darwinianism," to include the manifold deductions and side issues which the Darwinians attach to the theory of their master. In the present instance the term "Darwinism" is uniformly printed to limit the subject as much as possible to the main issue. Dr. Peebles, since his arrival in London, has visited and communicated with Mr. A. R. Wallace, and we have seen the sentences from Mr. Wallace's pen embodied in the foregoing note. They were originally written in the margin of the "reply" of Dr. Peebles, printed above, and therefore had strict reference to this discussion. Possibly it may not be amiss to say that these Darwinian disputants, though using rather caustic language—a habit not uncommon when treating of matters non-essential—are most excellent friends. Mr. Tuttle ever writes to us in the kindest manner of Dr. Peebles, and the Pilgrim ever speaks in praise and appreciation of Hudson and Emma Tuttle. This is as it should be. Divergence of opinion should never sever nor rust the chains of fraternal fellowship. Upon this subject, as others, men differ more in words and the meaning of terms than in the real subject-matter.

—ED. H.N.]

theory of the descent of humanity from brutality, or the ape-origin of man, benefit the human race intellectually and morally?

Professor Dawson well remarked a while since, that—"the Darwinian theory will have its day, and then men will wonder how they could have believed it. When it shall be discovered, as assuredly it will, that the world involves causes and agencies vastly more complex than this simple theory suggests, our successors in the arena of science will point to it as a warning against the prevailing error of specialists and enthusiasts, who ever tend, like quacks in medicine, to refer all effects to the same cause, and to cure all evils by one specific."

Closing, it is hardly necessary for me to say that, appreciating the ability of Mr. Tuttle, and the noble service he has rendered to a rational Spiritualism through his lectures and literary volumes, I can entertain for him only the highest respect. And yet, while prompted by most fraternal feelings of goodwill, as well as high considerations of a true personal friendship cherished towards both him and his excellent family, I sorrow—God and angels only know how deeply I sorrow—that my *friend* of so many sunny years ago has fallen into that cold Darwinian pit—the pit of Cimmerian darkness—the pit of spiritual death! Gladly do I put forth a strong hand—a little rough, perhaps, on the outside, yet warm and pulsing with tenderest love—to lift him up into the golden sunlight; yea, even up on the mountain-tops of the Spiritual Philosophy, where he can truly exclaim, "God is my father, angels are my ministrants, the humanities are my brothers, and eternal progress the glorious destiny of all souls!"

Melbourne, Australia.

J. M. PEEBLES.

A POPULAR REVIEW OF RECENT RESEARCHES IN PHYSICS, BIOLOGY, AND PSYCHOLOGY.

BY

T. P. BARKAS, F.G.S., NEWCASTLE-ON-TYNE.

*Delivered to the Members of the Newcastle-on-Tyne Psychological Society,
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[Mr. JOHN MOULD, President, occupied the Chair.]

It is now almost universally admitted, that experiment, and experiment alone, or, what in many cases is the same thing, spontaneous and carefully verified experience, lies at the base of all true knowledge of physics, biology, and psychology.

Verification by oft-repeated experiment, diversified as much as the circumstances of the case will permit, is the only justification for the hearty acceptance of any alleged new and antecedently improbable fact in any department of inquiry.

The dogmatic denial of any such alleged fact that has been vouched for by ordinarily credible and able witnesses, without careful investigation, is in view of the wondrous development of the antecedently improbable realities of natural phenomena, only less foolish than their too ready acceptance.

PHYSICS.

It is alleged that within the last few months there have been discovered two small satellites to Mars, the planet described by a poet as "moonless Mars." These real or supposititious satellites are so small and so near the planet as to be an exception to all our previous experience as to the relations in distances and sizes which exist between planets and their satellites. These miniature moons have, in the opinions of their observers, been glimpsed by about a dozen trained astronomers, and, notwithstanding the improbability of their existence, based on previous observation and experience—notwithstanding the fact that they can only momentarily be glimpsed, and that under the most favourable circumstances, and that a hypothetical and probably non-existent satellite of Venus has been so seen—notwithstanding that observers of reputedly equal ability, and with telescopes of reputedly equal power, differ as to their ability to observe these newly-acknowledged satellites—the vast majority of astronomers and the whole gregarious unscientific world have accepted the reality of their existence. Apart from observation, and in spite of preconceived improbability, they have accepted the theory of their reality with but small hesitation.

It is unquestionably true that negative evidence in cases of this kind is comparatively valueless, because all physiologists and physicists know that retinal sensitiveness differs in different observers, and in the same observer at different times; and that, with telescopes of equal power and definition, and under equally favourable circumstances, one set of observers may see, and another set of equally-trained observers may fail to perceive, the glimpses which the more sensitive observers have had of those miniature Martian moons.

Are we to say, then, that those miniature moons do not exist, because all skilled observers, under similar outward circumstances, do not perceive them? or are we without hesitation to accept the testimony of the observers with more sensitive retinæ than their fellows?

If we *must decide*, then: unquestionably the latter, as the eye, as well as the mind, only sees that which it brings with it—the power of seeing; and no two observers physically and psychologically observe alike.

With so limited a number of observers who have seen the moons; with the fitting, transitory, and consequently doubtful nature of their observations; with so many observers of reputedly equal capacity, and with powerful instruments, who have not seen them; with the fact that Mars is now receding from the earth, and the most skilled and sensitive observers are unable to reglimpse the supposititious moons; the proper and perhaps the only prudent course is to suspend judgment, write across the alleged discovery the open Scotch verdict,

"Not proven," and wait until near the end of the present century for the next near approach of Mars to the earth, before we either affirm or deny the existence of those miniature moons.

BIOLOGY.

In the department of Biology, the questions that have most earnestly engaged the attention of biologists during the last quarter of a century are the laws of development and evolution as propounded in the writings of Darwin, Wallace, and Hæckel; the line of demarcation between the organisms that are animal or vegetable among the lower types, as discussed by Professor Huxley and others; and lastly, and possibly most importantly, the biogenetic and abiogenetic theories of the genesis of life, as defended by some of the leading physicists of the age. Among the latter, or spontaneous generation theorists, may be reckoned Bastian, Sanderson, and Lankester; and among the former, or germ theorists, may be enumerated Pasteur, Tyndall, and Dallinger.

The theory of development or evolution, as propounded by Darwin and Wallace, has received the suffrages of a large proportion of the more advanced physiologists and biologists. But many, while they, in a certain restricted sense, admit development in organic forms, consider the extensive generalisations of Darwin and Wallace far from proven, and indeed as unworthy of being advanced beyond the sphere of hypotheses deserving earnest consideration.

As to the theories which prevail respecting the distinction that may legitimately be drawn between organisms belonging to the lower and least differentiated forms in the animal and vegetable kingdoms, there is much room for difference of opinion. This seems clear: that many forms, among which pre-eminently are diatomaceæ and volvocina, which during the palmy days of Ehrenberg were recognised as animal, are now unquestionably received as vegetable. Notwithstanding the difficulties that have been urged by Professor Huxley against the theory of ranking the lower monadic forms as animal, they are almost universally believed to be so by the leading biologists, and microscopists of the present day.

The one question in recognised biology which is very warmly contested by rival schools of observers, and which is open to the examination of all who possess powerful microscopes, good vision, and great experimental and manipulative power, is that of the germ or no-germ theory of the genesis of life.

Bastian, Sanderson, and Lankester on the one hand, tentatively contend that under conditions where germs or living protozoa have been exposed freely to a heat which may fairly be supposed to be destructive of life in forms so frail, and have been excluded from air and hermetically sealed, that notwithstanding the heat and exclusion of air, bacteria and other living animal organisms were spontaneously developed.

On the other hand, Pasteur, Tyndall, and Dallinger contend that apart from germs, or the recuscitation of apparently dead forms, there is no satisfactory evidence that life can be evolved, and that unorganised

matter without the presence of life in some form, will, if hermetically sealed, remain permanently barren. This is a strange theory to be held by Professor Tyndall, who, in his celebrated Belfast address, said: "Abandoning all disguise, the confession I feel bound to make before you is, that I prolong the vision backward across the boundary of the experimental evidence, and discern in that matter, which we, in our ignorance, and notwithstanding our professed reverence for its Creator, have hitherto covered with opprobrium, the promise and potency of every form and quality of life,"—which in a few days he modified as follows: "By an intellectual necessity I cross the boundary of the experimental evidence, and discern in that, matter which we, in ignorance of its latent powers, and notwithstanding our professed reverence for its Creator, have hitherto covered with opprobrium, the promise and potency of all terrestrial life."

My object, however, is not to enter into any elaborate analysis or examination of these various and contradictory hypotheses propounded by physicists, but to show that even in the broad table-land of experimental physics and biology, there exists great diversity of opinion among men of equal capacity, of equal honesty, and of equal love of truth. Truth in relation to these occult natural phenomena is not discoverable by any casual observer, but is only the result of a long series of experiments, analyses, and questionings, and by a patient and often fruitless process of trial and error, extending over many generations, and attended with much labour and much preliminary disappointment.

