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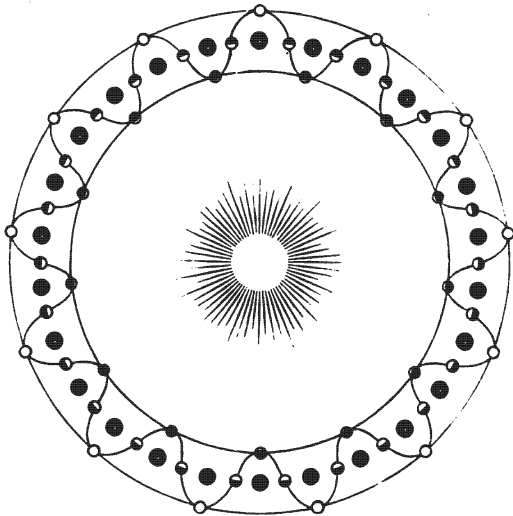
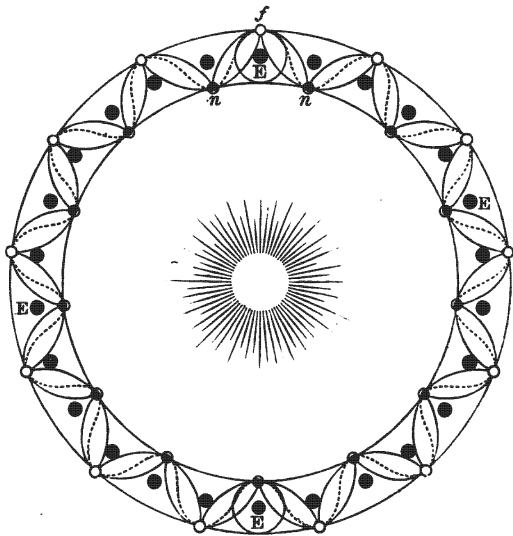


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SYMBOLISM



Vide p. 354.

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SYMBOLISM

OR

MIND—MATTER—LANGUAGE

AS

THE ELEMENTS OF THINKING AND REASONING

AND AS THE NECESSARY FACTORS OF

HUMAN KNOWLEDGE

BY

JAMES HAIG, M. A.

"Heaven and earth shall pass away, but My Words shall not pass away."—Matt. xxiv. 35.

"The Words that I speak unto you, they are SPIRIT, they are LIFE."—John vi. 63.

—JESUS OF NAZARETH.

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P R E F A C E

I HOPE that the ordinary reader will not be deterred from reading this volume by the appearance of a few hard words.

They may nearly all be skipped without loss, as in most cases I add the nearest plain English equivalent.

These words are the confused rubbish of divers philosophies ; and they stick in the brains of professors of logic and philosophy, without having any distinct meanings attached to them. But we cannot penetrate professorial or any other brains without using some of their own words.

These words, therefore, are only for those who use or abuse them.

Most of these words, like category, predicable, objective, subjective, ego, non-ego, &c., are altogether ambiguous, and might all be scored through with a pen without loss to the plain English reader who desires to think about this

wonderful *universe* of mind and matter in which we have been placed ; or about his own body, soul, and spirit, which are fulfilling their little, but to him all-important, part—social, political, religious—in the magnificent drama of the world's history ! My advice, therefore, to the ordinary reader, is to skip all those words, or parts of this book, which he does not at first comprehend ; and he may then, having arrived at some of the conclusions, perhaps, be tempted to read the book once again, in order to fully understand the reasoning, by which its conclusions are deduced.

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INTRODUCTION.

LANGUAGE is the great enigma or puzzle in human philosophy. The gentlest and most practical of all the apostles of Christ left us this deep truth, "If any man offend not in *word*, the same is a perfect man, and able to bridle the whole body;" and his Master Himself said, "For every idle word that men do speak they shall give account in the day of judgment; for by thy words thou shalt be justified, and by thy words thou shalt be condemned." Thus, in my opinion, the Demon of falsehood was seldom more successful than when he established the current opinion amongst mankind that questions about *words* are worthless, and of no importance whatever.

But every popular fallacy has always a seemingly true side. And most certainly, attaching over-importance to the *letter*—the mere sound and form of language—tends to destroy the *spirit* and meaning; and, on the other hand, neglecting the *letter* altogether must have the same effect; and must leave us in confusion.

Thus falsehood has in this, as in most cases, two contrary suggestions to make, and both false—1st, That the mere form and sound and symbol are of no importance—this is, or ends in, ambiguity and confusion; and, 2d, that the mere form and sound and symbol are all-important—this is, or ends in, hypocrisy—the letter

without the spirit—the outward form without the understanding or feeling thereof.

Thus, the outward form and body of our thoughts—our words—may be always presented alternately, as at once everything to truth, and also as nothing to truth.

Both alternatives are partly false, and both are partly true. Words are nothing to truth as felt by the individual, but everything to truth as knowable by, or recorded for, mankind in general. A rose by any other name will smell as sweet, and a truth in any other words will be as true as ever. The names or words are of no kind of importance to the individual, if the things and thoughts are truly felt and understood; but if we seek to compel the assent of other men to our feeling or understanding, then the words become all-important: for we have to insist that our words embody the very truth, which he shall not dare to reject.

Thus, in all discussions between man and man concerning Knowledge, Cognition, or Truth, *words* become *all-important* to mankind, just as they become *all-important* to the individual also, if the saying of Christ be true, that “by a man’s words he shall be justified, and by his words he shall be condemned.” But language cannot be at once all-important and of no importance; and we must therefore seek to place it in its proper and true position of importance, which, I think, requires us to treat it as being, jointly with mind and matter, one of the three factors of all human knowledge, thought, and reason.—Thus *words* are to the individual, *thoughts* in the heart by which he will be judged—the motives to every action—and to mankind they are *things*, the subjects of discussion.

But "the characteristics of philosophy" are "liberty and universality." Philosophy has the *universe* for its subject, and *freedom* from all dogmatic prejudice for its proper method of research. But Christianity has now become the great fact of humanity—the central fact in the history of those great nations who now govern nearly the whole world; and the universal acceptance of some outward form of Christianity seems already but a question of time. But if your philosophy does not account for or explain this central fact,—Christianity—where is its universality? if you ignore and avoid the fact, where is your freedom? * If you follow Auguste Comte, and can find no place for Christ alongside of Buddha, Confucius, Zoroaster, and Socrates, where is the universality of your philosophy? If you ignore or overlook Christ's doctrines and influence, are you not the slaves of a narrow-minded dogmatic prejudice? As Christians, we may accept Christ's exclusion from Comte's galaxy of human greatness, as an involuntary testimony to Christ's Divinity; but then, we must say that, such philosophy is neither universal nor free. The humble Carpenter of Nazareth has, at the present moment, left the greatest impression ever made by any one man on the history of mankind; and His words and principles must be better worth study than those of any other man who ever lived. If you purposely avoid them, you are the self-confessed slave of a dogmatic prejudice; if you ignorantly overlook them, then your philosophy is devoid of wisdom both in depth and breadth.

But the narrowness of your dogmatic prejudice is equally evident if you deny the possibility of mind exercising powers over matter, or addressing suggestions

* Professor E. Naville of Geneva, *Problème du Mal*, 313.

and voices to the mind of man—if you deny both the demon of Socrates and the spirit of Christ—what is this but a self-imposed prejudice? For surely Socrates was no enthusiast, and your prejudice must be self-chosen—a mere wilful opinion, without any reasonable foundation.

It is one thing to fight with unfair weapons, and quite another to hoist the ensign by which you have resolved to stand. I deny that my reasoning can be properly charged with any dogmatic prejudice whatever; because its foundations are self-evident and consistent with themselves. And I assert the very contrary of the Comtean dogma;* I assert that true reason or intelligence can only be founded on faith. What I think self-evident I openly declare and assume to be self-evident, and who can deny my assumptions? I think man's *body*, man's *mind*, man's *words*—matter, mind, language—are all three self-evident to every man who breathes, in his own person and actions, and all evidently distinct and different from each other. And I assert that, every man who denies this in language, must fall into verbal self-contradiction and logical confusion. But I say—strange and remote as the conclusion may now appear to the reader—that if you grant me this self-evident distinction, you have logically granted me the greatest of all Christian mysteries, the logical doctrine of the Holy Trinity; as well as the full refutation of all the philosophies current in the world, all of which overlook the true position of human language. You have granted me logically, the truth of Symbolism, as soon as ever you grant me, *mind*, *matter*, and a spirit and meaning to our *words*!

* "L'intelligence, seule base possible de la Foi."—A. Comte, Cat. Pos. p. 148.

S Y M B O L I S M

E T C.

CHAPTER I.

THINKING AND REASONING.

THINKING is internal reasoning, or reasoning to ourselves. REASONING is external thinking, or thinking expressed in signs, symbols, words, intelligible to others. The one is private and peculiar to the individual man; the other is the same thing when made common to all mankind possessed of language and sufficient intelligence to comprehend it.

But no man can ever know the thoughts or thinking of another. He knows, or may know, the words or reasoning which are said to embody the thoughts, but he can never know the thoughts themselves which exist in the mind of his fellow-man. The words and their logical connection or application—the reasoning—are the common property of both or all men; but the thoughts of each are necessarily, or never-ceasingly, confined to himself alone, and to those Beings or Minds superior to man who may be able to read Thought.

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Whenever, therefore, men speak of thoughts or thinking,—that is, of any internal and metaphysical subjects whatever,—the phenomena of consciousness—or the consciousness of internal phenomena—they, of necessity, are only speaking of the WORDS which are assumed and admitted to embody the thoughts. They assume it to be granted that certain words express or embody the thoughts in question, and then proceed to discuss and modify or refute the words. Therefore all discussions whatever concerning thinking, and the whole internal world of man's mind—all metaphysical questions whatsoever—are of necessity merely discussions about human words—*i. e.*, about certain conventional signs mutually assumed and adopted in the beginning as names for the internal phenomena—the NOUMINA—of the human mind. So far as the Invisible Universe of mind is concerned, therefore, we must commence and end with WORDS. Thinking, or its conclusion—Thought—as a general name for all human Cognition, common to mankind, concerning Mind, and the whole science of metaphysical truth, can be only a science of human words, signs, symbols—a logic—the logic of MIND. It can be nothing more.

