

KEELY AND SCIENCE - PART 2

Compiled by **Keely & Clara Jessup Moore**

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KEELY MOTOR BUBBLE

Causa latet, vis est notissima.— Proverb.
(The cause is hidden, the power is most apparent.)

Each day he wrought, and better than he planned,
Shape breeding shape beneath his restless hand;
The soul without still helps the soul within,
And its deft magic ends what we begin.

Legend of Jubal. — GEORGE ELIOT

" For it is well known that bodies act upon one another by the attractions of gravity, magnetism, and electricity; and these instances show the tenour and course of Nature and make it not improbable that there may be more attractive powers than these. For Nature is very consonant and comfortable to herself."

— Sir Isaac Newton.

[Page 16] THE Scotch author, Macvicar, from whose " Sketch of a Philosophy " has been compiled "Ether the True Protoplasm", published this year in the New York Home Journal, says in his "Enquiry into Human Nature" (written in 1852), "Modern science is certainly on the way to the discovery that, so far at is cognizable by us, throughout the whole universe the same laws are as work and regulate all things. The *mécanique céleste* of mind is still waiting its Newton to disclose them to us".

Knowing that "the words lie in the bosom of God, like children", and that with all a mother's watchful solicitude and attention, their Creator "supplies their wants, as *they arise*", Macvicar, with the extended vision of a seer, prophesied that, when our world is ready, a Newton would appear to reveal the connecting link between mind and matter; proving that, as Buckle said — "On the one side we have mind, on the other side we have matter, so interwoven, so acting upon and perturbing each other that we can never really know the laws of one unless we know the laws of both; that everything is essential, everything hangs together, and forms part of one single scheme, one grand and complex plan, one gorgeous drama, of which the universe is the theatre", and that "*the laws of Nature have their sole seat, origin, and function in the human mind*". This is Keely's discovery; this is Keely's secret; which, with the highest degree of moral courage, he has, while endeavouring to solve mechanical difficulties, guarded from all who are [Page 17] incapable of comprehending it. He is still slowly treading, step by step, a pathless, unknown region in his efforts to

formulate his system; but he has reached a stage at which he is able to demonstrate in mechanics all that he affirms.

When Buckle was asserting that "the highest of our so-called laws of Nature are as yet purely empirical", that giant in intellect, Macvicar, was contending that the fact that it is so should not discourage searchers after truth from efforts to reduce to their most general forms those laws which, reviewed as in emanation or operation at the fountain head, cannot but be dictates of mind. If not, he said, then they are not laws at all, but only manifestations of something inconceivable, which, without knowing what we mean, we call Fate. As surely, therefore, as generalisation is the grand operation of all science, and the discovery of laws, still more and more general, the grand aim in every branch of philosophy, all science, in proportion as it makes true progress in the direction it aims at, must ever tend towards the philosophy of mind, and must culminate in it. He continues: "Let us not, then, be discouraged from viewing man as a spiritual as well as a corporeal being, either from the undoubted difficulties, or the reputed hopelessness of mental science. Let the worst that can be said of it in these respects be held as true. Let it be that, while physical science has been advancing gloriously and gaining new victory over the hostile elements of nature, and fresh laurels for those who have devoted themselves to the conflict with ignorance in this field, age after age, nay, year after year of late, little or nothing that is of interest or importance has been discovered in the science of mind, since the days of the ancient Greeks. Let it be true that men, of otherwise admirable genius, have been landed by their metaphysical speculations, and that, even in modern times, in the most ridiculous conclusions, let it be admitted that they have gone wide from the dictates of common sense; let it be that human nature, though it be so near and so familiar as to be the home of every man, is yet not so well known as the solar systems in the sky; let all these things be, still we ought not to despair, or regard the true theory of the human mind as undiscoverable. There is in wait to be discovered a *mécanique céleste* of thought and feeling as there was of the starry heavens. And if so, ought not the boasted state of astronomy, and of physical science generally, to serve rather as an encouragement to the study of mind, than as a dissuasive against it? Only since the time of Galileo, nay, only since the time of Newton, has natural science fully emerged from a state of uncertain description, and heterogeneous hypotheses, and what though it may perhaps be true, that the science of mind still remains in this state? Compared with the whole period of philosophy, the epoch of Newton is but as yesterday, nay, it is still today. Why, then, despair of the science of mind? The future will bring to it a [Page 18] Newton too". Instead of being turned away from the pursuit of mental science by considering the more advanced state of physics, Macvicar contends that the student of mind ought rather to seek his revenge by adopting and pursuing to the utmost possible, for the advancement of mental philosophy, the methods which have proved so successful in natural philosophy. Physics may vanish into psychology, he says, and become a branch of what is now called metaphysics, but the science of mind can never cease; having the inexhaustible and ever new domain of free thought and feeling for its object, it has a root in the nature of things which must keep it alive for ever.