Some of the questions I have enumerated may remain hopelessly open during the terrestrial life of mankind.

PSYCHOLOGICAL INVESTIGATIONS.

I have on several occasions, by means of letters and lectures, introduced to the inhabitants of the north of England and to the members of your Society, descriptions of many remarkable occurrences which I have had the good fortune to witness in connection with the occult phenomena that occasionally occur spontaneously, but are most frequently observed at either private or public seances intentionally held to aid in the development of such phenomena.

To the investigation of the phenomena commonly termed spiritual manifestations, I have devoted, more or less continuously, several years of careful attention.

The first seance I attended was on the evening of Thursday, January 12, 1854, and from that time until the present day I have availed myself of every good opportunity of witnessing the manifestations in all their aspects, extending from table-rapping to full-form presentations.

The early manifestations were of a very simple and rudimentary character, but they rapidly increased in interest and complexity until full-sized living forms of men, women, and children, that grew from apparent nothingness, walked about the room in which the investigation took place, as if they were ordinarily embodied living human

forms, but were in reality abnormal forms, as was proved by their appearing and disappearing in the open room without screen or shelter of any kind, in the full and continuous observation of many critical observers.

Among the phenomena I have witnessed, and received evidence to justify my acceptance of them as real, are the following :—

1. I have witnessed motions of tables and other articles of furniture when such motions could not be produced deceptively, under the conditions, by any one present.

2. I have witnessed responses to questions which could not be accounted for on the theory of deception or coincidence.

3. I have been present at seances when objects have moved without any visible or mechanical contact, and are not known to move by magnetic or other invisible physical influence.

4. I have witnessed a musical instrument played with great ability in a well-lighted room, when no visible human musician was near it; and, on one occasion, I have had a guitar played in my own hands with no one near it but myself.

5. I have seen articles of furniture move about a room and obey, unspoken, complex requests.

6. I have seen tables rise from the floor, notwithstanding the fact that by considerable pressure I endeavoured to prevent them from rising.

7. I have been present when writing on a slate was produced in open daylight, when no human being nor any mechanical contrivance was near the slate or writing.

8. I have, in daylight, had writing produced upon a slate when held in my own hand, and when it was impossible for any human being to interfere with it without my observing it, the writing being both in longhand and shorthand.

9. I have, in good daylight, had writing produced within the covers of a tightly-tied book, when it was quite impossible that such writing could, under the circumstances, be produced by any trick or deception.

10. I have grasped and carefully examined living hands, or hands with the semblance of life, when no such hands were in the room connected with any ordinarily-embodied human being.

11. I have, when alone in a private apartment, been patted and touched by warm human hands when no embodied human being was within several feet of me.

12. I have seen living forms having the appearance of men, women, and children, walk from behind curtained recesses when I had good reasons for believing that no such ordinarily-embodied human beings were in the room.

13. I have seen living human forms grow up in the middle of a room from apparent nothingness, have witnessed those forms move about the room, shake hands with the sitters, show signs of affection to those who were present, and then in the open room gradually decrease in size and become invisible. I have heard similar forms speak and sing; I have seen them walk, sit, write, and lift heavy objects; I have felt their hands, feet, and pulses, and have ascertained

on various occasions that their hands and feet were sometimes pleasantly warm, and at other times icy-cold, with a corpse-like clammy chilliness. I have gazed in their faces in good light, and have had as much proof of their real, though only temporarily visible, existence as I have of the existence of any person with whom I am familiar.

14. I have, for many hours and on many occasions, sat with an automatic sensitive, apparently in her normal condition, that is, without any signs of trance or unconsciousness, and have seen her reply in writing to questions I had personally asked, on almost every department of physics, physiology, biology, and metaphysics, in a manner which was utterly beyond my own ability either to equal or imitate, and far beyond the capacity of anyone present in the room, —the sensitive herself being a very ordinarily-educated woman, and entirely ignorant of every branch of physics, biology, and psychology.

15. I have, as the result of nearly one quarter of a century's experiences, notwithstanding that I have on all occasions approached the investigation of the phenomena in an unbiassed but severely critical manner, arrived at the conclusion that I have witnessed illustrations on various occasions of the whole of the foregoing epitomised phenomena, and am satisfied, from extensive experience, that many of the alleged deceptions which are said to take place at seances are not deceptions, but misunderstood genuine phenomena; and that the only course requisite in order to convince the most critical of their genuineness, is long continued, candid, and careful observation, without any offensive display of suspicion or hyper-scepticism, a suspicion, which when seen, naturally hurts the feelings of sensitives through whom the phenomena occur, and in some occult way militates against the occurrence of the phenomena.

I have seen, heard, and felt the phenomena I have briefly described, the reality of which I could not, without having witnessed them, have accepted on the testimony of a hundred ordinarily credible witnesses. Had they not come under my own observation, it would, apart from observation, have appeared to me more probable, that a hundred credible witnesses were deceived, than that the alleged phenomena really took place.

When we bear in mind, however, that these phenomena are not merely testified to by a hundred credible witnesses, but that they are taking place in every part of the civilised world, that they occur in family circles, and in more public seances; that about every tenth person is a medium for their manifestation; that the phenomena have been examined by thousands of the acutest minds in the world, and that in every instance where full and careful examination has taken place, it has been followed by conviction of their genuineness; it becomes every inquiring man and woman either to refrain from the expression of any opinion on the subject, or to examine the phenomena with fulness and fairness, before they either form or express a positive opinion respecting them.

It is very easy to talk in the jargon of science of "dominant ideas" and "unconscious cerebration," but the only effective reply to the

assertion that the phenomena are genuine, is to reproduce them under exactly similar conditions, not merely conditions that simulate, or superficially resemble those in which they took place, but those which are their precise counterparts. Our facts stand like oaks spreading their broad arms to the blast, and bidding the storms come and welcome. In all ages, new or revived truths have been laughed at and scorned, but never have they been laughed or scorned out of existence.

The Mayor of L'Aigle, who, in an official notice, announced the fall of a shower of stones at L'Aigle in Normandy on the 20th of April, 1803, was simply laughed at for his pains; but like all propounders of fact, he speedily had his revenge. The Royal Academy of Paris deputed the philosopher Biot to examine the alleged phenomena, and he soon satisfied himself of the authenticity of the facts related by the Mayor.

A similar examination of the phenomena which I have briefly referred to, if made by competent, judicial, and painstaking men, would have a result similar to that which followed Biot's examination of the meteor shower: a result based not upon testimony merely, as must have been the case in the fallen meteors, but on personal observation of the phenomena, under conditions that would render doubt or denial impossible to any honest and sane man.

Carpenterian prepossessionists may continue to deny our facts, and "cling to their errors as dormant bats to dead boughs"; their over-weening prejudices render them impervious to the logic of new facts, and leave them "like space for ever shone into, yet for ever dark."

The great problem which now remains for solution, is not—Are the phenomena genuine? That is decided to the entire satisfaction of all who have fully examined them. The problem is—In what way can they most satisfactorily be accounted for?

I am confident, as the result of long experience, that the phenomena are not produced by voluntary trick or deception on the part of mediums. I also fail to see any satisfactory ground for believing that they are occult natural phenomena, produced consciously or unconsciously by natural mundane laws, with which recognised scientists are at present without knowledge. At the same time, I have to acknowledge that in the opinion of some intelligent inquirers, whose integrity I do not for one moment doubt, and in whose judgment in all ordinary matters I have considerable confidence, the phenomena are accepted as genuine, and are supposed to be produced by some occult and hitherto unrecognised natural mundane law.

I am, as the result of years of observation and much cautious reflection, shut up to the conviction that the phenomena are produced, for the most part, by disembodied intelligences of various grades, and of different degrees of development and progress—the majority, if not all of whom, have passed through their preliminary stages in this life.

Among the reasons which have influenced me in arriving at this conclusion are the following:—

- I. Whatever the agents, they unanimously affirm that they are beings who have passed the portals of the tomb, and are now living in various stages of spiritual exaltation or degradation.
- II. The phenomena produced are not such as can be produced under similar conditions by any known natural appliances.
- III. The phenomena are of a kind for which natural science, as at present understood, cannot account.
- IV. The phenomena are not only inexplicable as physical facts, on the bases of known mundane laws, but they manifest considerable intelligence, and are therefore produced by intelligent agents.
- V. The phenomena are not only physical but psychological, and mediums under control exhibit knowledge, of a quality and extent incompatible with what is known of their normal acquirements.
- VI. The human forms which frequently manifest themselves at seances where materialisations occur, appear to possess the ordinary characteristics of living human beings; they speak, sing, walk, and write, in a manner which would be impossible to a mere automaton, and they appear and disappear in the midst of a circle of critical observers.
- VII. Not only is invisible matter rendered visible and apparently living, but solid matter, such as iron, wood, cord, &c., appears to be decomposed and recomposed instantaneously, and apparently at the will of some invisible agent.

THEORIES.

The only theory which appears to me satisfactorily to account for these and other analogous facts, which it would be tedious to renumerate, is, that the phenomena are of spiritual or supra-mundane origin.