Strange as it may appear to some despisers of verbal questions, and denied as it may be by all the experiential and positive philosophers of the day, the same observation is strictly true of the whole world of MATTER—of the whole External Universe of sense without us—all our reasoning on material questions can be only a science of words, signs, and symbols—a Logic of MATTER.

External things make different impressions on each man's nerves—the ideas, conceptions, representations, images, or mental pictures, whatever name we give to those

internal things, which each man receives or makes in his own mind of or concerning the *external* things, are necessarily all different in each man who breathes. The thoughts resulting, or invented, or produced, are different in each man's mind. The words which we make or adopt to express to ourselves or others what we think or suppose to exist in this external world or universe without us, are necessarily merely conventional, and must be mutually framed or adopted, as sufficient and proper to express our own individual and private thoughts of the external objects, or the causes, as they are called, of our internal sensations. But these conventional words, which are called the names of the external things, are themselves the only things about which we can reason or hold any discussion, or have any questions *in truth*; because they are the only things or objects which men have, or can have, in common.

Consider—that the things themselves make different impressions with different pencils of light or other media upon our different nerves. But we cannot compare the impressions, the ideas, the images, whatever they are, the things within; all are different and distinct, and cannot be brought together, or compared in any way jointly by mankind, until they are embodied in mutual *words*. The resulting words, signs, or symbols, which are purely conventional at first, and mutually adopted, are in fact the only things actually passing from mind to mind—WORDS are the only common objects which men possess jointly, or can compare together, in any possible question or discussion that can be raised between man and man. Man's Mind must start with a symbol or SYMBOLS.

In short, mankind have nothing else whatever in common, either respecting the internal universe of *Mind*

or the external universe of *Matter*, which they can possibly compare together, except only the mutual words which they have agreed to use in common for the purpose, and in order to express their individual thoughts concerning the universe without or the universe within. Some may think the conclusion sad or shocking, humbling or revolting—they may wilfully refuse to accept or believe it; but it is utterly indubitable that men's powers of reasoning together must begin and must end with words—with language—conventional signs and symbols mutually agreed on and adopted! Every step in our reasoning is like the first, a mutual or conventional step from words to words. Our reasoning must begin and end with words—our *Reason* has no other mutual instrument and no other mutual object; and though the *Faith* of every man is quite fixed, and as certain to himself as the rock on which he stands, that LANGUAGE is not all that exists in this universe, yet it is all that exists in human cognition—it is all that men can compare together in every question and every discussion, and it forms every possible *conclusion* at which men can jointly arrive by their most earnest and careful thinking and reasoning.

Whether the reader is or is not convinced—and I do not expect him to be convinced—by this short preliminary argument, that true logic is the exclusive empire, or at least the only field of human reason in general; yet it is at least clear and manifest that “before men can think or reason on any subject whatever, certain preliminary assumptions are always necessary and unavoidable; and if men could agree upon what must be taken at first for granted, no doubt a great many disputes would disappear. We cannot reason about nothing. Therefore, in the first place, it is clear that the reasoner

always assumes the *existence* of the thing about which he proposes to reason. In the second place, it is equally certain that the reasoner cannot propose any question concerning the thing to be discussed without he first assumes the *possibility* of such question.

Thus certain Existences and Possibilities—or, to use their logical names, *Categories* and *Predicables*—are unavoidably necessary, and must be always assumed in every discussion, before men can possibly think or reason together in any way whatever.

But there is a third necessary assumption before we can arrive at any positive truth. Every absolute conclusion necessarily assumes and implies that there is nothing in the whole universe that can overturn it. And therefore, in order to arrive at any absolute truth, by our thinking and reasoning, if such be possible, it is unavoidably necessary that our preliminary assumptions must exhaust and embrace the whole *universe* of existence; for, otherwise, the part originally omitted in our contemplation may possibly invalidate or overturn our conclusion, which, therefore, is not absolutely true. Every one who asserts anything as being positively and absolutely true, has already, in fact, assumed some system of the universe; for he has asserted that there is nothing in the universe that can overturn his conclusion.

The common scoff of some modern philosophers, that the medieval schoolmen limited the universe to the categories and predicables of Aristotle, is in fact a scoff at the necessary and fundamental laws of all thinking and reasoning whatever. They themselves must limit the universe in the assertion of any absolute truth. If men are dissatisfied, as they justly are, with Aristotle's

fundamental assumptions, then it becomes their duty to suggest and adopt better ones; for thus only can any truth be established by thinking and reasoning.

The scoffers themselves must limit the universe to their own categories whenever they venture upon any assertion whatever, as being positively or absolutely true; for men can arrive at no absolute conclusion whatever without making some similar fundamental and universal assumptions.

Thus there are three fundamental and necessary implications and assumptions required before any rational discussion can even commence. If your opponent chooses to deny either the *existence* of the thing in question; or the *possibility* of the question or thought about it proposed for discussion; or, thirdly, if he says your fundamental thoughts of the *universe* are ambiguous or incomplete, so that the part confused or omitted affects the whole question about the thing, the discussion of that question cannot reasonably commence, much less be brought to any true and absolute conclusion. His preliminary objection not only prevents any rational conclusion, but prevents any rational discussion. It is simply absurd to attempt to reason with any one who will admit nothing; but it is equally absurd to reason with a man from fundamental principles which he denies. We can only reason with him from those fundamental assumptions which he is willing to admit and submit to.

Every attempt to evolve the universe out of nothingness, or out of consciousness, or in any other way than by assuming Logical categories and predicables and axioms—*i. e.*, self-evident things, possible questions, and self-evident principles—is merely doing secretly what ought to be done openly; pretending to assume nothing when you

are in truth assuming *words* for your consciousness, and axioms or *principles* affecting those words. It is doing secretly, and without acknowledgment, what ought to be honestly acknowledged. Even if we start, like Hegel, with a logical contradiction; "that Being and nothing are the same, and yet that they are not the same; for Being is *werden*, Becoming or growing." We have thereby already assumed the word *being* in two senses: as a thing and a question, as a noun and a verb; some-thing and no-thing; being the noun, and being the verb: and we have assumed the axiom that Being the noun is *werden* growth or action, and, as a manifest consequence, that a thing is, what it does! or is action, and that the universe is a flux! Such attempts are mere logical frauds, or arise from logical ignorance.

Few men, however, sift their thoughts sufficiently to know what assumptions they are really making when they reason. And in most controversies we still hear the words "substance," "species," "essential difference," "property," and "accident," &c., bandied about from side to side, as if this fundamental language of Aristotle—his categories and predicables—his fundamental words, thoughts, and things, were still acknowledged as binding on all reasoners, instead of being fundamental assumptions, now universally disputed, and more or less rejected.

Hence, in my opinion, chiefly arises the apparent hopelessness of all modern controversies on religion and philosophy, in morals and politics, on all those all-interesting questions which involve man's Mind—his rights, powers, and duties—his state on earth, his relations with heaven.

Neither disputant ever knows or asks what the other

admits or assumes as fundamental, and very often neither knows, nor has in the least fixed in his own mind, all that he himself assumes as being fundamentally true, either as things and facts, or as possible questions or theories.

We thus constantly find in the present day the very same questions raised, and discussed as eagerly and as hopelessly as they were by the Greeks before the days of Aristotle, nearly 3000 years ago. The chance of any rational and satisfactory conclusion seems as far off as ever, and the practical materialist, the positive philosopher of the day, triumphantly exclaims, "Philosophy has proved its incapacity by centuries of failure." "Let us stick, therefore," says he, "to our laboratories and workshops, to our steam-engines and telegraphs, for all else is nought!!"

Thus the highest and most important questions which man can discuss concerning himself and his position on earth—concerning his history, civilisation, and conduct here; or concerning his possible futurity hereafter—his hopes and aspirations beyond this short and passing existence, involving as they do all man's internal thoughts and secret motives—which are daily and hourly affecting his conduct in life and his expectations beyond life—are all considered by such philosophy to be subjects of idle speculation, on which no true conclusion can ever be established; and a degrading practical materialism, which dignifies itself with the title of Rationalism, or the Positive Philosophy of the Experience and Observation of Matter, is assumed to be the only proper subject of man's thoughts, and the only proper object of man's duties and actions.

But interesting and important as the world of *matter*

must ever remain to man upon earth, its interest and importance is but as a passing cloud; for it is infinitely less than the interest and importance which we ought to attach to the world of *mind*. The cognition or truth of the one affects the human body, and is as the passing shadow; whilst that of the other affects the human soul, and is to it, as the sun in the firmament of heaven is to all material beings, the perpetual source of light and life.

The states and relations of bodies on earth are no doubt of very great interest and importance, but they all depend fundamentally on the states and relations of the human soul. If there is not life in the soul—if there is not, either in the individual or in the nation, some worthy motive or mental principle really at work within, forcing on to action without—the external and resulting work will be neither really great nor really worthy. We may raise a pyramid, but our efforts will be useless; we shall in time disappear, and our works will become mere objects of historical speculation and permanent contempt.

But to reason at all, we must assume a universe of existence, and our categories or classes of existences are *mind*, *matter*, and *language*, which last includes in its most general sense Action.* These three embrace every *possible* object of human contemplation, and are each distinct from the other two, and not to be mentally confounded with either. The only possible questions which we can discuss concerning these three things are

* An action is only the outward *sign* or *symbol* of the inward thought or motive, and is therefore properly included under the general term *language* or symbolism. We do not and cannot understand an *action* till we supply or suppose some intention or motive for it.

reducible to two predicables—their *states* and *relations*—their States, when considered by us as unities—their Relations, when considered jointly as pluralities. These fundamental assumptions impose corresponding liabilities; for we are bound and liable at every turn to be called on to say whether we speak or reason of a mental thing, a material thing, or a mere sign or symbol, and whether we are discussing its state in itself—*i. e.*, as ONE; or its relation to something else or to several things—*i. e.*, as MANY.

CHAPTER II.

THE CATEGORIES.