Looking upon the discoverer of etheric force as the Newton, whose coming was foretold by Macvicar, it is satisfactory to see that Keely, in his field of research, eventually adopted the methods which his forerunner advocated nearly forty years ago; but not until after many years of blind grappling with the mechanical difficulties which he encountered, in his efforts to control the unknown Genii, which he himself

declares that he stumbled upon in quite another field of research. Keely was experimenting in 1875 on what he called a hydro-pneumatic-pulsating-vacuo engine, when, "accidentally", the first evolution of disintegration was made. The focalization of this quadruple force, acting on one general centre of concentration, produced partial molecular subdivision, resulting in a power of some three thousand pounds per square inch. Mr. Keely was himself amazed at this evidence of the energy which he had evoked, and at once turned his attention to researching its nature, with the result that he came to the conclusion that he had partially resolved the gaseous element of water by crude molecular dissociation. This was his first step, and the necessary introductory one, towards the elimination of ether; but at that time, to use his own words, he had not the remotest idea of the etheric element proper. Since then he has constructed innumerable machines to subdivide or dissociate the molecular; but it was not until he had instituted certain acoustic vibratory conditions that he began to realize the magnitude of the element that he is now controlling with his vibratory disintegrator. Yet, even this instrument was only the stepping-stone towards polar-sympathetic-negative-attraction.

In 1878, Mr. Keely conceived and constructed an instrument which he called a "vibratory lift", and, while experimenting on the improvised multiplication by this medium, he had occasion to put a piece of marble weighing 26 pounds, on a steel bar to hold it in place, when then and there his first discovery of the disintegration of mineral substance took place. From that time progressive research of the most arduous nature has brought him to his present standard in vibratory physics. In the winter of '81-'82, when threatened with imprisonment by the managers of the Keely Motor Company for not disclosing his secret to them (which then would have been [Page 19] like pricking a bubble), he destroyed his vibratory lift and other instruments that he had been years in perfecting. At this time so hopeless was Keely that his plans were made to destroy himself, after destroying his devices. At this critical juncture he received unexpected aid. Again, in 1888, before he was taken to a felon's cell in Moyameusing Prison by decree of Judge Finletter for alleged contempt of court, he broke up his vibratory microscope, his sympathetic transmitter, and other instruments, which have taken much of his time since to reconstruct. It would seem to be incomprehensible that a man who believes he has been specially endowed by Providence to convey great truths to the world, should have destroyed instruments which were the result of the labour of many years of research; but Schopenhauer tells us that genius possesses an abnormally developed nervous and cerebral system that brings with it hyper-sensibility, which in union with intensity of will energy, that is also characteristic of genius, occasions quick changes of mood and extravagant outbursts. Schopenhauer also explains why it is that men of genius are ignored by the age in which they appear: — "The genius comes into his age like a cornet into the paths of the planets, to whose well-regulated and comprehensible order its entirely eccentric course is foreign. Accordingly he cannot go hand in hand with the existing regular progress to the culture of the age, but flings his works far out on the way in front (as the dying Emperor flung his spear among the enemy), which time has first to overtake. The achievement of the man of genius transcends not only the power of achievement of others, but also their power of apprehension; therefore they do not become directly conscious of him. The man of talent is like the marksman who hits a mark the others cannot hit; the man of genius is like the marksman who hits a mark that the sight of others cannot even reach". In one sense this truth applies to all men, for, says Cicero, no man is understood excepting by his equals or his superiors.