I am quite familiar with the records of all alleged exposures which have taken place during the last quarter of a century, and notwithstanding some real, and many suppositional exposures based upon preconceptions and hasty judgment, there yet remains a large body of incontrovertable facts, for which no theory short of the theory which recognises the interposition of invisible intelligences at all satisfactorily accounts.

Without further detaining you with descriptions of phenomena and inferences, with which, as members of the Psychological Society, the majority of you are already familiar by personal observation and reflection, I propose in the brief period yet at our disposal, to explain the general teachings of the intelligences who communicate: *First*—In reference to their states, opinions, and surroundings; and *Second*—Their opinions as to the modes in which occult, physical, and psychological phenomena which occur at seances are produced.

ORTHODOXY AND SPIRITUALISM.

To the theological opinions that are commonly inculcated by rigidly orthodox theologians of the Protestant Church, the teachings of the invisibles at spirit-circles are directly opposed.

1. Orthodoxy teaches the existence of a tripartite anthropomorphic Deity. Spiritualism teaches that God is one, indivisible, invisible, and to all beings incomprehensible.

2. Orthodoxy teaches the existence of two states or conditions in the future, known as heaven and hell. Spiritualism teaches the existence of numerous states extending gradually from the very depraved to the most exalted.

3. Orthodoxy teaches justification by faith in a Divine Saviour, and instantaneous forgiveness of sins on belief. Spiritualism teaches that justification can only take place as the result of repentance and reformation.

4. Orthodoxy teaches the existence of an endless hell for all who die impenitent and unbelieving. Spiritualism teaches that the future world as well as the present is a condition of probation and progress, and that "the present life is but Being's first faint ray."

5. Orthodoxy teaches that the bad go directly to hell and the good to heaven. Spiritualism teaches that all mankind enter, on departing this life, into a spiritual sphere, for which, spiritually and morally, they are fitted, and that in that sphere they may either progress or retrograde, but that at some point retrogression and consequent misery cease, and all are eventually raised to goodness and consequent happiness.

6. Orthodoxy teaches that all punishment may be avoided by penitence and belief in Christ at any period of terrestrial life. Spiritualism teaches that every man must in his own person suffer the penalty of his misdoings, and can only avoid further punishment by sincere reformation.

7. Orthodoxy teaches the resurrection, in some form, of the natural body. Spiritualism teaches, with the Apostle Paul, that there is a natural body, and there is a spiritual body; that the natural body does not rise, but that by decomposition it becomes incorporated with the chemical constituents of the earth, and that the spiritual body survives the dissolution of that which is material.

8. Orthodoxy teaches, that each individual of the human race will be judged and approved or condemned on one day, known as the Day of Judgment. Spiritualism teaches that there is no such day, but that every day men are judged, approved, or condemned, no especially set-apart day being necessary.

9. Orthodoxy teaches instantaneous enlightenment and celestial bliss to those believers who at death enter heaven, and everlasting and terrible misery and degradation to those who enter hell. Spiritualism teaches that there is no such sudden change on entering the spirit-world, but that all persons gravitate to the exact sphere for which spiritually, morally, and intellectually, they are fitted, and that the future life is in its first stages, to a large extent, a counterpart of the present; that spiritual realities are as tangible to the inhabitants of the spirit-

world as material bodies are to the inhabitants of the material world, and that the inhabitants of the spiritual world normally stand in relation to the material universe as embodied human beings in their normal condition stand in relation to objects in the spiritual world.

10. Orthodoxy teaches that rest is a leading characteristic of the higher future life. Spiritualism teaches that the future life is one of almost ceaseless activity—an activity not for personal aggrandisement, but in the true spirit of a commonwealth for the benefit of others. All become spiritually rich by liberal distribution; that, in fact, the real glory of a future life is activity, not rest; that rest, as generally understood, means retrogression, illustrative of the sentiment of the poet, who says :—

“There is a fire-fly in a southern clime,
Which shineth only when upon the wing;
So is it with the mind; when once we rest,
We darken. On! said God unto the soul,
As to the earth for ever. On, it goes,
A rejoicing native of the Infinite—
As is a bird of air—an orb of heaven.”

11. Orthodoxy teaches that its view of theology is the correct one. Spiritualism teaches, that as on earth, so in the rudimentary spirit-spheres, there are diversities of religious opinion, but that the majority of enlightened denizens are omnists,

“And believe in all
Religions—fragments of one golden world—
Yet to be relit in its place in heaven;
For all are relatively true or false,
As evidence and earnest to the heart
Of those who practise or have faith in them.
The absolutely true religion is
In heaven only, yea in Deity.”

HOW ARE THE PHENOMENA PRODUCED.

In order to obtain extra-mundane opinions in reference to the occult phenomena which take place at spiritual seances, I have on various occasions asked the more intelligent controls who have taken possession of mediums, their opinions respecting the *modus operandi* of the phenomena, and have, among many other explanations, received the following replies :—

Some controls in the spirit-world are without experience in these material modes of manifesting to the denizens of earth, and sometimes replies have been received from those who have no practical acquaintance with the phenomena.

Speaking generally, physical phenomena are produced by less developed and less intelligent agents, and psychological phenomena by those who are more intelligent and advanced.

There appears to be the same variety of intellectual and moral idiosyncrasy in the future life as there is in the present; and that is probable enough, or man would not be man were there not endless diversities of character, disposition, and knowledge.

QUESTIONS ANSWERED.

The following answers to questions I have asked of controls are selected :—

Q. How do you account for the lifting of tables, &c., at seances, without mechanical contact ?

A. In some cases by the power of attraction, in others by mechanical force.

Q. How do you account for the unseen rappings which are heard on tables, floors, walls, &c., at seances ? By what means are they produced ?

A. They are to be easily accounted for from the fact of the spirits being desirous to attract attention, and are produced in various ways. In many cases by the condensation of various gases contained in the air and their explosion. In some cases by the materialisation of some solid substance, and then used as a hammer. There are many ways, but of their mode of operation I leave Walter to explain, he is more conversant with that particular manifestation than I.

Q. How do you account for the production of what are termed spirit-forms, *i.e.*, of forms exactly resembling human forms, clothed in a profusion of white raiment, when no such forms, nor any such raiment, are in the room ?

A. My acquaintance with the production of materialised forms is extremely limited, but so far as my knowledge extends I am willing to explain. The primary elements of every earthly substance are to be found in the earth, and as the atmosphere is but the primary elements of the earth's formation in an etherealised, or, if you choose, a fluidic condition, the substances may be temporarily gathered together by persons situated as we, and used according as our knowledge directs, whether in the formation of forms resembling the human body, or drapery to clothe it. The particularity of colour is owing to the fact of it being more easily manufactured. This is my opinion, and you may have it as such. I do not pretend to be conversant with the subject, and would rather have time to consider and experiment before speaking more fully.

Q. I have seen full-sized clothed human forms produced apparently out of nothing, within a few feet of me ; I have seen such forms melt away into apparent nothingness ; I have seen those forms walk about the room and touch those who were present. How do you account for these phenomena ?

A. I have never seen such phenomena, therefore cannot speak from experience, though it agrees with my opinions as to the manner in which the substances were procured with which to form them. The atoms or molecules drawn together by the attractive power brought to bear upon them by the peculiar affinity each atom has for the other, it is not difficult to understand ; still less is that of the form's animation. After the building of the figure and moulding it according either to fancy or after a model, it is very easy to animate it and give it an automatic action. The intelligence is not, in my opinion, possessed by the form, but by the spirit which directs its movements, whether

that spirit is that of the person whom the form is supposed to represent, or a stranger.

Q. How do you account for bright luminous bodies, seen at seances, not radiating light so as to enable us to see the objects on which they rest?

A. From many persons—nearly all—there is a phosphorescent emanation, which to us is a palpable substance, and can be gathered together or condensed, either into a ball, or made to cover some object. Phosphor seldom radiates light when in its most luminous condition, and in the case of the formations we speak of, the quantity is too small to enable anything to be seen except in contact with it; it is then seen by contrast.

Q. What are those forms that are seen by clairvoyants only, and are not seen by ordinary sitters?

A. Generally, forms materialised by the spirit whom they represent, and are too ethereal to be seen by those who have not the gift of clear-sight; and sometimes the form only exists in the imagination of the medium, but is, nevertheless, perfectly palpable to the spirit, but not to the eye, even of the most gifted. In such cases it is merely an impression conveyed to the brain of the medium or clairvoyant, by the spirit wishing to be recognised, and is more easily to be done than by materialising a form never so ethereal by the uninitiated.

Q. What is the cause of the cold breezes which pass over sitters at seances?

A. Caused by the disturbing of the atmosphere in gathering together the ingredients required by the presiding spirit for the manifestations.

On a subsequent occasion I asked a more volatile control the following questions, and received the following replies:—

Q. Will you kindly answer a few questions on materialisation? How are the materialised forms, which are rendered visible at seances, produced?