MIND, matter, and language, are our categories or classes of existences. They include all things whatsoever—God and man, the universe without, the universe within, all human knowledge and action—all conceivable existences. Nothing exists or can be contemplated which is not one of the three—either a mental thing, a material thing, or a logical thing. They include all, and each is clearly distinguished from the other two, and the man who denies the existence of any one of the three is, we assert, clearly self-contradictory; for if he denies the existence of *matter*, he denies the existence of his own body, and contradicts himself by his bodily action or words. If he denies the existence of *mind*, he denies the existence of his own mind, and expresses a thought which denies the existence of all thought; and if he denies the existence of language—the outward symbol of the mind within—he logically contradicts his own words. Nor can any one of these three be confounded with either of the others of them. And if any man attempts, in obedience to the law of parcimony, as it has been termed, which forbids more assumptions than are necessary, to deny the distinction between mind and matter, and to assert their identity with Spinoza and Hegel, and so says that the two may be one and the same

thing, his words again convict him of self-contradiction. For every word, sign, and symbol is itself a vibration of matter, but every vibration of matter is not a word or language. In order to be a word or language, the vibration must have a human meaning. The word is a material vibration, but the *meaning* cannot possibly be material; the meaning in the mind must be the mental, the spiritual understanding and appreciation of the material word or vibration.

The word is motion—the motion of matter; but what is the meaning of the word, without which the word is dead? The vibration is not matter, but a form of motion in matter; but the meaning of the word, the meaning itself, cannot be material, it must be something else—it must be spiritual! For even if we suppose the word or material vibration in passing through the human brain, there creates a nervous brain-cell, and affects the human soul, creating a cellular material form, by which we remember the word, yet the *meaning* of the word cannot be that brain-cell—that material, idea, image, or impression. The meaning must be something else, which we can transmit, which passes on to other men. It must be the spiritual, the mental, and internal appreciation of the brain-cell, or of the word, which is distinct from matter, and all its ordinary forms and motions, and passes from man to man; and without this spiritual and purely mental meaning, the word or vibration itself, which passes from mind to mind, would not be a word or language at all, but a mere dead vibration or undulation.

Thus the meanings of his words do continually convict the *materialist* of self-contradiction, as the actions of his own body and the vibrations of his own

tongue continually convict the *idealist* of similar self-contradiction! Both admit the existence of language, both insist on the meanings of their words! Each is guilty of verbal self-contradiction, and misuses his words in order to deny their partial existence. The one denies the matter of which his words are a physical motion or vibration; the other denies the mind by which they are spiritually appreciated, weighed, and valued. Thus the distinction between mind and matter, and that they are separate and distinct things, and not one thing, is forced upon every man by the very meanings of the words which he adopts, and uses or misuses. The word is a material vibration, possessing a mental signification; it is a spiritual meaning or mental conception, embodied in a bodily action or material motion.

Thus the materialist, who admits only matter and impressions; and the idealist, who admits only spirits and ideas, are both equally refuted by their own words and their meanings: for though the words which the materialist uses may make impressions on me, yet my impressions are certainly not his meanings, and may be quite different from what he desired or intended; and his meanings must have existed before the words were uttered, and therefore could not be impressions. So the words the idealist uses may produce ideas in my spirit, but his meanings are not my ideas, and may be quite different, and his meanings must have existed before the words were uttered, and, when uttered, his words were something before they reached my spirit or produced my ideas. That something which the word of the idealist is after it leaves his spirit, and before it reaches my spirit, is a something which is neither an idea nor a

spirit, and can only be a motion or form of matter—not a spirit and not an idea. And thus the meanings of the words which the materialist and idealist use, which exist before the words are uttered, and afterwards, are certainly neither matter nor impressions, nor spirits, nor ideas.

But it can be equally well shown that the materialist and the idealist both palter and trifle with the words they use; for words are not matter, but motions and forms; not impressions, but that which causes and produces the impressions, and therefore a third thing, neither matter nor impression, so that the materialist has three things—matter, impressions [and words before they make impressions]. And in like manner the idealist must have spirits, ideas [and words before they create ideas], which in both is confusing words [motions and forms] with either matter or spirit. But motion and form is neither matter nor spirit, but the work of spirit upon matter and with it when it takes the form of *words*. And we may well suppose matter the work of God, who brought it into existence by the word of His power, saying, “Let there be light, and there was light;” just as man creates words with his mind to influence the minds of others, and to be used by them; so God has created the universe to influence the minds of inferior spirits, and has made it subject more or less to their powers, their influence, and their enjoyment.

The division, therefore, of existence into mind, matter, and language, is a sound logical division; it is both complete and clear. All its parts together embrace and express all that exists; and each of its parts is clear and distinct from all the others. No one can think or truly say that mind is matter, or matter mind, or either

of them only language; or that anything has ever been ideally thought or sensibly felt by man which is not included in one of the three.

The most mysterious and difficult subjects which Philosophy has discussed and squabbled over have been motion, action, force, form, number, space, time, cause, resemblance, and the rest which some have termed "different forms of the impulse of the mind to generalise;" and the existency of which some have denied altogether, and which others have insisted, are not ideas or things at all, but that some of them, time and space for example, are mysterious inexplicable "*forms*," necessary to enable us to frame our ideas or to think at all! These deserve our attention and demand our explication. We admit and confess our obligation to show that such well-known and obvious subjects of human thought, as time, space, number, cause, &c., are included in the widest generalisation which we believe to be true. To say that such things are not ideas or thoughts, but "necessary forms," or mysterious somethings, which enable us to frame our ideas, appears to me to sap the foundations of all truth; it is to build our knowledge on the shifting sands of the unknown, and to make unknown some things necessary to human knowledge, and so to found knowledge itself upon the unknown—a contradiction!

We reject all such mysteries. We build upon man's body, man's soul, man's language, his matter, his mind, and his words—three things which each man knows for himself, with the utmost certainty possible. We build on nothing else, and on no mystery whatever. It is each man's duty, and it should be his pleasure, to form as true and complete conceptions of these three—mind, matter, and language—as God will enable him.

We have in ourselves examples of all; none can deprive us of them. Mind, matter, and language are the first and last division, both of the universe of existence and of human knowledge in general. The thing knowing, the thing known, and the thing which embodies and expresses the knowledge, the subject, the object, and the word, which unites the action of the object and the conception of the subject into one—these three—are within the grasp of every human intellect; but objects themselves are threefold—mental, material, and verbal—the first is a subject, and the last a word, and matter is distinct from both; for the words object and subject are confusing and ambiguous.

But if any one should think or say that language, being composed of words, by our own admission, partly material or partly mental—a vibration of matter with a mental emotion or signification—that therefore the laws of logical division hereafter laid down are violated, in that they—words—are not sufficiently distinguished from mind and matter, or confuse the two; we answer that it is not so. For, though words or language consist of vibrations of matter, with mental meanings or significations attached thereto, yet words are neither matter nor mind, but only a state of matter and state of mind conjoined in unity together. Vibrations are not matter or material, but a state of matter—a shifting form of material particles. Motion is not matter, but a state of matter—a relation of material particles. And the meanings or significations of our words are not minds, but states of mind—spiritual agitations and emotions, FORMS or perceptions of the soul, but not the mind itself, nor parts of the mind itself, but states and conditions of the soul, the emotional part of the mind.

As the external word is a vibration of matter, so its internal meaning is an emotion of mind. The two must be conjoined to constitute a word, which is a state of matter conjoined to a state of mind, but neither material nor mental in itself. Words and language, therefore, though always consisting or composed of vibrations or undulations of matter connected with perceptions or emotions of mind, are neither mind nor matter themselves, nor even partly composed of either mind or matter. Motion is not matter, and emotion is not mind—the one is a state of matter, and the other a state of mind. Words are, therefore, to every man who thinks, clearly and distinctly a third thing—neither matter nor mind, neither partaking of matter nor partaking of mind—but, nevertheless, they arise and are created by the union and conjunction of the motion of matter with or by the action or emotion of mind—by the union of certain vibrations or undulations of matter with certain perceptions, agitations, or emotions of mind attached thereto. Words are the conjunction of motions of matter with emotions of mind.

Thus all three, Mind, Matter, and Language, embrace all existence; but all three are separate and distinct from each other, and cannot be confounded together by any rational being. And the division of the Universe into mind, matter, and language, is both clear as to its parts and complete as to its entirety.

CHAPTER III.

THE PREDICABLES.

WE have said that it is impossible to reason with the man who denies, either the *existence* of the thing, or the *possibility* of the question, proposed to be discussed. We then have no fundamental assumptions, or words in common, from which we can begin to reason. We must then try and go back to something which we both still hold and admit in common, in order to begin our reasoning. If a man denies the existence of matter, and declares himself an Idealist—or of mind, and professes Materialism—we can only fall back on the existence of human knowledge or Language, and the possibility of understanding it. We are driven to *words* and their meanings. We ask, what is a word with no meaning, but a vibration, an undulation, or Motion of *matter*? and what is its meaning but an emotion, an agitation, or conception or form of *mind*? And the disputant is reduced to the necessity of either denying the existence of words without meanings, or the existence of meanings without words to express them. Our words with meanings prove the real existence of our *minds* or understandings; and our words, or marks and sounds, without meanings, prove the existence of *matter* independent of our minds, of which matter, such words are motions, undulations, or vibrations. But the truth is, that all men

admit, in some form, the existence and distinction of mind and matter; and then through bad logic, or bad intentions, or bad habits, contradict themselves, and hide their self-contradiction under a cloud of words!