Admitting all that has been said of the difficulties attendant upon the comprehension of a genius by the age in which he lives, it does not require genius to understand the blunders which, perpetrated by the managers of the prematurely organized Keely Motor Company, have placed Mr. Keely, as well as themselves, in false positions with the public; leaving him since the winter of '80-'81 to bear the whole burden of the infamy brought about by their having offered stock for investment which could possess no tangible existence in the shape of property until the laws governing the unknown force that he was handling, had been studied out and applied to mechanics in a patentable machine. To those informed that this company ceased to hold annual meetings as far back as '81 it will be a matter of surprise to hear that, sitting up in its coffin, seven or eight years after its burial, it called *another* annual meeting, and that now its managers are again applying the [Page 20] thumb-screw, as in past years; pressing their claims and threatening a suit for obtaining money under false pretences, unless Mr. Keely renounces his plan of progressive research, and gives his time to the construction of engines for the Keely Motor Company. This requirement, as was said in 1881, of a similar effort, is as sensible, under existing conditions, as it would be to require Keely to devote his time to growing figs on thorn trees. It is from the "Minority Report to the Stockholders of the Keely Motor Company from the Board of Directors" (made by a member of that board in 1881, John H. Lorimer), that the material is gleaned for disclosing facts which it is due to Mr. Keely should now, since this last attempt to intimidate him, be given to the public. The stock of that company is not lessened in value by the mismanagement of its officers and directors; for Mr. Keely's moral obligations to its stockholders are as sacred to him as if the company had not long since forfeited its charter. When Mr. Keely became financially independent of the company last March, speculation in the stock of that company received its death blow, and the "Keely Motor Bubble" burst, leaving to the stockholders all that ever had any tangible existence in the shape of property in a more valuable position than it had ever been before. Mr. Lorimer is a gentleman of Scotch birth who was elected a director of the Keely Motor Company in '81, and who resigned in '82, because he was "unable to carry the enterprise", and unwilling to fall in with the policy of the old directors. Before resigning, he set himself to studying the position of affairs with a view to forming for the Board a definite plan of action which ordinary business principles would justify.

This course resulted in a thoroughly business-like letter to Mr. Keely in which, under nine heads, Mr. Lorimer set down the conclusions he had reached as to the cause of the difficulties that had culminated in a threatened law suit, and Mr. Keely was ordered to ask that a special meeting of the Board should be called at once, to consider any proposition he should see fit to make towards settling the question whether he should proceed with the company's work or be permitted to defer it, as he so much desired, until he had fully developed all the adaptations of his power already known to him or hereafter possible of discovery by him. Mr. Lorimer added: — "And now, in conclusion, I may say to you that the above deductions from the history of your motor are the result of patient and laborious inquiry on my part, and I am truly at a loss to understand how, or in what manner, other than that herein suggested, you can honourably vindicate your position; and as no one I have met connected with the enterprise, or personally acquainted with you, hesitates for an instant in crediting you with the most unswerving integrity, I have no hesitation in offering the above suggestions for your consideration; and I trust you will so far adopt them as to enable the active portion of your friends to bring the organization rapidly into harmonious accord with you in the [Page 21] development of what all seem to think is the greatest

wonder of our civilization, the early completion of which will lift you to the highest pinnacle of fame as a scientist, and make them co-dispensers with you of the God-given wealth of which you hold the key". The date is 10th of February, 1881.

This letter was followed by another dated February 11th, in which Mr. Lorimer submitted certain conclusions, arrived at after meeting in New York with several members of the Board of Directors, one of which reads: — "It seems to be generally understood that without your hearty co-operation and good will, the company cannot realize value upon any existing contracts, or any they may hereafter make with you".

At this time Mr. Lorimer states that he had the opportunity presented of studying, semi-officially, the very peculiar man whose genius held his friends so spell-bound that they lost their power (if such they possessed) to adapt business methods to the enterprise. "To meet him socially in his shop," Mr. Lorimer writes, "after his day's work, was, I think, invariably to be impressed with his earnestness, honesty of purpose, and, above all, with confidence in his knowledge of the plane of science he was working in (acoustics), and at the same time, to be impressed with the folly of basing calculations for the government of the business details of the organization upon the statements made by him while contemplating the possible result of his researches".