A. With all the pleasure imaginable. Didn't I tell you, or somebody, that once before? How can I tell you any plainer? We just get the stuff and build the thing up, and then animate it. Sometimes we can't do it properly, but then it does not matter; there's always plenty of material to work with wherever any human beings are to be found; if you can only get an experienced, artistic sort of a fellow to do the building part, then the rest is quite easy. Sometimes we can't get sufficient of one thing, sometimes another, so that it is not always quite the thing we would like in the end; but there is in the materialised form the essential parts of a human being, and those materials are to be found wherever, as I said before, there are men or women. I can't give you any idea how to make them yourself, but if you are particularly anxious, why, just take a trip this way at your earliest convenience and I'll initiate you into the mystery with the greatest pleasure in the world.

EXTENSIVE INVESTIGATION.

The phenomena called spiritual have now been under examination for upwards of a quarter of a century, and have been investigated by many of the leaders of thought and action in both hemispheres.

In America, Judge Edmonds, Professor Hare, Dr. Dexter, Lloyd Garrison, President Lincoln, Dale Owen, Epes Sargent, and hundreds of others have examined the phenomena, and arrived at the conviction of their reality and genuineness.

In England their genuineness has been accepted by Mr. Howitt, Robert Chambers, Lord Lindsay, Dr. Wilkinson, Dr. Elliotson, Professor Crookes, A. R. Wallace, and tens of thousands of men and women of high intelligence and unquestioned moral character.

The majority of those who have accepted the reality of the phenomena have also accepted the spiritual hypothesis, viz., that they are produced by extra-mundane agents, but there is yet a great diversity of opinion as to the identity of the agents who produce the occult effects that are witnessed at seances.

It is difficult in the absence of all direct means of testing personal identity, to arrive at any entirely reliable conclusion, and the result is that the majority of cautious investigators leave the question of the identity of the agents an open one.

The broad, general teachings of the controls are, however, generally accepted, and the majority of those who have examined appear to accept the teachings respecting the future life, which, at the commencement of this address, I, in a condensed form, enumerated, rather than those that are commonly taught from orthodox pulpits, and are supposed to be accepted by professedly orthodox believers.

The teachings of Modern Spiritualism coincide with the aspirations of the human soul, and we feel that—

“ This life, this world, is not enough for us—
They are nothing to the measure of the mind.”

A future life, such as has been described by the extra-mundane communicators, is one worthy of the ambition and desire of all progressive minds. It is not to be a state of stagnation and ignoble rest, but of ceaseless activity and boundless progress. There we take up the broken thread of life—snap when, where, and how it may—and enter upon a renewed course of active service.

“ Our mission being accomplished in this world,
We go unto another, where all souls
Begin again, or take up life from where
Death broke it. We cannot think that there will be
Like disproportion there between our powers
And will, as here ; if not, we shall be happy,
And feel no bounds.”

We all feel more or less the transitoriness of this earth-life. Day by day, and hour by hour, those we know and love are passing from us, and without an hereafter of progress, virtue, and consequent happiness, small hope or delight can a sensitive and refined man have in this life. Our best-loved fellows leave us ; but, with the knowledge

that death is but the portal to a higher life, we are reconciled to the temporary separation, and know that when

"The death change comes,
 Death is another life. We bow our heads
 At going out, we think, and enter straight
 Another golden chamber of the King's,
 Larger than this we leave, and lovelier."
 "Beauty and bounty still beset our course;
 New beauties wait upon us everywhere;
 New lights enlighten, and new worlds attract."
 "Step by step, and throne by throne, we rise
 Continuously towards the Infinite,
 And ever nearer, never near, to God."

To doubters and unbelievers in another life death is a dread and painful mystery; they feel

"The winter is when those they loved have perished,
 For the heart ices them, and the next spring
 Is in another world, if one there be."

But even those philosophical doubters and disbelievers, when they enter the spirit-world, may exclaim—

"Yes, vain philosophy, thine hour is come!
 Thy lips were lined with the immortal lie,
 And dyed with all the look of truth."

I have to acknowledge the receipt of revelations of the conditions of a future life, and of terrestrial knowledge, from one whom, though I have never seen, I love to term my friend. From him I have received more information than ever I obtained, or hope to obtain, from any embodied man. I may with propriety say—

"He was to me an all-explaining spirit,
 Teaching divine things by analogy
 With mortal and material."

To the majority of men the future life is a matter of merely doubtful faith, but to the vast proportion of those who have been earnest investigators of modern spiritual phenomena, the belief takes the aspect of knowledge—knowledge, not based upon demonstration, but upon the strong balance of probabilities. The position of those who believe in a future life, and of ministering spirits as a matter of faith, may be appropriately expressed thus:

"We know in day-time there are stars about us,
 Just as at night, and name them what and where
 By sight of science; so by faith we know,
 Although we may not see them till our night,
 That spirits are about us, and believe,
 As full of angels as a beam of light
 Of notes."

The broad lessons we learn from all these investigations are that in the reign of physics, biology, and psychology, there is continual progress, and more or less of doubt.

The transcendentalism of to-day becomes the common sense of to-morrow, and in every department knowledge is advanced from stage to stage.

Bigotry and conservative immobility obstruct all new truths and new theories, and it is well that it is so, as such obstruction casts upon the defenders of all new facts the burden of proving their right to be accepted, and opposition commonly annihilates error.

These despised phenomena are, perhaps, the only satisfactory antidote to the materialistic tendencies of the age. They strike at the root of the prevailing conception, that there is no manifestation of thought apart from a physical brain; they show that intelligence exists apart from all forms of ordinarily organised matter. The last, and possibly the most important, lesson is, that there is a future life for man, and that that future is characterised by continual progress, and by an inflexible law which associates happiness with goodness, and unhappiness with violation of Divine order.

One word to dogmatic opponents of our established facts; it is, to lift the finger of prejudice:—

“Take your finger off your eye;
It blocks the universe and God from sight.”

And another word to those who are believers—Be not too anxious to proselytise. Those who are lovers of and searchers after truth will, in due time, accept our teachings, and probably join our ranks.

ESSAYS ON MATTER, MOTION, AND RESISTANCE.

BY JOSEPH HANDS, M.R.C.S.

(Continued from p. 18.)

COLOURS—continued.

135. *The effects of colours on different objects, displaying the materiality of colorific rays.*—Under ordinary circumstances, says Mr. Hunt, plants bend *towards the light*. In all my experiments with red fluid media *they have as decidedly bent from it*.

136. The wild and savage buffaloes found in the thickets on the Poestan plains are readily excited, like the pheasant, by glaring colours. Thus, a German artist, who went to sketch the magnificent remains of the neighbouring temples, once incurred great risk by pulling out a red bandanna pocket-handkerchief, the sight of which so infuriated these animals that he was obliged to fly for his life. In the Neapolitan games, a buffalero, well mounted, and whose horse is trained to turn short on his haunches, and to be perfectly “in hand,” undoes the long scarlet sash he wears round his waist, and, shaking it in the air, provokes the animal to pursue him.

137. The hyla, or tree-frog, like the chameleon and iguana, changes

its hues in accordance or from sympathy with the colours of surrounding objects.

138. The pigmental layer of the skin, analagous to the *rete mucosum* in the octopods, says Mr. Owen, consists of numerous cells, containing coloured particles suspended in a fluid. The hue is rarely the same in all the cells; the most constant kind generally corresponds more or less closely with the tint of the inky secretion. In the *Sepia* there is a second series of vesicles, containing a deep yellow or brownish pigment; in the *Loligo vulgaris* there are three kinds of coloured vesicles—yellow, rose-red, and brown. In the *Octopus vulgaris* there are four kinds of sacs—red, yellow, blue, and black. In the skin of the *Argonauta* all the colours which have been observed in other cephalopods are present, and contained in their appropriate cells. These vesicles possess the capability of rapid alternate contractions and expansions, by which the pigment can be driven into the deeper parts of the chorium, or brought into contact with the semi-transparent epidermis or scurf-skin. If the surface of an *Octopus* be slightly touched, the colour will be accumulated gradually or rapidly, like a cloud or blush, upon the irritated cuticle. If a portion of the skin be removed from the body and placed in sea-water under the microscope, the contractions of the vesicles may be watched for some time. Their margins are well defined, and they pass, during their dilatations or contractions, over or under one another. The ability which the cephalopods possess of changing their tint, and of harmonising it with that of the surface on which they rest, is as striking and extensive as in the chameleon and common trout, in which it seems to be produced by a similar property and arrangement of pigmental cells.

139. The *Geckotidae* adhere to bodies by forming partial *vacua* under their feet; they have kidneys, but no bladder. These lizards put on the hues of the localities they inhabit, are very quick in their movements, and *can perceive objects in the dark*. All these ugly reptiles are said to blister the skin by the touch.