If a plain man were to declare that his own body, or its unsentient parts, were only a "permanent possibility," we might at first think he was joking. But if he assured us in serious language, in the midst of a deep philosophical work, that, "in any other sense, he did not believe in the existence of matter,"—*i. e.*, except as "a permanent *possibility* of sensation,"—it is clear, in such case, that he does not consider matter as an existence or thing, but a possibility or question about a thing—a state or relation of Mind. This makes matter a state of Mind, just as the Materialist makes mind a state of Matter.*

Berkeley was more reasonable, for he said that the phenomena, which we call substance or matter, were the *language* of God to man. This made matter, at least, independent of man's sensations and mind—a thing or existence—a language of nature—not a possibility, but an existence or thing, independent of the human mind! We still had, in Berkeley's view, the language of God, or *external* things; the thoughts

* The same author, of course, as he proceeds with his language and reasoning, finds himself under the necessity of treating his mind as "a flux," "a series;" but of what? It can only be of particles of matter! a state of matter! Thus, the magician or logician who takes the philosophic world by storm, shifts his position, from time to time, as his argument requires, and makes his mind matter, or his matter mind, just to suit his *logical* convenience! Of course the result is neither Materialism nor Idealism, but positive Scepticism; for he attacks and refutes Conceptualism without reaching faith in words or Symbolism, which includes faith in matter and faith in MIND, the Creator of all. Positivism, if consistent, would be the negation both of reason and of faith.

of man, *internal* things; and human words or language, *logical* things. But to call matter a "possibility" is not Berkleianism, but logical confusion—the confusing of existences with possibilities; the confusion of things with questions about things; the confusion of categories and predicables. It is logical ignorance, or logical confusion. .

The error of Berkeley, in my opinion, is this, that matter or the phenomena of nature is, more or less, subject to man's will, and also to other wills than that of God. Man can bring things together which produce phenomena—what we call natural phenomena—according, and more or less subject, to the human will. And there may be possibly many other wills, good and bad, in the universe, between God and man, to whose wills also natural phenomena—what we call material phenomena—may be more or less subject. To call material phenomena the language of God, therefore, is to make God's language more or less subject to the wills of men, and possibly of angels and devils. It cannot be true or right to call what is subject more or less to my will—to call the phenomena which I can produce, or forbear to produce, at pleasure—the language of God. It is that part of God's creation which He has subjected in part to my will, and in part not to my will. I call it, therefore, part of God's creation—matter—which God may, and no doubt does, sustain by His almighty power, but which He has given for the use and instruction of man on earth.*

* But even the operations of angels and of devils can only present themselves to man as phenomena of matter—*i. e.*, visible or sensible—to which he can "turn aside;" and which he should examine without fear; as a great and good man did to a "great sight"—a "bush burning with fire, and yet not consumed!"

But to confound matter with a "possibility" is to confuse things with questions—is to confound categories and predicables, or nouns with verbs! Matter exists, and is the name for a certain class of things or existences. Predicables are possibilities which may or may not exist; which may begin and grow, and change and decay and cease, and possibly begin again.

It is a fundamental error to call *matter* a state of mind; or pure *mind*, a state of matter. They are two things or existences, distinct from each other. It is another fundamental error to overlook the deep importance of *language*, which is a third thing, neither matter nor mind, but a conjoined or united state of matter with a state of mind, a material vibration with a mental emotion. Having assumed these existences, the simplest possible question we can ask is, Whether we are to think of and consider them separately and apart, or conjunctively and together—their *states*, considered as unities or alone; their *relations*, considered as not alone but conjunctively, or as pluralities? Are we to consider the thing as one or as many? is the first question any one can reasonably ask—its state as a *unity*, its relations as a *plurality*?

There is no difference, in fact, between states and relations; for any *number* of things may be put together by the mind as a unit, and the relations of the number are the states of the unit. So any *unit* may be divided into many parts or powers or qualities; and the state of the unit is merely the relations of such parts or powers or qualities. For example, the state of the solar system at any moment, or its states for any *time*, are the relations of its parts and powers in *space*. We must hereafter consider Number, Time, and

Space, which all seem to be involved in all the states and all the relations of all things in the Universe.

But it is evident that all Aristotle's *predicables* are either states or relations. "Genus" is the origin, class, or family history of a thing in time and space; its original state and successive states is its "genus" and history. "Species" is the form, shape, and resemblance, which are evidently states or relations in number, time, and space. So "essential difference," "property," and "accident"—all are evidently reducible to states of things as unities, or their relations to other things, as pluralities. But the greater part of Aristotle's *categories* are, in fact, not properly things, but questions about things; not existences, but possibilities; not properly categories, but predicables. All of them, in fact, except substance, are not things, but questions. "Quantity," "quality," "relation," "action," "passion," "when," "where," "posture," and "habit," are all evidently not things, but states or relations of things. They are questions and possibilities, not things or existences themselves. They are all answers to the questions—How much? how many? how like? Or how? when? where? and are all *states* of the one, or *relations* of the many.

But it may be justly asked, Are not predicables, of which we can speak and reason, like quantity and quality, or actions and passions—in short, all states and relations—are they not also all things—"conceptions present to the intellect"—and justly called *things* as well as spirits, bodies, and words are called things?

What, then, is the distinction between existences and possibilities? between things and questions? between categories and predicables? It appears to me that the

difference between these fundamental assumptions is like unto that between permanence and variableness, between forms and motions, between motions without progress, which are only *undulations*, and forms without fixity, which are only *ideas*! between "being" the *noun* and "being" the *verb*.*

It is this difference or distinction which gave rise to Zeno's old paradox about motion, which is not a thing, but a relation of things, a state of things. The first step of the human mind is to distinguish *things* that are permanent as categories, and *things* that are variable or only possible as predicables; to mark out what is continuous and permanent amidst the perpetual flux of nature. Man falls back on himself, on his own identity, the permanence of his mind, his *Ego*, and gropes with his language to mark out true and real distinctions. The one and the many—ego and non-ego—object and subject—facts and theories—mind and matter,—all these distinctions, as we shall show, are imperfect or confused divisions, and have given occasion for infinite

* This seems the fundamental juggle of Hegelianism. Of course, every Predicable can become a thing, a thought, a concrete, in place of an abstract conception. Every noun can be used as a verb to express some action or relation of the noun; and the German language, from its general use of its verbs substantively, without any article to distinguish, affords greater facility for this confusion than English. But we can play the *jeu de mots* in English also with the present participle in *ing*; and we find a little of it with such words as *being*, *knowing*, *believing*, action, motion, &c. All language is undulation, which implies both motion and form—fixed *limits* to the wave in *form*, and *motion* between those *limits*, and yet progression beyond them into the succeeding undulation! Here Newton's illustration of "throwing pebbles into the ocean of existence, and counting the ripples which they make," assists our mind in its conception of its own operation in acquiring human truth. Every WORD is a pebble flung into the infinite depths of the human soul.

logomachy. But before we can reason with words and signs, we must discuss the laws or axioms of logic, and the nature of language. But I say that all possibilities are *states* of one or *relations* of many ; and all existences are either spirits, bodies, and words, or mind, matter, and language.

Thus, the distinction between categories and predicables is the distinction between existence and possibility. Categories are *things* we assume to exist, predicables are *questions* we assume to be possible. Both are fundamental assumptions from which our reasoning must start, and on which it must always depend ; and till men can agree on these fundamental assumptions, all discussion is an idle waste of words. But the laws of logical truth lie at the foundation of all human truth. We must have and assume *a priori*, categories, predicables, and axioms—existences, possibilities, principles—all self-evident, and from which we may and must start, or else our reasoning cannot even begin to be. But the worst of all possible foundations for truth is to begin with a verbal lie ! a verbal contradiction ! a falsehood ! It were better to be silent for ever !

CHAPTER IV.

LOGICAL TRUTH—AXIOMS.

WHATEVER truth may exist concerning mind and matter, it is clear that all human truth, all human knowledge, must be embodied in words, signs, and symbols, before it can possibly become the common possession of mankind.

Logical truth, therefore, lies at the foundation of all human truth whatever. We must begin with words and language; we must first establish what these are, and in what their truth consists. If our words, signs, and symbols, whatever be their *force* or *meanings*, are so arranged and put together that in and by themselves they violate logical truth, they are logically false, and manifestly and necessarily cannot be admitted to embody any truth whatever, either concerning mind, matter, or language.

I reject the pretended law of Excluded Middle, and say that the fundamental laws of logical truth are three, the self-evident axioms of language:—

1. The Principle of Identity.
2. The Principle of Contradiction.
3. The Principle of Logical Division or Distinction.

The first, or principle of Identity, is the law of logical *liberty*, or free speech, which authorises every reasoner to assert, if he pleases, the *identity* of two words, and

of the thoughts and things they mean and represent. Every man has in argument the never-ceasing right to assert that the two words A and B mean to his mind the same material thing, the same mental thought, or are two words verbally and logically interchangeable.

The second law, or principle of Contradiction, forbids *direct* logical falsehood. It is stated simply thus: Two contradictory propositions cannot both be true in the same place at the same time, here and now. That is—Logical truth requires that no man shall directly contradict himself, and say that A is B; and here, at the same time, say that A is not B. That is direct logical falsehood, self-contradiction—a LIE, the most odious violation of truth. He who contradicts himself, stands self-refuted, and violates truth, whatever his words may mean. But a man may well and truly say that A is B here to-day, and that it is not B at some other time, or in some other place.

The *law of Excluded Middle* is the converse of the law of Contradiction, but I reject it altogether as a necessary law of logical truth. The law of Excluded Middle means that one of two contradictory propositions must be true, and is laid down thus: "A must be either B or not B; there is no third possibility." This law I reject, for reasons to be stated hereafter. But, I think, it is obvious that whenever A is only partly B, or only sometimes B, we are justly entitled to deny both general or universal propositions. They are both ambiguous, and both false.

The third law of logical truth is the principle or law of logical distinction or Division which has been grossly neglected by most writers on logic; and its neglect occasions most of their errors and ambiguities.

This law forbids logical ambiguity—*i. e.*, *indirect* logical falsehood. This law has two branches—1st, that the parts of the division must be *clear*; 2d, that the parts must be *complete*. The violation of this law has been the source of almost all the ambiguities that have disgraced philosophy from the days of Thales or Pythagoras. The meaning of the first branch of the law is, that if we think it needful to distinguish the parts of a whole by distinct names, the parts should be *clear*—*i. e.*, not overlap or be confusable with the other parts. Logical truth manifestly requires that none of the things called by the name of one part should be possibly included or confounded with any of the things included under the other part or parts—*i. e.*, each part should be *clearly* distinguishable from all the others. The second branch of the law requires *completeness* in the division, and means that all the parts taken together should comprise the whole intended to be divided—*i. e.*, that no part of the thing intended to be divided should be left out or forgotten.