With the hopeful spirit of an inventor, Mr. Keely always anticipated almost immediate mechanical success, up to the hour in which he abandoned the automatic arrangement that was necessary to make his generator patentable. From that time his line of perspective extended, and he began to realize that he had been too sanguine in the past. He had been like a man grappling in the dark with a foe, the form of which had not even presented itself to his imagination; but when, in 1884, Macvicar's work on the structure of ether came like a torch to reveal the face of his antagonist, what wonder that he, with the enthusiasm of Paracelsus, felt his

. . . . " fluttering pulse give evidence that God
Means good to me, will make my cause his own,"

and, as in 1881, again rashly bound himself, anew, by fresh promises, made to those who had the power to give or to withhold the sinews needed in the warfare he was waging?

To return to the report. During the negotiations which followed, facts in the history of the company were developed which convinced Mr. Lorimer that Mr. Keely was totally unable to measure time, or define his plans, because of the ever changing results attained by him, in researching the laws governing the force he was trying to harness. At this time the treasurer of the company was proposing to bring over from New York to Philadelphia a number of capitalists to witness an exhibition of the production of the force, [Page 22] ill order to dispose of 500 shares at 25.00 dollars a share to them. To this plan Mr. Lorimer objected, writing to the treasurer, "I fear that you would be putting yourself in a false position with the friends you might induce to take stock at the figures named", and Mr. Keely himself at first refused to give the exhibition, but upon the application of the thumb-screw, kept in readiness, it took place. At this time Mr. Lorimer wrote to the president of the company, "If Keely gives us the benefit of his discoveries, it will require all our energies to guide our enterprise; and, on the other hand, if he dies or is forestalled, it will need all our care and attention to take care of our reputationsThe fact that the Board has some delicate

and important work to perform, brings us to the question, are we properly organized to perform our part? If we are, let us show it by our acts, and, if not, let us act like men, worthy the important trust before us. If I am over-estimating the character and importance of this work, you can show it to me, and per contra, if I am correct, you can and will accept the responsibilities of the position you hold, no matter how unpleasant, no matter how irksome, if understood by you and honourably supported by us."

Mr. Lorimer then prepared this summary, or analysis of the situation.

SUMMARY

26th July, 1881

First.—The existence of a discovery or invention which, from evidences of its adaptability (when complete) to the industrial arts and sciences, may be esteemed the most valuable discovery of civilization in modern or in ancient times, inasmuch as it revolutionizes all known methods of generating power.

Second.—The retention by the discoverer and inventor of all the secrets whereby these discoveries can be utilized by the public, thus making their future existence, so far as the Keely Motor Company is concerned, depend entirely upon his life and goodwill.

Third.—The existence of a corporated company, organized for the purpose of furnishing funds for the development and completion of the discovery, and for the final control of certain specified inventions, in certain specified localities.

Fourth.—The contracts under which the above-mentioned control of certain inventions is vested in the Keely Motor Company, being mere evidences of intention, have no real value until the inventor has received his patents and verified the contracts by transfer of the same to the company.

Fifth.—If any conflict should arise between the company and the inventor, in which the latter felt *justified* in withholding the transfer, the existing contracts might be a good foundation to build litigation upon but not good for investment in. [Page 23]

Sixth.—The uncertainty of the future of the enterprise, as thus indicated, must of necessity invite a speculative management; and while speculation under some circumstances is legitimate and laudable, under other conditions it may become illegitimate and reprehensible.

Seventh.—The existence of a speculative management in Keely Motor affairs has, of necessity, developed two interests — one which holds that the completion of the discovery in all its possible grandeur should ever be the sole object of its management, and the other, believing that on account of the human uncertainty of the completion of the invention, they are in duty bound to make quick recoveries on their investments, so that they may be safe financially, in the event of a failure by Keely to perfect his inventions.