140. Colours, like odours and sound, occasion, through the medium of the brain, distinct effects; thus blue *tranquillises*, yellow causes *confusion*, red excites the nervous system, and acts on the spirits. It is almost impossible to classify the numerous and dissimilar effects which the diversified hues of nature develop in the entire individuality of man. Different tints often produce strange effects on certain persons. The time and extent of the action of light, and the operation of diversified colours upon the spiritual principle, are as particularly measured and governed as is the circulation of the living blood or nervous fluid. The influence of *violet* is generally soft, mellow, pleasing, and tranquillising; red is the most exciting element, and

the lowest in beauty. The intense action of *red* upon the medium of sensation produces great, and sometimes uncontrollable, excitement in susceptible minds. Some animals are infuriated, and certain individuals are thrown into paroxysms of nervousness, or delight, by the sudden presentation of *red* to their senses. Africans are passionately fond of this colour; it imparts pleasurable sensations, suggests simple enjoyments. It influences them to sing, after their fashion; also to dance and go through a great variety of pleasing gymnastic performances.

141. There was a bookseller at Augsburg, blind from birth, who maintained that it was not the eye, but the nervous intellect, which recognised, judged, and arranged the proportion of different hues. This man assured his friends that it was by means of an internal sense that he had precise notions of colours, and it was a fact that he determined their fitness with exactness. This bookseller had a variety of different tinted beads, with which he formed dissimilar figures; and the arrangement of the colours was always harmonious. He stated that whenever he took much pains to arrange the hues of a ground he felt a pain immediately above the eyes. The region which I have indicated as the organ of Colour was greatly developed in this man. (Gall, vol. v., p. 53.)

142. The electrical conducting abilities of bodies vary, and are often affected by the colour of the thread, or rather the nature of the dye-stuff by which it has been tinged. When of a brilliant white or a black character, its conducting capability is the greatest, and a high golden yellow or a nut brown renders it the best insulator.

Marichini and Mrs. Somerville communicated *magnetism* to steel wires by exposing them to the violet rays.

143. A plant, after it has reared its head above the surface, if it be permitted to vegetate under the influence of the blue rays, will for some time exhibit a luxuriant growth, and present in its earlier stages an appearance far superior to that of plants grown under white light. The leaves will be of a darker green, and altogether the plant will show signs of vigorous health, although it will be more succulent and contain less woody fibre than under other circumstances. Gardeners employ deep blue glasses to assist in the development of roots from cuttings.

It is found that vegetable colours are bleached, not by the rays of their own character, but by those which are *complementary* to them. Thus a red dye fades under the influence of a green ray, and a yellow beneath that of a blue one more rapidly than when exposed to rays of any other colour.

Vegetation and animals vary in colour from the base to the top of mountainous countries.

144. Some of the inhabitants situated in the interior of Ceylon are without the organ of Colour, and have no words to express this element. These people are of a diminutive stature—about four feet four inches in height. They have no religion, and are without the phrenological organs of Memory, Number, or Order.

145. Previously to entering further into the disquisition touching the qualitative materiality of light, I deem it desirable to place before the reader a list of the recognised elements mostly contained in the earth's atmosphere; suggesting, at the same time, the presence in it of other particular (though not as yet recognised because at present undemonstrable) amorphous imponderable substantive elements. I shall further venture to propose the positive materiality of certain definite existences always persistent in the air, which at this epoch are generally considered to be merely the result of a series of special definite pulsatory conditions of motion; as for instance the elements or principles constituting sound and colour, &c. I am further impressed to suggest that there must always be a *something* which moves or causes motion, and this something should partake of the properties essential to materiality. The most fertile imagination cannot, I presume, conceive a nothingness producing effects.

As regards the constituents of our aerial element, among other things mixed up with it will be found gravitating atomised matter as—1, oxygen; 2, nitrogen; 3, sometimes free hydrogen; 4, carbonic acid; 5, ammonia; 6, watery and other vapours; 7, sulphuretted, phosphuretted, and carburetted hydrogen; 8, floating animal ova; 9, the seeds of certain plants and the sporules of others; also, 10, particular *bacteria* or rod-like fungoid germs. Accompanying the above must be particularly noticed the motory, creating, corporeal, spiritous principles of—11, light; 12, electricity; 13, magnetism; 14, the chemical principle of actinism; 15, the elements constituting colour; 16, the matter by means of sound which is produced. Further; 17, odorous exhalations (healthy and noxious); of the latter are the miasms of intermittent and other forms of fever and certain contagious diseases; 18, meteoric magnetic iron, &c., &c.; all these, or their effects, have been detected and demonstrated as resident in the air we breathe. But, added to these, there must be certain special undeveloped and consequently unatomised, and non-gravitating yet material elements, which in coming time will be made evident to our perceptive faculties, and their manner or mode of use shown, relative to their chief employment in the formation, or materialisation of the vegetable and animal kingdoms, which have produced all the later crusts of the continually enlarging earth, except, perhaps, the meteoric iron *aërolites* that fall by millions every year upon the surface of our planet.

LIGHT.

DISSERTATION on the materiality of light, or radiant imponderable matter.

146. Huygins, Euler, and Descartes thought that light consisted of vibrations extending through a rare elastic medium, which fills all space; while Newton considered it as resulting from the emanations of particles of matter from bodies. Dr. Young held to the former theory.

The undulatory waves of light have been proved to move 192,000 miles in a second, and are 8 minutes and 13 seconds (Herschel says $7\frac{1}{2}$ minutes) in reaching the earth after being excited into vibratory action by the sun; whilst a projected cannon-ball, travelling at its usual rate, would take 20 years (Herschel says 17), and sound 14 years and 87 days in performing the same distance.

147. *Light is capable of refraction*—that is, breaking towards the perpendicular—when the ray proceeds into a rarer medium, and from the perpendicular when the beam passes into a denser medium. A ray of light, then, forms a curve to reach the earth (and varies in its arch according to the temperature of the different strata of the terrestrial atmosphere), and thus we see a star before it rises. Different bodies vary in their refractive ability, as hydrogen, the diamond, amber, turpentine, and oils. Newton inferred from this fact that the diamond was combustible, because it refracted light like the latter substances.

148. *Reflection of Light*.—When luminous rays arrive at the surface of bodies, a part of them, and sometimes nearly the whole, are thrown back, or *reflected*, and the more obliquely the beams fall on a surface the greater in general is the reflected portion. In these cases the angle of reflection is equal to the angle of incidence. Malus, in 1810, discovered the *polarisation of light by ordinary reflection* at the surface of a transparent body. He found that when a beam of light is reflected from the plane of such a body, *at a certain angle*, it acquires the same singular property which is impressed upon it in the act of double refraction (as when split into two by passing through Iceland spar) and the phenomena of polarisation are in this way exhibited.

149. *Phosphorescence*.—No heat ever accompanies phosphorescent light, nor does it produce chemical change. By the prism we detect the same number of colours in a phosphorescent beam as in the sun's rays. Many bodies exposed to the solar beams give out light when examined in the dark, as with the flowering nasturtium. If the human hand be held in the sunshine for a time it will emit light after the exposure for some minutes in the dark. The bodies which chiefly

display this property are the Bolognian stone, a sulphuret of barium; and Canton's phosphorus, which is prepared by calcining oyster shells and sulphur together. If these substances are exposed to the solar rays they acquire the property of shining in the dark so strongly as to enable the observer to read a book by them. Other substances exhibit these phenomena, as Homberg's phosphorus, melted chloride of calcium, and also nitrate of lime and sulphuret of strontium, &c. The above results show that light is a divisible *something* or radiant material, and not an undulatory *nothing*. This luminous ability of certain bodies is diminished by cold; they are more brilliant in dry and warm than in cold, wet weather; they shine most intensely after exposure to direct sunshine, but some of them, especially Canton's phosphorus, glow in the dark after mere exposure to ordinary light. Some persons report that these substances can absorb and then give out coloured lights.

The beams from the moon do not produce the foregoing phenomena, but burning gunpowder, a lamp, or electricity will.

A diamond which had been placed in the solar rays, and then covered with black-wax, was found to shine, several years after exposure, on removing the wax. Chemists have exhibited, to a high temperature, a mixture of sulphur and zinc, excluding every substance from which they might obtain oxygen. The two substances united, forming a pure sulphuret of zinc, and at the moment of combination, they gave out vivid light, showing this principle to be a material capable of combination with other bodies.

Aristotle and Fresnel supposed light to be a pure, subtile, homogeneous medium, or imponderable, material ether, pervading not only all space, but every substance in nature.

150. Faraday was enabled, by means of a strong electro-magnet, to attract rays of light as readily as if constituted of a bundle of iron wires.

151. All bodies on which light falls absorb a certain part of it, giving an increase of energy to their distinctive undulatory qualities, which are at all times escaping from them, whether in darkness or light. It is this enhanced intensity of the vibratory attributes of substantive existences that make us, in our common state, aware, from habit or use, of their presence through the source of vision.*

152. *The motor ability of light.*—Mr. William Crookes, F.R.S., suspended an exceedingly light lever-arm of glass to the end of a fibre of spun glass, 8 inches long, inside a glass tube. To each end of the lever-arm a disc of pith was fixed. As soon as the tube was filled

* See the author's work on Will-Ability, pp. 12, 37.

with air, the warmth of a finger instantly repelled the lever-arm. When there was a partial vacuum of 30 millimetres, external heat would not move the arm; but on making a very perfect vacuum, the lever-arm was repelled by the warmth of the finger. Light also attracts or deflects the lever-arm under like conditions.