If the first branch of the law is violated, the distinction is not *clear*; if the second is violated, it is not *complete*.

In either case, we are landed in an indirect logical falsehood—*i. e.*, an ambiguity. For if a proposition is verbally ambiguous, it is false in one or both meanings. When the parts are not *clear*, the things erroneously included under two distinct names render the application of these names ambiguous; and when the division is not *complete*, the part omitted may possibly falsify or contradict what is asserted as to the other parts.

But although the parts of a logical division must be

both clear and complete, it is not necessary that the mental or physical things themselves should be mentally or physically separated or separable. The law is a logical, not a mental or physical, law. Division is a logical distinction, and the meanings of the words may be clearly distinct in the mind, though the things are not in themselves separated or distinct; otherwise we could not distinguish, logically, the parts of a unit, or recognise the divisions of a whole, or distinguish our minds from our bodies, or either from the thoughts and words we possess.

We may, for example, assert that man is composed of body, soul, and spirit, and treat of them as logically distinct and separate, though in our present stage of existence they are inseparable, and all incapable of being separately examined, or their boundaries clearly defined. Yet man's mind is not his body, nor his body his mind; and in like manner his mind is divisible into soul and spirit; and his soul may be subject to the material influences of light, heat, magnetism, or electricity, and yet his spirit may not. And though we cannot separate them in this world, yet we should constantly remember the great and constant distinction between the three.

Good divisions are very difficult to discover; but it is clear that if our words are confused, then the general propositions made with such confused words are confused—that is, partly false. And if our words are imperfect or incomplete, then the general propositions made with such imperfect or incomplete words are themselves imperfect or incomplete—*i. e.*, partly false. And what is partly false cannot be wholly true—*i. e.*, the general proposition is false. Hence it follows that

both contradictories, made with such confused and imperfect words, can be, and ought to be, denied in spite of the law of excluded middle. This law of excluded middle has, in fact, done more to puzzle and confuse philosophers, and to disgrace the name of philosophy, than any other part of logic. And we must therefore proceed to examine it more at large, in order to fully justify our rejection of its obligation as a law of logical truth.

But there are two divisions of the universe much in use at present, which are the worst possible, for they violate both laws of logical division—viz., *Ego* and *Non-Ego*, and *Object* and *Subject*. They are neither *complete* as a whole, nor *clear* as to the parts, and therefore violate both laws of logical distinction.

1st, They both ignore language or *words*, and so are not complete. Words are partly egoistic and partly non-egoistic; partly objective and partly subjective. Before the word is uttered, it is part of the subjective ego; after it is uttered, it is part of the objective non-ego. Therefore neither division is complete, for language is wholly omitted. But, 2d, The parts are not clear. Your ego is part of my non-ego; and my ego is part of your non-ego! so that we are necessarily always speaking of different things. But besides this, our egos never remain the same for two moments of time! They vary with every breath we draw, and every morsel we eat! No logical distinction can be worse than ego and non-ego—they are bad English, bad logic, and end in false philosophy.

The same observation applies to object and subject; for the objects and subjects are different to each man, and the object can become subjective in thought, and

the subject can become objective, or the thing we are thinking of. The parts, therefore, overlap each other, and are partly interchangeable. In short, these celebrated divisions are as evil as possible, and violate both laws of logical distinction ; and no truth can be arrived at by resting or depending on such false and ambiguous *words* ! Both these distinctions—ego and non-ego, and the objective and the subjective—are always supposed to comprise the whole universe known to mankind, and are always so used ; and yet the parts of each are not only ambiguous and interchangeable, but each distinction also overlooks and omits the foundation of all human truth—viz., human LANGUAGE.

CHAPTER V.

LAW OF EXCLUDED MIDDLE FALSE.

THE law or principle of Excluded Middle means the logical necessity that one or other of two directly contradictory propositions must be true. The law has been described and laid down by an eminent logician as follows:—

“Of two directly contradictory propositions, one or other must be true. . . . This axiom is the other half of the doctrine of contradictory propositions. By the law of contradiction, contradictory propositions cannot both be true: by the law of excluded middle, they cannot both be false. Or, to state the meaning in other language, by the law of contradiction, a proposition cannot be both true and false: by the law of excluded middle it must be either true or false—there is no third possibility.”*

I assert that this law or principle of excluded middle is in many cases absolutely false, and therefore cannot possibly be binding as a general law of logical truth.

* J. S. Mill's 'Examination of Sir W. Hamilton's Philosophy,' p. 414, 415. Again, he says:—"A is either B or not B. That, indeed, rests on the principle of Excluded Middle, or rather is the very formula of that principle. Sir W. Hamilton calls this the principle of disjunctive judgments." But I think Mr Mill's is the more accurate expression, for the reasons which he himself has given.—*Ibid.* It is sometimes also called the axiom of contradiction and identity.

This so-called law has puzzled and deluded philosophers from the earliest ages, and to it may be traced most of the fallacies and paradoxes which have disgraced philosophy from the days of Zeno to the present time. And if we admit the principle as binding on our intellect, most absurd propositions have been and can be logically proved beyond all question.

Zeno first applied this doctrine to motion and time and space. Achilles could never overtake the tortoise, the greyhound could never overtake a hare; for the thing must be either overtaken or not overtaken. If it is overtaken, the fact is already past; if not overtaken, it is still yet to come, and the law of excluded middle excludes the third possibility—the present time. The infinite divisibility of space and time may be equally applied to maintain the same paradox, which still puzzles some unmathematical conceptualists.

In fact, very few, except mathematicians thoroughly imbued with the science of Descartes and Newton, even yet perceive the falsehood and fallacy of the proposition, “A thing must be either moving or not moving.” Both alternatives may be false, and a thing may be beginning to move, neither moving nor not moving, and that beginning to move may last ten thousand years! For example, as it has been observed, a canal of water is beginning to move when you open a tap at one end; but if the canal is long enough, and the tap slow and small enough, the canal will not be moving for ten thousand years, though it has been running out at one end all that time, and all that time has been beginning to move; yet the canal is not all moving, or all not moving, and during all that time the canal is neither moving nor not moving, but only beginning to move!

The canal as *one* thing is neither in motion nor not in motion, but only beginning to move; for Motion is a *Relation* between two and not a predicable of one; and when we speak of a *state* of motion, and say a body is in a state of motion, we mean either the Relation of its own parts to themselves, or internal motion; or else the Relation of the whole to some fixed point or to space, or its external motion in space. Motion *in itself*, is not matter, but a State of matter.

But the same paradox by the law of excluded middle may be proved of any Relation; for a relation exists in neither Relative—it is neither in the relative nor out of the relative. Thus by this law there is no *beginning* to life, and no *end* to a walking-stick! The end of your walking-stick is neither on the stick nor off the stick; it is neither a part of the stick nor beyond the stick—it does not exist either as a part of the stick, for then it is not the end; nor apart from the stick, for then the stick is without an end. In short, the end of your walking-stick is, like a mathematical surface, “inconceivable,” to those who are bound by the law of excluded middle.

But to the mathematician, Newton disposed of all such paradoxes, when he discussed the *ratios* of vanishing motions—the ratios of velocities at the moment of their ceasing altogether—and exhibited the proportions of infinitesimals, in the second and third degrees—ininitely less than things themselves infinitely little!

Of course the Materialist, and the Conceptualist in his materialistic mood, rely on the law of excluded middle to refute all such things as the points, lines, and surfaces of the mathematician, as well as the proportions of vanishing ratios infinitely less than what is infinitely little; all of which, by the law of excluded middle, become

absurd, inconceivable, and non-existent. But no person should presume to reason about the human mind without some study of the mathematics of infinitesimals. Till he has done so, the door of philosophy is shut to him, according to the rule of the ancient Academy of Plato.

But not only motion and the relations of mathematical quantities may be shown to be non-existent by the law of excluded middle, but every possible relation, and every attribute which depends upon a relation, are equally non-existent. Fatherhood, brotherhood, sonship, or the meaning of every abstract term, may be declared to be non-existent; for all abstract words are constituted and created from and by relations and resemblances which exist neither in the things nor apart from the things, but *between* the things; for these Conceptions are conceptions present only when the intellect is capable of creating or realising the mental resemblance; and at other times nowhere and non-existent—for Relation and Resemblance are wholly mental!

Number and Time and Space, the Infinite and the Absolute, all relations, Divine and Human, the wisdom, power, and goodness of God and man, all virtue and all obligation—in short, every possible Relation between any two beings—can be disproved by means of this law of excluded middle; and we thus may behold the spectacle of a “theologian taking advantage of the temporary occupation of a theological chair to prove [by the law of excluded middle] that theology cannot exist;” for theology is altogether relative! But, happily, common sense is stronger than bad logic.

In fact, no part of human knowledge is logically secure if the law of excluded middle is binding; for all human knowlege is a Relation between object and subject ex-

pressed in words, and it exists neither in the Object nor without the Object, neither in the Subject nor without the Subject—for then it could not pass from Subject to Subject—and the law of excluded middle forbids the third possibility! This law, therefore, is the main weapon and chief instrument of the materialistic and positive philosophers of the day; and by it they attempt to support the dogma of the schoolmen, “that nothing can be in the intellect which was not first in the senses,” and that all ideas are derived from and founded on Experience, and that we can have no ideas independent thereof.

All which is false! For we have ideas of God, Spirits, and thousands of abstractions which we have created, but never experienced at all; but this requires future consideration. However, as we have divided all things into Mind, Matter, and Language, it is easy to show by a few examples, that this supposed law of excluded middle is false in each department; and being sometimes false, is not a law universally true or binding.

It is false in three cases:—1st, When one or other of the terms employed, A or B, is logically absurd or nonsensical; 2d, When the thoughts of A and B are mentally ambiguous or incompatible; 3d, When the things A and B are physically variable and composite with each other in number, time, and space—*i.e.*, when A is partly or sometimes B, and partly or sometimes not B. For example:—

1. Suppose that it were asserted that “all fish must be either abracadabra or not abracadabra,” we can well deny both alternatives, for both are logically nonsensical.