It is not necessary to pursue this summary farther, as the manner in which Mr. Lorimer has set down the facts already given, makes clear the nature of the conflicting interests that brought about the antagonism which he attempted to subdue, bringing such a spirit of fairness and justice into his efforts as must have crowned them with success, supported as he was by Mr. Keely, had it not been that those who advocated following a policy which, at best, aimed no farther than at the recouping of losses to themselves were in the majority. It was at this time that Mr. Keely manifested his willingness to assume, on the one hand, all the responsibility of the proper development of his discovery; or, on the other hand, all the disgrace accompanying failure by his offer to purchase a controlling interest in the stock, fifty-

one thousand shares of which, in order to prevent speculation, he agreed to lock up for five years, and to give the company a bond restraining him from negotiating or parting with a single share of it in that time, the stock to be paid for as soon as certain deferred payments had been made to him. This proposition of Mr. Keely to the Board of Directors, October 25th, 1881 (and laid upon the table by a large majority as unworthy of consideration), was made from his earnest desire to control the presentation of his life's work to the world in a just and honourable way; having recognized, with Mr. Lorimer, the utter impossibility of reconciling the numerous interests created by mistakes of himself and the mismanagement of the Board, unless he could thus obtain the power to deliver an unencumbered enterprise to the world. In the opinion of Mr. Lorimer, during the negotiations which he conducted between the management and Mr. Keely, the latter was the only one who had manifested any consistency or strength of purpose, so far as the facts gave evidence, which were brought before him, of the history of the company. When the validity of the contracts made with Mr. Keely while he was president, or director of the company, were disputed, he was called upon to resign, which he did; and yet no steps were taken to ascertain the value of the existing contracts, which had all been [Page 24] made with him while he was both president and director, and which were therefore, illegal. Proceedings in equity were commenced against Mr. Keely, by the Committee of the Board of Directors having the matter in charge, late in the year 1881, while Mr. Lorimer's report was still in the hands of the printer. "The spectacle of a Board of thirteen Directors, composed of business men", writes Mr. Lorimer, "claiming that they have been foiled in their business calculations by a man whose mind has been so thoroughly absorbed in researching the problems presented by his wonderful discoveries that he could not possibly compare with any of them in *business* tact, is truly a phenomenon which is not easy of explanation on any hypothesis, but the one that their visions of prospective wealth have been so overpowering as to undo their prudence; and then having in due process of time discovered their error, it certainly is an edifying spectacle to see them now trying to throw all the blame on one poor mortal wholly absorbed in his inventions, and by these efforts disturbing that mental equilibrium of both the inventor and themselves, which is absolutely necessary to ultimate success. When boys, in early summer, pick unripe fruit and eat it, because of their unwillingness to await the ripening thereof, they sometimes suffer acutely for their haste. Yet no one ever thinks of punishing the tree because of their sufferings; nor is it deemed necessary to justice to preserve the fruit of the tree, when ripe, for the sole use of the impatient ones as a recompense for their early sufferings! So it has been with the Keely Motor Company; undue haste to gather the golden fruit that was to come from it has led to a great deal of suffering financially among a few impatient believers. Still it does not seem to me to be wise to curse the inventor, or his inventions, because he has not given us the fruit when we expected it would be ripe."

The effort to force Keely to divulge his secrets failed, for at that time he had nothing of a practical nature to divulge, and though possessing no business qualifications, he was too shrewd to cut off any of his resources for supplies, necessary to enable him to persevere in his efforts to attain some practical result, as he surely would have done, had he said, "I know very little more than you know of the laws governing the force I have discovered. I can only control their operation by experimental research, and the more time that is wasted in building engines, until I have made myself acquainted with these laws, the longer will you have to wait for your golden fruit". Mr. Keely was no more able at that time to give the faintest idea of the present stage of his researches than Professor Leidy or Dr. Wilcox could now,