THE THREE KINGDOMS OF SPIRITUALISM.

By J. BURNS, O.S.T.

(Continued from page 11.)

THE GOSPEL TRIADATION.

The narratives styled the Gospels were written so long after the events described therein occurred, and by penmen who wrote from tradition or previously-existing fragments, that it is a hard matter to weed out those ideas which mar the consistency of the whole, and retain alone the central Gospel truths. This work can never be effected by the usual form of criticism, but by intuitive perception of the essential truths of the system. Inspiration, not scholarship, must accomplish the task, but both combined would be the best arrangement. The Gospel, or God's message of good news respecting the soul and its destiny, has been the same in all times, and all who have been sufficiently developed to hear it have listened to the same voice of truth.

My purpose is not to introduce into this short exposition a criticism of the kind to which I allude, but to view the position in passing, that I may call attention to the definition of spirituality attributed to Jesus in Matt. xxii. 34—40 :—

But when the Pharisees [the religionists] had heard that he had put the Sadducees [the materialists] to silence, they were gathered together.

Then one of them, which was a lawyer, asked him a question, tempting him, and saying :

Master, which is the great commandment in the law ?

Jesus said unto him, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind.

This is the first and great commandment.

And the second is like unto it, Thou shalt love thy neighbour as thyself.

On these two commandments hang all the law and the prophets.

In this reply of Jesus we have the triadation in two forms, the second being "like unto" the first. The love of God with "mind," "soul," "heart," represent the individual, humanitarian, and divine methods of man's being, by which he gains an external knowledge of

truth, is impelled by the love of his species to diffuse it as widely as possible, and has within him a godlike aspiration to lead a pure and holy life. The second commandment is really included in the first, of which it is a practical application, denoting altogether three kinds or degrees of love: the love of God, the love of man, the love of self. These three spheres of duty are furthermore declared to comprehend all the law and the prophets.

Jesus does not pretend to have made an original discovery in giving the reply to the Pharisee, for he distinctly declares that the previously existing law and spiritual teachings through old time prophets were other forms of the same comprehensive truth. He gives the law a moral form of expression, embracing the widest generalisations; avoiding the externalism of the priestly party on the one hand, and the speculations of the philosophers on the other. He leaves every man to apply these commandments to his own needs, and in such a manner that he will seek within for the solution, and not in external teachings, written, oral, or revealed. The seat of action with the commandment-keeper is thus shown to be in the spirit, not in the external mind or intellect. His light is within himself, and is not derived from Scriptures or preachers. "If the light that is in thee be darkness, how great is that darkness!"* The "Gospel Spiritualism," like all other forms of Spiritualism, is essentially spiritual, taking its rise in the inmost nature of man, and from the centre extending outwards, and sanctifying the whole nature. It is not that which goeth into the man that defileth him, but that which originates within him and cometh out. If the interior of the man be enlightened, and true to itself, all sufferings or disabilities will pass off as nothing, compared with the bliss and light which is the reward of the spiritually-unfolded or fully-initiated disciple.

It will be perceived that the triadation of Jesus is put in the esoteric form. The inmost, the love of God, the "heart," is put first, and the love of self, the "mind," is put last. In the Motto of the Spiritual Institution, the exoteric arrangement is followed, and the needs of self or the "discovery of truth" is put first. This is because in the present condition of Modern Spiritualism the work is altogether exoteric, and is followed by the intellectual deductions, based on phenomenal facts. We Modern Spiritualists approach the subject from that position of materialism and spiritual darkness in which a recent condition of barbarism, and the rituals and dogmas of the Churches, have placed us. But when we become Spiritualists indeed, and, relying not alone on the phenomenal manifestation of the spirit,

* Matt. vi. 23.

discover the soul itself, and avail ourselves of its faculties, then we will reverse the terms of the triadation, and begin with the inner and eternal kingdom, and pass outwards to its dependencies.

THE TRIADATION AND THEOLOGICAL TERMS.

There are minor considerations mingled with the doctrine of the Trinity which affect somewhat the meaning of terms used in the ancient triadations. "Jesus," representing the outward man, in whom the inmost found full expression, would be "God manifest in the flesh," or the physical man attuned to the divine purity of the image of the godhead within. "Christ" is another name for that "image," and by outward control over the natural man, becomes the "saviour" and redeemer from mortal ills. "Christ" is also the "Son of God," being an individualisation of the infinite, or "Father" who ruleth over all. "Christ" is then synonymous with the inmost or divine spirit of man, and "Jesus" is that spirit ultimated in human life by the welling over from within of its holy power, whereby the organism—spiritual and physical—with all its faculties, are "anointed" with light divine and actuated in accord with the will of the Father. Such is the true, fully-developed Spiritualist, who has attained to the "kingdom" and is at oneness with the Father: in other words, lives the Truth. This inner and outer man is also formulated in Platonism.

Another form of the triadation which expresses the stages of development now being discussed is the formula: Natural, Spiritual, Celestial, which may also be expressed as, Phenomenal, Intellectual, and Intuitional, more particularly in the method by which the human mind takes cognisance of the kingdoms or the manner in which they express themselves through the mind of man when he is developed in them. Other synonyms are Body, Soul, Spirit, as used in the Harmonial Philosophy by Andrew Jackson Davis.

EGYPTIAN AND HINDOO TRIADATION.

Such is a cursory view of the forms of expression relating to this matter that are most familiar to us. In the Egyptian and Indian systems there is a similar tripartite division. Osiris, Isis, and Horus have been regarded as implying the system of nature, as expressed in cause, means, and effect—father, mother, child. The Indian Brahma, Vishnu, and Siva (creator, preserver, and destroyer) embody similar ideas, the latter being the kingdom of phenomena or change—the outer kingdom, and hence that in which effects pass away to be replaced by other effects. In like manner Horus was periodically renewed, though his progenitors were stationary and eternal.

These, say one school of thinkers, were forms to express the phenomena of nature. But is man not an epitome of nature, nay, of the universe itself, from the Creator outwards to the realm of material phenomena? Each soul is indeed the centre of a universe, having all the attributes of the whole. Exoterically let us suppose this teaching represented the physical world around us, but to the more enlightened it would be a philosophy of human life and of the career of the individual spirit.

GOD AND DEVIL.

The duality of good and evil also falls into a three-fold division, and gives us another triadation, for it is impossible to conceive of a good and an evil quality or state without the intervention of a middle factor. Good, the causative factor, is the antithesis of evil, the crumbling realm of effect or change, with all its pains, struggles, and uncertainties. Cause and effect are necessarily opposed, as are the two walls of a house, the two sides of the body, or the outer and inner surfaces of a vessel. It is impossible to conceive of existence as a whole, or objects as parts of existence, without this opposition coming to the front. Hence the natural man, such as Mr. Charles Bradlaugh, who is not developed beyond the perception of material effects, sees evil in the downward sweep of the avalanche or the ferocity of wild beasts, and censures God, if there is one, for not managing things better. The Siva worshippers, after the same school, pray to the devil to be merciful on them. From the same class of sentiment the Christian worshipper offers up a similar prayer to God to shield him from the "adversary;" that is—the material side or sphere of effect as opposed or adverse to the causative side—spirit, or God.

It is possible that all of these theological forms or spiritual triadations had a common origin during ancient civilisations, and were a consistent philosophy of the great mystery of being; but the condition of high culture in which this philosophy was developed having passed away, a more barbarous race would fail to comprehend it fully, and give to that which was instructive and spiritual, a dogmatic and stultifying quality. Such is the case with the Christian theology of the age. Modern civilisation has not yet arrived at the stage of independent spirituality, and so it makes shift for itself by misappropriating and misunderstanding the spiritual discoveries of past ages.

SUMMARY OF TRIADATIONS.

Some of the triadations which may be noticed could be classified thus :—

	I.	II.	III.
Modern Spiritual- ism	Discovery of Truth	Diffusion of Truth	Application of Truth to the welfare of Hu- manity.
Gospel of Jesus	{ Love of Self .. Mind	Love of Neighbour .. Soul	Love of God. Heart.
Christian Trinity	.. Father .. ..	.. Son .. ..	.. Holy Ghost.
Egyptian .. ..	.. Horus .. ..	.. Isis .. ..	.. Osiris.
Indian .. ..	.. Siva .. ..	.. Vishnu .. ..	.. Brahma.
Masonic .. ..	.. Apprentice ..	.. Fellowcraft ..	.. Master Mason. }
Harmonial .. ..	.. Body .. ..	.. Soul .. ..	.. Spirit.
Relative .. ..	.. Natural .. ..	.. Spiritual .. ..	.. Celestial.
Mental .. ..	.. Phenomenal ..	.. Intellectual ..	.. Intuitional.
Conventional ..	.. Devil .. ..	.. Human Souls ..	.. God.
Nature .. ..	.. Mineral .. ..	.. Vegetable .. ..	.. Animal.