2. Suppose that it were asserted that “a musical symphony must be either as sweet as a rose or not as sweet as a rose,” we can again deny both absurdities, because

the thoughts or sensations are incompatible or ambiguous. Both are sweet, but we cannot compare the sweetness of hearing with the sweetness of smell. No man can be bound by any law of Logic to accept one or other of such dubious, ignorant, or ambiguous propositions.

3. Suppose that it were asserted that "water must be either oxygen or not oxygen," we can well and properly deny both propositions, for both are false. It is false to say that water is oxygen, when it is only partly oxygen. It is also false to say that water is not oxygen, when every particle of water is oxygen, *plus* something else. In all such cases we are well entitled to deny both alternatives, in spite of the law of excluded middle, for both are false, imperfect, or ambiguous; and we are entitled by such denial to call upon the reasoner to correct his *language*, to improve his *mental* perceptions, or to extend his *physical* knowledge.

If your propositions are not framed with correct words, according to the true relations of Thoughts and Things, I can well deny both the affirmative and the negative. If the words are absurd, or the thoughts and things, A and B, are ambiguous or imperfect, I can justly decline to be fixed with either alternative made with such absurd words or ambiguous or imperfect thoughts and things; and in spite of any such supposed law of excluded middle, I may justly deny both contradictories or both contraries.

In fact, this law of excluded middle implies and assumes that there is nothing,—*i.e.*, no state of mind, when we speak of thought or Metaphysics,—between the affirmative and the negative,—between belief and disbelief. But there are three things and three states of

mind between them. There are doubt, ignorance, and indifference. What is doubt but partly believing and partly disbelieving? What is ambiguity but partly truth and partly not truth? What is incompatibility but partly thinkable and partly unthinkable?

So when we speak of matter or physics. There are, in relation to our senses, three states of matter—solid, fluid, and gaseous. And fluids penetrate solids, and gases penetrate fluids, and also gases and fluids interpenetrate each other; and besides their physical mixture, there is also their chemical combinations, with the real nature of which we are wholly ignorant. But nevertheless, although man himself cannot penetrate matter, yet matter can not only penetrate different kinds of matter, but may also penetrate man's body; and for all that we at present know on the subject, a *Spirit* in the form of a gas might penetrate man's Brain, or even man's Soul, just as the fumes of brandy or ether or tobacco may penetrate a man and deprive him of some or all his bodily and mental senses. But this law of excluded middle ignores all these possibilities, and insists that the visible or sensible A must be either B or not B; whereas it is manifest that the visible and sensible A or B may be interpenetrated, even materially, with some (to man) insensible fluid or gas, which might render all our logic, as well as the law of excluded middle, utterly absurd upon the subject of the physics of such matter. Both physics and metaphysics are therefore clearly beyond the limits of this pretended law of logic.

This law of excluded middle was first applied by Zeno in his paradox about motion, which still puzzles the conceptualists. But it is equally applicable to every relation, which may be thus shown to be neither in the

relative nor without the relative; and so to exist nowhere but in the human mind or imagination. Thus, this law becomes the stronghold of materialism, scepticism, false rationalism, and false morality or no morality—for all attributes, and all abstract relations whatever, even pure Logical Inference, perceived only by the mind and not by the body, can be absolutely denied as possessing any existence whatever! And, likewise, all the relations between man and God, and between man and man, can in like manner be proved to be non-existent, except, as they may say, in the illogical brains of priests, pietists, and moralists, who have not sufficiently studied and submitted to Positive philosophy and to the law of excluded middle; and so mistake their weak imaginations for the laws of nature, which this logical law of excluded middle can clearly show to exist nowhere and at no time, neither in the Things nor apart from the Things—neither now nor in eternity! neither here nor there! and nowhere! for where does a Law of Nature really exist?

All the philosophical rubbish of twenty centuries hangs and depends and is built on this supposed logical law of excluded middle, which, as a *general* law of logical truth, is wholly false, and in no respect binding on the human intellect.

Of course, logicians have long seen the falsehood of some of the conclusions founded on this law, and have generally endeavoured, under the title of fallacies or the laws of Fallacies, or of Probabilities, &c., to take back what they have previously granted, or are bound to grant, under this assumed law of excluded middle. Ancient and mediæval Logic has thus been guilty of inconsistency and self-contradiction, but Aristotle probably less so than many of his followers. But the

proper and only correct way is to deny the whole obligation of the law of excluded middle, and to assert, as I do assert, that it is not binding on any intelligent human being; but that whenever human words are ambiguous or imperfect, men are well entitled to deny both the affirmative and the negative; because, when composed with such ambiguous or imperfect language, whether relating to thoughts, things, or words, both general propositions may be false.

Between the affirmative and the negative in thought and fact and language, there are doubt, ignorance, and indifference, all of which have left their marks in the corruption and ambiguity of our words. Matter admits of gaseous and fluid Interpenetrations, and, with Mind, is equally open or obnoxious to doubt, ignorance, and indifference, caused by such material Confusions.

Thus then, the law of Contradiction is entirely sound and obligatory, and forbids logical falsehood. No man has a right to say, here and now in words, that a thing is *both* A and not A; that is logical falsehood. But the general converse of this, or the law of excluded middle, is not binding on any man. The thing may be neither properly A nor properly not A, because A may be in itself absurd or ambiguous; and this may happen, as we have said, in three cases:—

1st, When the word A is absurd or nonsensical.

2d, When the thing is materially composite with A in space or time; for then both propositions are materially and logically imperfect.

3d, When the thought of the thing is mentally incompatible with A; for then both propositions are mentally and logically ambiguous.

In all these three cases both the affirmative and the

negative may be justly denied, notwithstanding this pretended law of exclusive middle.

This law of excluded middle, it may be also observed, secretly assumes that we are speaking of the things *themselves*, and not of our ideas of things, or of our *words* for our ideas of things. And the philosopher who admits the distinction between mind and matter contradicts himself if he admits the law of excluded middle; and this contradiction can, I think, be made manifest thus:—For if we admit the distinction between mind and matter, then each man's words are the names, not of things themselves, but of his *ideas* or mental images of things; and when he says "A is B," he means, only according to his ideas. But when he says, "A must be either B or not B"—*i. e.*, when he asserts the law of excluded middle—he is no longer using his words as names for his ideas, but as names of the things *themselves*; and he is thereby attempting to fix nature or his opponent, with the reality of *his* ideas, under the name of the reality of things themselves; about which, he who admits the distinction between mind and matter, admits that he cannot speak at all.

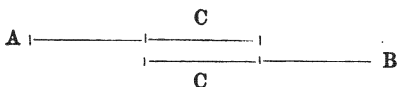
For, whoever admits the independent existence of mind, and that mind and matter are two and not one, admits that he can neither know nor speak of anything but what is in his mind—*i. e.*, not of things *themselves*, but only of his *ideas* of things. But this law of excluded middle always implies that we are speaking of the very things *themselves*, as they are in nature and in the sight of God, as *positive* realities, and not merely as human *idealities*, or matters of human faith and mental certainty embodied in Words.

Thus, the man who asserts the law of excluded middle

logically denies the existence of the human mind, as distinct from matter; as well as the existence of all abstract ideas. But this, I think, will appear more clearly hereafter. First, let men acquire distinct ideas of mind, matter, and language—of spirits, bodies, and words—as positive and indubitable realities—and then the logical and philosophical fetters of this law of excluded middle drop from our awakened intellect as an ancient, but empty and contemptible, logical *incubus*.*

* The argument in the text may be put technically thus:—In the universal affirmative, by the laws of all logic, the predicate is not distributed—*i.e.*, part of its comprehension is left out of consideration altogether, and is not thought of or spoken about at all; therefore, when we deny the universal affirmative to be true, we are affirming nothing of that part of the predicate not distributed. But when we also deny the universal negative, both the subject and predicate are distributed, and both the universal propositions are false, if any part of the subject is contained in the predicate.

Thus, if A and B have a common part, C,



it is false to say, "Every A is B," and it is also false to say, "No A is B." Both are equally false whenever A and B have a part in common. Or, according to the logic of Aristotle, "Both contraries may be false, though both cannot be true."

The error of modern logicians has, in my opinion, arisen from illicit dealings with the copula, and from the connecting improperly the sign of negation with the predicate itself, and so converting unlawfully the negative proposition into a new affirmative. Thus, "A is B," and "A is not B," are thought of at one time, and the latter is then changed into A is (not-B), which is a new "affirmative," in which, of course, as an affirmative, (not-B) is not distributed, and is become a wholly different proposition from (No A is B). But the conclusion of the law of the excluded middle—*viz.*, "A must be either B or (not-B)"—is then alleged concerning *two terms*, B and (not-B), neither of which have been distributed—*i.e.*, not wholly thought of, or in general previously settled or spoken about in any way!

Of course, writers on logic try to get out of this quagmire of inaccur-

ate language or inaccurate thought in various ways, generally in the chapter on fallacies. But one ingenious way adopted by a clever mathematical logician may be mentioned here—viz., by making a universe not a universe! or creating a new universe wholly undefined of every universal term (for who can define a new universe for the *negative* of each universal term?)—*i.e.*, by saying that A and (not-A) and B and (not-B) are two universes of some particular kind, not “the one Universe”—with which, therefore, philosophy can have nothing to do, as philosophy is wholly engaged with “the one Universe.” In discussing the copula “is” and “is not,” this author lays down the law of excluded middle in the usual form, “That *is* and *is not* are *contradictory alternatives*. One must, and both cannot, be true.”—(De Morgan’s ‘Logic,’ p. 50.) But he then soon afterwards abandons the well-known logical distinction between the words contrary and contradictory, and treats them as *synonymous* (p. 60), though he candidly admits all I require—viz., that “contraries may both be false, but cannot both be true” (*ibid.*); and therefore, that the law of excluded middle, as applied to universal propositions by Mill and Hamilton, is false. Professor De Morgan’s able book appears to me to involve the confusion, tempting to a mathematician, of “existence” with “equality.” But “existence” only requires *one*, and “equality” requires *two*; and we can certainly reason about the continuous existence of one thing without considering its equality with anything else. The difference, which he appears to ignore, between “Horse (is not) man,” and “Horse is (not-man)” (p. 137), appears to me to be this; that from the first we can logically deduce “No horse is a man,” and “No man is a horse,” which is defined and positive knowledge; but from the other, “All horses are (not-men),” we can only deduce, “Some (not-men) are horses.” But we cannot possibly deduce logically that “No horse is a man;” and Swift’s filthy tale might be therefore true in the one case and not in the other, for some (not-men) might be rational, and might be horses. This seems to me a very considerable logical difference. But such arguments are hardly worth serious consideration.