after witnessing the experiments in sympathetic attraction, write out a clear formulation of its governing law, and an inductive substantiation of it. Even were it possible no reader could understand it, because the discovery made by Mr. Keely is not in accordance with any of the facts known to [Page 25] science. Mr. Keely's experiments in disintegrating water prove that incalculable amounts of latent force exist in the molecular spaces; but in the opinion of scientists, molecular aggregation is attended with dissipation of energy, not with absorption of energy. If the men of science are right, then there must be an absolute creation of energy, for only by admitting its absorption in aggregation, could molecular dissociation supply the force witnessed. Yet Keely denies any creation of energy, claiming only that he can produce an indefinite supply by the expenditure of an infinitesimally small amount of energy. Every new discovery necessitates a new nomenclature. The vocabulary coined by Mr. Keely, to meet his requirements in formulating his hypotheses into theories as he progresses, conveys as little meaning to those who read his writings, as the word electricity conveyed 200 years ago. Professor Crookes said that to him reading Mr. Keely's writings was like reading Persian without a dictionary. Another learned Professor said that they seemed to him to be composed in an unknown tongue, so profoundly unintelligible had he found the extracts sent to him. One must be familiar with Mr. Keely's instruments and their operation, in order to comprehend even the nature of his researches.

At some experiments illustrative of varying chords of mass, an author of philosophical works was present, whose theories had not been in unison with those of Mr. Keely on that subject. He sat for some time after the demonstration with his eyes fixed upon the floor, wearing as serious an expression of countenance as if he were looking on the grave of his most cherished views. The first remark that he made was, "What would Jules Verne say if he were here ?" The rotation of the needle of a compass, the compass placed on a glass slab and connected with the transmitter by a wire, 120 revolutions in a second, had the same effect upon the scientists present, one of awe; so completely were they transfixed and unable to form a conjecture as to the mysterious influence from any known law of science. There was only one professor present, *a very young man*, who ventured the whispered suggestion of concealed mechanism under the pedestal; and as Mr. Keely soon after had occasion to wheel the pedestal across the room, showing that it was not stationary, and could have no concealed connection within or without, the young professor took up another line of conjecture. As Macvicar says, it has grown to be the fashion, to a marvellous extent, to give predominance in education to physical and mathematical studies over moral and mental. Hence a very general and growing prepossession in favour of material nature. Astronomy, natural philosophy, chemistry, natural history, geology, these and the like are in our day held to be everything. He continues: —

Now, all these branches of study, however various in detail, agree in this, that they exclude the conception of a true self directive power from the [Page 26] field of thought. They offer for consideration nothing but figures, movements, and laws. And thus they tend to form the popular mind to the habit of looking for figures, movements, and laws everywhere, and for rejecting all other conceptions as intruders. But of all such other conceptions, there is nothing so difficult and so intractable, under physical modes of investigation, as self-directive power. It therefore runs a great risk of being rejected, and thus the mind, from its first training, having been in physics, carrying out here, as it usually does everywhere, its first love into all its after thoughts, shuts up the student surreptitiously with materialism as his philosophy. Thus it is easy to see how materialism should come to be a current opinion, when the popular education runs all in favour of physical pursuits. But if

philosophy must yield to the demands of the logical faculty for an extreme simplicity, unity, identity, at the fountain head of nature, it were more logical to regard those phenomena and laws named physical, such as the laws of motion, elasticity, gravitation, etc., as manifestations, when existing under certain limiting conditions, of substances or beings which have also in them, when not so limited, and when existing under certain conditions ability to manifest self-directive power. That every body is compounded, constituted, or made up of molecules, is universally agreed. Every body is therefore a fit subject for analysis But when any body is submitted to analysis in reference to its mere corporeity or bodily nature, that is, its extension and impenetrability, what do we ultimately arrive at ? Do we not, in reference to the attribute of extension, arrive at particles, of which the physical limit is that they have at last ceased to be extended, and are but mere points in space ? And as to the attribute of impenetrability, what do we in the last analysis arrive at, but the idea of a substance that can resist the intrusion into its place of other similar substances, and, therefore, ultimately, a centre of force. And thus, under a logical analysis, which must be admitted to be legitimate, it may be maintained that a body or chemical element resolves itself into a system of centres of force balancing each other at certain distances, and thus rendering the whole molecule or mass extended, as body is known to be. The elements of body, therefore, are things of which these attributes are to be affirmed in the first instance, that they possess unextended substance and extensive power. But, if so, do they not touch upon the confines of the spiritual world to say the least ? asks Macvicar; and the Newton whom he foretold answers the question (and demonstrates the truth of his answer) in his discovery of the cerebelic stream or mind flow.