I shall now proceed to define the Three Kingdoms of Spiritualism in the nomenclature of the Spiritual Institution as representative of British Spiritualism, and point out the work of Spiritualism as a science, a movement, and a soul-saving power.

(*To be continued.*)

CHAPTERS FROM "THE STUDENTS' MANUAL OF MAGNETISM."

TRANSLATED FROM THE FRENCH OF BARON DU POTET.

(*Continued from p. 39.*)

Sympathy and antipathy.

The communications of patients among themselves, when the magnetisation has taken place in common, develop attractions and repulsions with which you ought to be acquainted. I have witnessed a great many instances of this kind; they often produce irregularities in the treatment, sometimes even cause a total failure.

Magnetised objects.—Intermediary magnetism.

In certain cases, magnetised objects may be turned to good account; flannel, handkerchiefs, and even clothes, may be thus utilised. When the diseased part is covered with them, they keep up an easily perceptible tonic movement, and swellings may in this way be reduced which have resisted the action of poultices and plasters, however skilfully they may have been applied.

You take the object which you wish to magnetise into your hands, and by the exercise of your will throw your magnetic force into it as if you were magnetising a person. Ten or fifteen minutes suffice.

Magnetised water is also of great use. You hold the tips of your fingers over a glass of water for rather a shorter space of time than is indicated above.

Demagnetisation.

Certain organisations become, so to speak, saturated to excess with magnetism, and for that reason it is necessary to learn how to draw it off. Passes across the lower part of the forehead suffice in ordinary cases, but in extraordinary ones they only add to the superabundance which already exists. You must establish currents from the chest to the extremity of the feet; observe carefully whether the head is free, recommence time after time, and directly the patient opens his eyes leave the room; for the sleep may be reproduced not only on contact with you, but also on your approach, which may place you in an embarrassing position. We repeat that some bodies absorb the magnetic principle with avidity; like a sponge on the contact of water, they draw away your strength with incredible rapidity. This fact might be doubted but for the existence of numerous instances of it. The most convincing proofs may be obtained by experimenting before several persons. These absorbent organisations even draw off the magnetic power which you have expended upon some one else.

You must remove these persons or give up your experiments. There is nothing extraordinary in these cases: are there not physical bodies which absorb more heat and retain it longer than others? It is the same thing with humidity, &c.

This magnetic absorption requires a certain degree of prudence. Follow the rule which I have given above: disembarass yourself of these people if you do not wish to prepare difficulties for yourself. When they are absent order will be re-established. But do not trifle with the magnetic agent; it is a mysterious force, which carries with it virtues not possessed by other natural agents.

Do not be alarmed in the case of serious illness; the disturbances which I have indicated are little to be feared, but awake the patient after an hour's sleep. I have remarked that after this lapse of time, magnetism loses its composing properties. It is seldom that one hour's sleep is not sufficient.* But all somnambulists find this a comfortable state; they beg you to let them continue in it; do not however listen to them.

DANGERS OF MAGNETISM.

In common with every force and every agent, magnetism has its dangers as well as its advantages.

I must point out to you those which I have been able to discover; they are of two kinds: physical and moral, and concern the magnetised as well as the magnetiser.

Physical Dangers.

When magnetism encounters a susceptible disposition which it cannot control, the sensitiveness is augmented to an injurious extent. It produces excessive irritation of the nerves, thus placing you in a

* Here there is only a question of somnambulant sleep; as to natural sleep however long it may continue, it should never be interrupted. Magnetisers for their part often think only of their wish for information; and they prolong as much as possible this fatiguing state.

most uncomfortable position. You must either give up magnetising and consequently abandon a treatment, or if you continue, you expose the sick person to the risk of the magnetic crisis, which can only be calmed by great precautions, and much expenditure of time.

Some people are so sensitive to magnetic action, that twenty or thirty seconds are sufficient to produce in them the magnetic crisis, and the agitation thus caused may last several hours in spite of all your efforts to tranquillise them. I had given up treating such cases; for, contrary to the rules which I had laid down as efficacious, the means which I employed to lessen this agitation only served to increase it. The most certain method is to retire, and to wait till the agitation subsides.

These exceptional cases having been observed by the doctors, they say that magnetism always irritates the nerves. Such cases are extremely rare; they are to be met with also in medicine, the organs of some sick people being irritated by the administration of the weakest drug, others being overdone by the twentieth part of a grain of tartar emetic. All that can be done is to change and to modify the mode of treatment.

I now come to the subject of contagion or inoculation by contact. It is a serious one, and deserves our deepest attention.

By that kind of enthusiastic state of mind which somnambulists often find necessary in order to have a proper feeling for the troubles of others, they are exposed to the risk of catching and being inoculated with the diseases of those people with whom they are placed *en rapport* either with or without contact. Even magnetisers run the same risk.

1. *Inoculation by Contact.*

Among the facts verified by me, I may quote the following:—A woman who was suffering from a gouty affection which had caused her joints to stiffen and her limbs to lose their flexibility, and even prevented her jaws opening to their full extent, was placed *en rapport* with one of my somnambulists, who, after having shown that she understood the malady, and having indicated the mineral baths which were likely to cure her, complained that she felt pain in the same parts which were affected in the patient. I did not pay much attention, for the same thing had happened in other diseases and no unpleasant consequences had arisen. I awoke her; but what was my astonishment?—she could neither move nor open her mouth. I tried in vain to remove these symptoms, which I considered to be only temporary. After the lapse of several hours, as she still continued in the same state, we were obliged to carry her, as we had carried the patient, stiff and helpless to a carriage and take her home. She continued thus for three days. During this time she was obliged to be fed, like an infant, with small spoonfuls of soup, for her mouth was three parts closed. The malady gradually left her.

Another somnambulist having touched a patient whose blood was in a bad state, lost all his hair a short time afterwards.

A convulsive hiccough, a cough, a pain in the side, were transmitted by contact to another somnambulist.

Another, who had held the hand of an idiot for some time in his, became and continued quite stupid for several days. It is, however, only at this cost that somnambulists often find means of cure. The more they feel, the better are their perceptions. They talk very little, but they investigate; their medication is peculiar but efficacious. When asleep they have not the least fear of contracting any disease; when awake they are as much alarmed as if the malady were permanent. I have never magnetised a consumptive person or a patient who had taken mercury without in the first case feeling a pain in my chest, and in the second in my bones, and particularly in my wrists and finger-joints.

When magnetising a young man who had a dislocation of the thigh, I was seized shortly afterwards with very acute pain in my leg on the same side. I did not at first pay much attention to it, and the pain soon ceased, but the following day the same thing occurred, although before going to my patient I was perfectly well. I could not believe in this singular phenomenon, and wished to prove its reality. I suspended the treatment for two days, during which time I felt nothing. I recommenced, and the joint again became affected, and I began to drag my leg, whereupon I made some excuse for not continuing the treatment. I did not at that time know that in magnetising without contact the action was of the same efficacy, and that this inoculation might be avoided.

One day I was making experiments upon a young man affected with a syphilitic malady, of which I was in ignorance, his knees being between mine. At the end of about a quarter of an hour I felt acute pain in the legs. I asked him if he was not affected in the same way. He replied that for the last minute he had been free from pain, but that habitually he suffered intolerably. I ceased my experiments, and the pain which I had contracted continued for a part of the day.

Since making this discovery I have often said to the patients whom I was magnetising, "You feel pain in such and such a part of your body," and each time I have been right. Never having been ill, and having never suffered in any way, when I feel pain in magnetising I know that it does not arise from myself, and I remove to a sufficient distance from the patient, in order not to expose myself to the risk of this inoculation.

Other magnetisers have told me of the same fact. I confess that for a long time I refused to believe either their testimony or my own. Now unbelief is no longer possible: I have observed the fact too often to retain a doubt on the subject.

One more instance of the same kind occurred to me at St. Petersburg while I was engaged upon this work. I was magnetising a lady who was seriously ill with a nervous and putrid fever. Being often obliged to be near her and to touch her, I had a kind of effusion of blood in the whole of the cellular tissue of the eyelids. I suffered no pain, but it continued nearly a fortnight. It was on the very day when this lady was in great danger from the fever being at its crisis

that this happened to me. On leaving the patient's house I felt a tingling sensation in the eyelids, and during a drive of a quarter of an hour the effusion had taken place. But I must say that during the visit to my patient I experienced peculiar sensations, which made me think that a species of inoculation had just taken place. It is in order to avoid these accidents that I recommend people to touch as little as possible when magnetising.