CHAPTER VI.

NUMBER.

WE have thus laid before the reader all our fundamental assumptions:—

Three *Categories* or distinct *Existences*—Mind, Matter, and Language; all three self-evident to every man in his own person.

Two *Predicables* or classes of *possibilities*—questions concerning these existences—viz., their *States* as unity; their *Relations* as plurality.

Three *Axioms*, or self-evident principles or laws of logic—the laws of Identity, Contradiction, and Division.

Besides these fundamental assumptions, we hope that we have enlarged the domain of human liberty by abolishing the law of excluded middle, showing it to be false and unfounded; and have endeavoured to relieve the human mind from a logical falsity which has pressed it downwards for two thousand years—the very absurd notion, as it now appears to me, that if A is an ambiguous or imperfect term, and I deny the truth of a proposition involving it, that thereupon (not-A) is, or has become against me, less ambiguous or less imperfect; and that I am obliged to admit that the thing is not A! whereas I may intend to assert, and may assert perhaps justly, that both the affirmative and the negative are

false, because they both involve the imperfect or ambiguous thing or thought or word which I reject.

Having thus, as we hope, established logical truth on the sounder basis of the laws of contradiction and division, or logical distinction, the most natural step might appear to be to discuss first the nature of language, or of words, signs, and symbols in general.

But men learn their words and language, before they can remember, from their parents, their companions, and their teachers. And before we (any of us) can remember how it occurred, we have all learnt three great abstract *words*, thoughts, or things, and to use and apply them as, more or less, the measures and make-sures of all material things—viz.,

NUMBER.—TIME.—SPACE.

We all, more or less, understand and apply them, from the child who counts his marbles and measures his toys and longs for his play-hour, up to the astronomer who calculates and measures the least possible distance and possible times of the dog-star Sirius, or the nearest of the fixed stars. What then, in the first place, is number? We all study abstract numbers before we study language in the abstract; we study arithmetic before we study philosophy.

Pythagoras, more than 2000 years ago, pronounced number the beginning of all science, the foundation of all certainty. The modern philosopher, riding on his positive or materialistic hobby, pronounces, by the law of excluded middle, "number in the abstract" to be nothing at all. "All numbers," says he, "must be numbers of something; there can be *no such thing* as numbers in the abstract! Ten must mean ten bodies or ten

sounds or ten beatings of the pulse." And, of course, to the materialist, by the logic of the excluded middle, abstract number, like all other abstract words, has, "strictly speaking, no signification"—*i. e.*, none visible, or sensible, or material. For all abstract words, including the word *number*, are all names for *mental* relations or resemblances, which the mind perceives or invents between certain things, when it gives them a class name.

But this relation or resemblance does not exist in any one thing; and if not in any one, then not in all the things taken together. The relation or resemblance itself is not in the things, but between the things, and only in the human imagination, in the human mind, which to the positive materialist is nought and nowhere; and the *signification* of the abstract term is also, by the law of excluded middle, nought and nowhere, neither in the things themselves nor out of the things themselves—nothing but a "general abstract idea" which, in the sense of a material image, Berkeley showed to be a "stark-staring absurdity!"

In short, abstract ideas, to the positive materialist, are worse than nothing, neither existing in time nor space—a mere phantasm of ill-regulated imaginations, not confining and restricting themselves to the *positive*, or to concrete matter! to the sensible and visible!

Of course, by such reasoning, number in the abstract, together with force, cause, resemblance, &c., are proved to be nothing at all. Yet Number is an abstract word very intelligible to us all; and we all learn arithmetic, or the abstract laws of number.

However, as we believe in the existence of mind and language, as well as in matter—and as we assume that words are positive existences, independent of matter—

and as we deny the obligation of and reject the law of excluded middle—we say that abstract number is, like all other abstract words, a class *name* for a number of *units*; and each unit is a sign, a symbol, a *word* made entirely alike all others. Units are only *like-words*!—*i. e.*, when all words become, or are supposed, alike, they become units, marks of unity, and their class name is Number; or numbers of numbers of like units pronounced with the mouth, or made with the pen or printer's ink, or only thought of by the mind when we do a sum of arithmetic in the head; where they have no visible, sensible, or material existence whatever, that we know of, but are only mere units in the mind, or thoughts, made all alike, and numbered as mental units in mental arithmetic. Ten is the abstract name for ten *units*, ten anythings or ten nothings; ten words, signs, or symbols. Numbers are words.

Such are numbers in the abstract — *i. e.*, abstracted from the Universe of mind and matter; and in the concrete they are things, thoughts, or words, merely considered as units or ones, and joined together by a class name. Any arithmetical number is merely a bundle of units marked and known by its sign or name, and thereby distinguished from all other such bundles which have different signs, symbols, or names, all of which are words invented by man to distinguish the bundles from each other.

I deny, therefore, that number in the abstract is nothing, and show thus what it is. For I say, numbers are signs, symbols, *words*. Nor do we get or make our numbers by tentation, or by any uncertain or doubtful process, or by *induction*! On the contrary, I assert that we make them all logically, and get them all by irre-

sistible logical necessity—by *deduction*; and that a man must contradict himself who does otherwise, or who denies numerical deduction.

I assert that every man who uses words, and thereby admits the existence of language, must contradict himself, or become an inaccurate logical shuffler, who doubts any accurate arithmetical calculation—for all sums in arithmetic are only accurately and logically demonstrated substitutions of symbols. But, of course, many men are both poor arithmeticians and poor logicians !

But let us strictly deduce our numbers, and so, by sound words and language, teach materialistic philosophers to think accurately about number.

Having assumed or been granted in the beginning three categories and two predicables, then, by the law of identity, I am at liberty to set down what has been already granted in a new form, thus :—

		General Abstract Terms.
Mind	= 1	= 1 = One.
+ Matter	= 1 + 1	= 2 = Two.
+ Language	= 1 + 1 + 1	= 3 = Three.
+ (Their States)	= 1 + 1 + 1 + 1	= 4 = Four.
+ (Their Relations)	= 1 + 1 + 1 + 1 + 1	= 5 = Five.

And, if you cannot continue the process much further than you like, you are a very poor arithmetician, and require to study ; for we can evidently count five as a new *unit*, and add one thereto after the manner of the ancients, and use the old symbols, and say five + 1 = vi ; or, after the manner of the Arabians, take a new symbol and say = 6, and so on by tens to a million or more, without any possible conclusion—*i. e.*, without end, or

to infinity; and so can frame all numbers on the binary, quinary, decimal, or any other system.*

But supposing the education of the arithmetician in symbols perfected, yet the positive philosopher and pious worshipper of induction steps forward and says, You have not yet proved that two + two make four !! But I say that I have to eye, ear, and understanding proved, deduced, and demonstrated that fact; for, as soon as I have set down my two two's as units, and counted them, or divided my *four* units into two two's, then, by the law of identity, I say that they are visibly, actually, sensibly, logically, and mentally demonstrated to be the very same things! I have myself made them so; and you must contradict yourself in words, signs, and symbols, and deny what you have first granted—viz., my first *words*, signs, and symbols, or deny the law of

* In a former publication I showed that numbers could be deduced from one, two, three—the categories, mind, thing, and word—as the three units then assumed; and now I include the predicables, unity and plurality, as four and five, as two further units, to show that every distinct *assumption* is a distinct unity—to avoid any supposed superstition about one, two, and three. But I still think the remark correct, and worthy of observation,—“If we had commenced with assuming at first two existences or distinct things only; or if we could hold the opinion that human knowledge necessarily implies only two things—say subject and object, or *ego* and *non ego*—we should have at once fallen into a dubiety or uncertainty in the deduction of Numbers, quite independent of materialism or dogmatic idealism. For if we only had had one, two, as the foundation of numbers, instead of one, two, three, in our first conception, we could not feel quite sure what the next most simple or most natural step should be, for there would be two steps equally natural. Two is formed by adding one to one; and the next like step might, therefore, have been two to two, and so on, making each new number by adding the former number to itself. We should, therefore, have remained uncertain or dubious, between what are called the natural numbers, 1, 2, 3, 4, &c., and the series, 1, 2, 4, 8, &c. Both of these might have been said to be equally natural. But having assumed knowledge, as one unit in the beginning,

identity—or else two and two are four, and have been four, and will be four, from all eternity to all eternity, in every intellect that ever did or ever can exist. “Oh, but pray, suppose a miracle,” says the pious inductive positivist, though belonging to the class who usually scoffs at miracles and prayers as irrational and weak imaginations of unphilosophical minds! By all means, as I believe in many miracles, and in the efficacy of earnest prayer! Let us then suppose this miracle “not beyond the bounds of Omnipotence!”

But can I go on to suppose a contradiction, a falsehood, in *my own* chosen and selected signs, symbols, words—a miracle worked by Omnipotence? Can Omnipotence alter my words, signs, and symbols? I humbly deny it. Though a much less Spirit than Omnipotence may be able to confuse my *mind*, and puzzle my intellect,

if three units are given in our first cognition, or conception of knowledge, the mind cannot jump from three to three times three; and is, as it were, compelled to recognise the individual *unity* of the three factors—thing, mind, and word—and to discuss their combinations, and to proceed by the steps of one, two, three, to the *natural* series of numbers, adding unit after unit, in place of adding units or things to themselves.

“The same dubiety or uncertainty which I have illustrated by the two series, 1, 2, 3, &c., and 1, 2, 4, &c., seems to me to result from all attempts to reduce human knowledge or philosophy to an antithesis—in short, to a couple; thoughts and things, *ego* and *non ego*, subject and object, facts and theories, and so forth; from which antithesis, as I conceive, no kind of certainty can result. I say, therefore, with great respect for many of these great philosophers and learned men, that the foundation is insecure and uncertain, and involves all philosophical questions in its own dubiety. It compels them to endeavour to sustain their system by new assumptions, forms of thought, intuitions, necessary conceptions—such as Space, and Time, and Cause, &c.,—which enable any bold sceptic to blow the whole fabric to pieces, by refusing to admit all or some of these assumptions.”—‘Philosophy, or the Science of Truth,’ p. 39.