Body and spirit, one at the fountain-head, when rising into existence, form, as it were, the first breath of creation; for, as Sir Wm. Thompson says: "Life proceeds from life and from nothing else". They are the opposite poles of being, and constitute the two principles by the harmonious [Page 27] interweaving of which the beautiful system of creation is constituted, and its economy worked out. Such a view, far from being contrary to the canons of science, is even the necessary complement of science. That unity, which is the last word of science, must always include two objects, existing in contrast after all. The law of couples, of opposites, of reciprocal action between two contrasted yet homogeneous and harmonising elements, each of which opens a field for the other, and brings it into action, is of universal extent. In the organic world, also, no less than in the purely physical and chemical, all is framed according to the same law of couples. In the sphere of sensibility, in like manner, everything turns on the antagonism of pleasure and pain, and in the moral sphere of good and evil. Nor is the world of pure intellect exempt from this law, but on the contrary displays its influence everywhere. Hence faith and sight, identity and difference, finite and infinite, objective and subjective, space and time, cause and effect, the world of realities and the world of ideas. In a word, every system of thought and of things, when complete, present as its basis two co-ordinate elements, the reciprocals of each other; or one parted into two reciprocally, and by the harmonious antagonism of both the beautiful web of nature is woven. If we are to be consistent, mind and matter ought always to be viewed as distinct, and the opposite poles of being; *inertia*, or unvarying submissiveness to the laws of motion being the characteristic of the one; self-directive power the characteristic of the other.

The universal analogy of science sanctioned Macvicar in the characteristic he thus arrived at as that of animated nature, for if inertia, or the obedience to pressures and impulses from without, be the characteristic of matter, then that which is needed as the other term to complete the couple is just what has been insisted on, viz., self-

directive power. Here is shown the symmetrical relation in which this power, when viewed as the characteristic of the whole animal kingdom (which plainly points to man, and culminates in human nature), places the animal in relation with the vegetable and the mineral kingdoms. Of minerals or crystals, the characteristic is simply self-imposing or *self-concreting power*. They are, so to speak, merely insoluble seeds without an embryo. To this, *self-developing power* is added in plants, and forms their acknowledged characteristic, while of animals the characteristic, according to the view here advanced (the same seed-producing, self-developing, powers continuing) is *self-directive power* superadded. This relationship between these three kingdoms of nature is as homogeneous and symmetrical as is necessary to appear to be legitimate, and is a true expression of the order of nature.

Granting these two principles, the inert and the self-directive, the necessary and the free, we obtain the materials for a universe, without disputing the fact of human liberty and bringing into suspicion even the possibility either [Page 28] of morality or immorality. If man be really free as well as under law, in this union of body and spirit, then in human nature heaven and earth truly embrace each other; and no reason appears why, as the ages roll on, our own free thought may not have the run of the universe.....What study then can be more replete with interest, what researches can possess more of fascination, than those which Mr. Keely's discoveries are preparing the way for ? His are no speculations, such as have been indulged in by atheistic evolutionists or hair-splitting imaginative metaphysicians, leading their students into the position of Socrates when he recounted to Cebes the result of his studies in physics: — "So far is it from me now, by Jove, to think that I know anything about the cause of these things, that I cannot settle it with myself whether, when to one one is added, it is the one to which that one is added that makes two, or whether the added one and the one to which it was added, because of the addition make two", etc., etc. But quoting Anaxagoras that "mind is the disposer and cause of everything". Socrates grows delighted, and affirms that he would "most gladly become the disciple of any one who would teach him the thing without which the cause could not be a cause, which the many appear to be seeking for, as it were in the dark, and making up to a name which is not its own, dub it a cause". How delighted would Socrates have been with the discovery of the cerebellic stream. "Metaphorically", writes Keely, "I associate the mind flow (to a certain extent) with all organisms that are sensible to negative attractive vibration that I can reach in my field of research". The immense region thus laid open has no limits. It extends as far as the universe extends, for all to explore who are willing to "chip the shell of ignorance", and allow themselves to be led by their apperception into the sanctuary of Truth, the threshold of which has been crossed in the discoveries of laws by which a *mécanique céleste* of mind will in time be revealed to the world.