2. *Inoculation without Contact.*

By a singular freak of magnetic force, and, perhaps, in consequence of the analogy between two nervous systems, unexpected phenomena sometimes occur. Thus I have several times seen a connection established between magnetised persons who were strangers to each other, and the sensations experienced by the one were felt by the other, although they were often in different rooms. This is extremely embarrassing, for while you are expending your care upon the one who is affected sympathetically, the other whom you had left calm is again seized with the agitation, and the crisis through which he had already passed, and *vice versâ*. Hours are thus spent in useless and very fatiguing labour; you must then either change the time for your treatment, or find a substitute to magnetise one of the two patients. Do not fancy that this is all imagination on my part. In a hospital at St. Petersburg I was engaged to treat two persons suffering from nervous affections of an epileptic form, both of which I cured, though the disease was of a serious nature and long standing. Now, although the patients were at a great distance from each other, one being on the first floor and the other on the second, as soon as I magnetised one the other was affected by it. The person whom I was not magnetising could have had no indication of what was going on, and it was not once, but twenty times, and both by day and night, that this singular phenomenon was observed. I used to enter quietly without making the least noise; they were often both sleeping naturally, and it did not signify which I magnetised first, the other invariably awoke in a state of extreme agitation. In order to gain information, I allowed this sympathy to continue for some time, after which I put a stop to it by producing several artificial crises in succession, thus destroying the excessive sensitiveness of their nervous systems, hitherto kept up by a too great abundance of nervous fluid, which was prevented passing off by the cramps and spasms, from which they suffered almost continuously.

Magnetism is destined to exercise the thoughts of the physiologist and psychologist for many years to come. New and incomprehensible facts will constantly be manifested, in consequence of the singular properties of the agent employed.

Moral Dangers.

I can only touch slightly upon this subject here. I have elsewhere unfolded my ideas to the best of my ability in my "Essay upon Philosophic Teaching."

If you magnetise with an impure heart, you run the risk of corrupting; this is a moral as well as a physical fact.

A truth which you will recognise later in life is this; that two men apparently of a similar nature, with equal merit, operating in the same manner and in identical cases, will obtain different results. And I do not say this only of magnetism, but of all medicine and even of surgery. This proceeds from the moral principles which they may possess, and which have an influence which is extended even to their works. Our hands must be free from stains. You will laugh at this, for you will not understand it; but it is a fact. Water out of an unclean vessel can never be good; it can no doubt be used, but its effects will be injurious; sometimes it is even poisonous. Some people have pernicious properties which are often only discovered when it is too late to prevent their effects, sometimes they are not even aware of it themselves. But I repeat that this is true of other things besides magnetism. It is only too true that certain human beings exercise a pernicious influence upon their surroundings, there are others whose influence is favourable. Somnambulists can always distinguish these people, and sometimes the patients also. But here everything is veiled in obscurity.

The will and the desires must be regulated. I regard as of the first importance great persistence of idea; the sentiments and wishes must not continually be changed; the morrow must find you in the same frame of mind as the day before, in order that you may take up your work where you left it. If convinced of this truth you act thus, you will accomplish great things. Reflect that the determinations of your mind are carried out in action, and that scarcely has a thought passed through your mind, when it is already transmitted by an invisible messenger. What will be the consequence if your will is constantly changing? A derangement of the organisation which you are charged to reconstruct, a displacement of the materials built up by you the day before, and a situation in which it is impossible to know how to carry on the work. You will be like a doctor who alters his mode of treatment daily, and who, not having the least patience, is perhaps astonished that what it sometimes requires weeks to produce, does not appear in one day. Be patient and persevering; without these two qualities you will be a second-rate magnetiser, and you will only succeed in trifling ailments or in those which are of short duration.

The more I advance in the study of magnetism, the more I feel convinced that it is a great science and a great art. With the assistance of the phenomena which it produces, will one day be explained by analogy the effects now attributed to imitation and to sympathy, that kind of inoculation of nervous disorders always so much dreaded, and which have carried terror into so many families, so many communities, and so many schools. Where nothing but imitation is recognised, there is a subtle agent which is transmitted without contact from one to another, and may be communicated by vicinity, by a look, or even by a glance. Oh, human ignorance, when will

you cease? Must doctors always remain in obscurity, when the flaming torch of Mesmer's great discovery is at hand to illuminate them with its bright light?

(To be continued.)

"ANACALYPsis"—PART V.*

The fifth part of the reprint of the great work of Higgins is now published, and the parts already issued are being done up in a volume, which will soon be ready for delivery. There is no work on the occult and the antique in spiritual ideas and religious symbols so profound and comprehensive as the *Anacalypsis*. It has been the resource of book-makers for a long time, and having been inaccessible, except to the few, its matter could be appropriated without much danger of detection. Now that the work itself is being popularised, there will be an end of this kind of thing, and no doubt this reprint will give an impetus to the further investigation of the origin of intellectual forms, and yield discoveries which will lead nearer the desired goal.

The circulation and study of this wonderful book would have a most pronounced effect on the mind of the times. Those who are well acquainted with it enjoy a position in discussion, which places them high over the heads of less informed men. It is emphatically a *Human Nature* book, treating of man in a very profound and comprehensive manner, affording a satisfaction which the efforts of anthropologists and ethnologists, so called, fail to convey.

Poetry.

THE BETROTHAL.

"O, human love! thou spirit given
On Earth of all we hope in Heaven!"

EDGAR ALLAN POE'S "TAMERLANE."

Through verdant vale and daisied dale
And grassy glade I threaded;
By wandering wave where willows lave,
And stars seem deep imbedded.
The sparkling stream with glassy gleam
O'er golden sand was flowing;
A balmy breeze caressed the trees,
Which bowed to greet its blowing.
Fair Luna lent—the star-beams sent—
A silvery light around;
The throatly cell of Philomel
Poured forth symphonic sound.

* "*Anacalypsis*: an Attempt to Draw Aside the Veil of the Saitic Isis; or an Inquiry into the Origin of Languages, Nations, and Religions." By Godfrey Higgins. Five Parts now ready, price 2s. 6d. each. Part V. is offered to the purchasers of *HUMAN NATURE* for this month for 2s. post-free.

Bright drops of dew of pearly hue
 Formed pendants for the flowers ;
 The woodbine fell adown the dell
 In odoriferous bowers.

And by my side did gaily glide
 A figure like a fairy :
 Whose footstep fleet beat music sweet,
 Angelic, light, and airy.

I twined an arm around that form,
 And breathed a wish to cherish,
 Till life's last ray, till death's dim day,
 When earthly pleasures perish.

"For, with thee near to charm and cheer,
 A desert is not dreary ;
 Apart from thee my soul would be
 Sad, sorrowful, and weary.

"Though beauty teems in star-lit streams,
 And fills the flowing fountains,
 And brightly gems the slender stems
 And crowns the cloud-capt mountains,

"And music floats in merry notes
 On rippling rill and river,
 And feathered throngs attune their songs
 To give us gladness ever,

"The blushing rose its tints disclose
 To bow before thy face,
 Whose witching wiles and sunny smiles
 Bear beauty's brightest trace ;

"The harp that rings with thrilling strings
 Would wish to rival thee,
 Whose voice imparts to human hearts
 Earth's richest melody.

"My bosom burns, my being yearns,
 To be with thee for ever :
 To share thy grief—to give relief—
 To leave thee lonely never."

Her quick reply : an upturned eye—
 In sympathetic splendour,
 Its beauty beamed, its brilliance gleamed,
 From out a soul most tender !—

We joined our hands in hymen bands—
 (Our hearts were joined before) :
 A happy home, with love-lit dome,
 Sprung from that scene of yore !

At death's dim day we'll wend our way
 To saintly scenes supernal,
 'Midst fragrant flowers, in heavenly bowers,
 That bloom with bliss eternal !

TRANSLATIONS FROM THE GERMAN OF HEINE.

BY ALFRED T. STORY.

I.

Thou hast diamonds and pearls in plenty—
 Hast all on which heart can lay store,
 And hast the loveliest eyes too ;—
 My darling, what wilt thou more ?
 To thy most beauteous eyes, love,
 Have I a perfect corps
 Of deathless poems indited ;—
 My darling, what wilt thou more ?
 With thy most beauteous eyes, love,
 Thou hast me tried so sore,
 Thou hast me wholly ruined ;—
 My darling, what wilt thou more ?

II.

When in my bed I'm lying
 Enwrapp'd in pillows and night,
 Before my spirit hovers
 A form so sweet and bright ;
 And scarcely are my eyelids
 Weighed down by silent sleep,
 Ere that most lovely image
 Into my dreams doth creep ;
 And with the dawn of morning
 It doth not pass away,
 But in my heart I bear it
 All the livelong day.

III.

I would my woe I could utter
 All in a single breath,
 I'd give it the frolicsome breezes ;
 They'd bear it joyfully forth.
 They'd bear it to thee, my dearest,
 That word of anguish and care ;
 Thou hear'st it every hour—
 Thou hear'st it everywhere.
 And when thine eyes in slumber,
 Have hid their winsome beam,
 Then will my word pursue thee
 Into the deepest dream.

IV.

When I look into thine eye,
 All my woes and sorrows fly ;
 When howe'er thy lips I kiss,
 Then my heart is full of bliss.
 When on thy breast I lay my head,
 Joys heavenly sweet my soul o'erspread ;
 But when " I love thee," thou dost say—
 O then my tears I cannot stay.

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