The discoveries of Mr. Keely (demonstrated — as he is now prepared to demonstrate them) cannot be disputed, though his system may be called in question. With the humility of genius, he calls his theories hypotheses, and his hypotheses conjectures. The solidity of the principles, as laid down by himself, cannot be decided upon by others until he has brought to light the whole system that grows out of them. But it is time the public should know that the odium thrown upon him by the Keely Motor Company, he does not deserve. It is time that the Press should cease its sneers, its cry of "Crucify him, crucify him !" morally speaking, and extend to him that discriminating appreciation of his work and encouragement which the New York Home Journal, Truth, Detroit Tribune, Chicago Herald, Toledo Blade, Atlanta Constitution, The Statesman, and Vienna News — have been the first to do. Let the Press contrast the past history of science with the present position [Page 29] of Keely.

"Fancy the discoverer of electricity having succeeded in inventing the modern dynamo machine ! Such a fact would mean the concentration of hundreds of years of scientific discovery and invention into the single life of one man. Such a result would be simply marvellous", writes an English scientist. *Thousands* of years, he might have said, counting Thales as the discoverer; for Gilbert did but re-discover electricity. It is time that capitalists should step from their ranks to protect Keely from the selfish policy of the managers of a speculative company, which has long since forfeited all claims upon him, to continue mechanical work for it, even admitting that it ever possessed that right; and, more than all else, it is time that science should send her delegates to confer with the broad-minded men who have had the courage to give testimony, without which Keely could not have stood where, this year, he stands for the first time, fearless of threats, pursuing his researches on his own line, to acquire that knowledge of the laws governing his discoveries by which alone he can gain sufficient control of machinery to insure financial success. Meanwhile, are there no men who are able to feel an interest (without reference to commercial results) in a discovery which sweeps away the *débris* of materialism as chaff is swept before a whirlwind ? — giving indisputable proof that, as St. Paul teaches, "we are the offspring of God", or, as Aratus wrote, from whom he quoted: —

" From God we must originate,
Not any time we break the spell
That binds us to the ineffable.
Indeed, we all are evermore
Having to do with God; for we
His very hind and offspring be:
And to his offspring the benign
Fails not to give benignant sign."

CLARA JESSUP MOORE

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* I think it is safe, for even the most conservative and pig-headed of scientists, to admit that Keely, the contemned, the scoffed at, the derided, the man whom every picayune peddler called charlatan because he could not harness the hitherto undiscovered forces of ether in less time than one might hitch up a mule, is the most original and the most straightforward of inventors, and that in his own good time he will give to the world a power that will throw steam and electricity into disuse, open the realms of air as a public highway for man, and send great ships careering over ocean with a power developed by sound. His theory of etheric vibration is now conclusively established, and it is only a question of time and material that delays its use as a servant to man. The fact is patent, so that he who runs may read, but [Page 30] the ox must have the yoke, the horse the collar, the engine the cylinder, and the dynamo the coil, ere they can work their wonders. While Keely was hampered by mere tradesmen, who only looked to the immediate recoupment of their outlay, men more anxious for dividends than discoveries, he could do little save turn showman, and exhibit his partial control of the harmonies of nature as springs catch woodcocks, and was forced to open his crude contrivances to divert the eternal will of the cosmos to work-a-day uses, that he might coax from the greed and credulity of mere mammon worshippers the sorely grudged means to continue his exploration of the infinite. His genius was prisoned in a test tube, and only let out to play monkey tricks before muddleheaded merchants, who could see the effect, but not the means, and

so the greatest discovery of the age was turned into a raree show, and the eternal music of the spheres was set, figuratively speaking, to play tunes to attract custom like a barrow organ before a dime museum.