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if I am willing to submit to the spirit of falsehood ; yet no person can possibly alter my *words* chosen by myself against my will ! However, for the sake of argument, suppose this miracle !

Behold the miracle proposed and supposed by inductive philosophy !

“ Consider this case. There is a world in which, whenever two pairs of things are either placed in proximity or are contemplated together, a fifth thing is immediately *created*, and brought within the contemplation of the mind engaged in putting two and two together. This is surely neither inconceivable, for we can readily conceive the result by thinking of *common puzzle* tricks ; nor can it be said to be beyond the powers of Omnipotence. Yet in such a world, surely two and two would *make* five. That is, the result to the mind of contemplating two two’s would be to count five. This shows that it is not inconceivable that two and two might *make* five ; but, on the other hand, it is perfectly easy to see why in this world we are absolutely certain that two and two *make* four : there is not an instant of our lives in which we are not experiencing the fact,” &c.*

Now there is here a very manifest illogical shuffle between “*create*” and “*make*,”—between “creating a fifth” and “making five” ! In this miraculous world, whenever a man looked at his four fingers and saw two and two, a fifth would be “*immediately created*,” possibly between them ! But how does this fifth so created by miracle prevent his seeing that two and two make four, more than does the now, then, and always existing thumb ? This is not in any way explained. Suppose the fifth created. Surely the having one over does not alter two and two, or tend to confuse it in any way with five, more than the always now existing thumb confuses the four fingers in counting

* Essays by a Barrister. Quoted with approbation by J. S. Mill on Hamilton, p. 69, n.

four, or two two's. The thumb is a standing perpetual miracle, as Sir Charles Bell has shown us. If the miracle was intermittent, and only occurred when we set to work to count by two's, or make out and deduce our multiplication table, I ask, How would this intermittent miracle prevent our counting as we do now? Would the growing of the fifth finger prevent our reaching six or ten, as we now do, and why? Does the intermission alter the human Sense, capacity or power to count five, six, seven units?

If the perpetual miracle of the thumb does not, why should the intermittent miracle, say of a new middle finger, first growing, then disappearing, have that effect? The whole argument is, in fact, an illogical shuffle between "creating a fifth" and "making five," as if the two thoughts were the same, and beyond the power of man's intellect to distinguish!

As it seems to me, such an intermittent miracle would not have even the least tendency to interfere with an intelligent man counting and numbering just as he now does. If man's intellectual powers remained the same, in this miraculous world, as they exist at present, he could and would still require to count, and must continue to construct his numbers, just as we now do by logical and symbolical deduction, or else logic must cease to be logic, and symbols cease to be symbols, and the human Mind cease to be an Intelligence!

But I object to supposititious, as well as superstitious, miracles, which will not bear discussion, and are in themselves absurd.

There are no two things in this world *exactly* alike; and the creation of a fifth different from the previous four, in place of preventing counting, would stimulate

the art, by so readily gratifying man's desires for more and more! Omnipotence has granted man certain powers, and in so doing has limited His own powers. He has granted to man the power to make signs, and to number them; the power to think and to conceive number, space, and time, and to measure them; and the power to create and make a history for himself! God has Himself thereby limited His own powers, by the creation of free spirits or minds, intelligent gods like Himself, but with limited powers and capacities.

He has limited His own powers: and though He might, no doubt, annihilate the whole human race, yet He cannot most certainly annihilate human numbers or human history! Number, space, and time, man's great abstract and true Conceptions, once granted, cannot be annihilated even by God! Omnipotence Himself could not annihilate these human *words*, and thoughts, and signs; for they are portions of the divine Essence of Truth, which He has Himself subjected to human thought! and in respect to such verbal and mental creations, we are ourselves as gods, intellectually!

To suppose this annihilation, therefore, is to suppose a contradiction, and to suppose God the author of a contradiction! This assertion, that God cannot annihilate arithmetic, does not trench on God's greatness, or the powers of Omnipotence, as Schlegel and some pious philosophers have thought; but it asserts the true dignity of the human mind, as being made in the image of its Creator.

Man also is a creator within his proper limits. He is the creator of human words, signs, and symbols, and for all these he is responsible! God might annihilate

man, but that would not annihilate history, or arithmetic, or true science ! *

Numbers then are words, signs, symbols, the most perfect and certain language which man is capable of creating—the beginning and foundation of human certainty.

And thus starting from our original assumption of categories and predicables, we are clearly able to deduce strictly, and demonstrate mathematically, all numbers, and all their numerical relations. Thus we can deduce all arithmetic, by strict logical deduction, from our first assumptions in logic and philosophy.

To suppose a miracle working or creating a contradiction in my own words, signs, and symbols, is to suppose God not only the author of falsehood, but is to suppose man no longer man, no longer master even of his own symbols, of his own thoughts, nor of the signs which he himself has created ! But man's words, signs, and symbols are man's own Creation, and depend upon his *will* for their meaning and signification ; and to suppose a miracle interfering with this, is to suppose God not God, and man no longer man—no longer an intelligent Being ! †

But the fundamental error of the inductive philosophy of the day is this contradiction—viz., that it supposes all abstract ideas dependent on, and derived from, and founded on experience, although no man ever

* “Ye are all gods,” said Christ, and “the words of Scripture cannot be broken.” “God doth know,” said the tempter, tempting our first parents with knowledge, “that ye shall be as gods, *knowing* good and evil,” confirmed by God Himself, when He said—“Behold, the man has become as one of us, to *know* good and evil,” capable of distinguishing some truth and some falsehood—some *knowledge* ; and there is *good* logic as well as *good* morality—*bad* logic and *bad* morality.

† The same answer applies to the other supposed miracle of the same author—an infinite railway preventing a man living thereon from acquiring the idea of parallel right lines never meeting, because he

experienced one single abstract idea in the whole course of his experience ; and these inductive philosophers are themselves inclined or obliged to declare that abstract ideas are nothing whatever—that abstract numbers, for example, are nothing at all !

Abstract Numbers are, in truth, no *material* thing whatever, and are only human mental conceptions and human words. But of course, therefore, to the materialist neither abstract ideas nor the *meanings* of his words have any existence whatever. But yet they are very real to us all, and we all know them to really exist in the mind as thoughts and words to reason with.

But the truth is, that all Arithmetic is built up step by step by Deduction, each step being *deduced* from the preceding ones ; and it is absurd to suppose that we arrive at twice two by induction, but at five times five or nine times nine by deduction ! The simplest step is learning to count one by one ; and the arranging the units in bundles tied together by a name or sign. That is logical deduction. When we have added by units, then we proceed to add by twos, threes, and other bundles, or simple addition. Then we proceed to the complex addition of equal bundles as complex units, which is multiplication, three four's, or four three's, &c. And each step is deduced and demonstrated to eye, ear,

would always see the infinite railway vanish in a point ; as if in such a case a man could never learn the laws of perspective ! Why should a man living on this infinite railway lose his capacity to learn perspective ? Could he not learn that his senses deceive him by walking to the point of junction, and measuring ? If not, then the miracle supposes man no longer man, but deprived of his senses and judgment by the endless rails ! The whole argument illustrates how completely all our knowledge is obtained, not from *experience*, but by *judgment* between experiences, by correcting our first thoughts by subsequent thoughts—by attention, comparison, reflection, &c.

and understanding by the fingers, or by the abacus, or on a slate, Symbolically and Mathematically, arithmetically and logically, by accurate science, to him who learns arithmetic, not as a mechanical art, but as an abstract Science.

This is deduction and demonstration, not induction, which implies tentation of a number of like instances. But in arithmetic we proceed step by step not inductively, but deductively, by the Laws of Logical Identity.

All arithmetic consists of words, signs, symbols, only, put in order and arranged by our internal *sense of number*; and the varying capacities of children for numbering, from the poor idiot who cannot learn to count five, graduated up to the extraordinary phenomena exhibited by calculating boys, who can do in their heads in half a minute sums that would take a good arithmetician a long while with a slate and pencil, afford one of the best proofs we have that men are born with *innate* senses and capacities. Of these, the natural senses of arithmetic or *number*—of music and harmony or *time*—and of geometry or *space*—afford the most obvious examples.

Children are born with, and exhibit from their earliest years, the most varied tastes and capacities or internal *senses* for the clear understanding and comprehension and application of these three things, or thoughts, or necessary forms, or whatever we are to call them, Number, Time, and Space.

I call them distinct *words* for clear *ideas* of mental, physical, and verbal existences or *things*.

Men may dispute and differ about innate *ideas*; but no observant man can doubt the *innate* varying capacities, powers, or senses of children for arithmetic, music, or geometry! Number, time, and space are not only words and things, exterior to man's mind, which he deals

with and measures without him, but he possesses distinct natural innate *senses* or powers for each of them. One child is naturally, from its earliest years, quickest with numbers; another is naturally most capable at music; a third most able at geometry; just as one is short or far sighted, and another is dull or quick of hearing, or another weak or strong in muscular movement. And this occurs under like circumstances, and even in the same family.

One might as well doubt the original capacities of the body as those of the mind.

We might as well doubt the innateness of the senses of hearing and seeing, as the innateness of the senses of number, time, and space!

Upon and by means of these innate senses, powers, or capacities we build up by demonstration and deduction the sciences of arithmetic, music, and geometry. The senses are innate; but the useful and agreeable applications are acquired by experiment and observation, or by imitation. Most men learn more by the last than by any original observations or experiments whatever. But the natural mental capacities of children for perceiving the necessary relations of arithmetical numbers, or of musical tones and harmonies, or of geometrical quantities, vary as much as does the muscular strength of the body in different children.

We have numbers in the mind; we can add, subtract, multiply, divide in the mind. We have thoughts of numbers, but we cannot speak or reason about *general* thoughts; we can only speak or reason about general *words* for our thoughts, symbols for our numbers, signs for our ideas of things.

The words, signs, or symbols which we call Numbers

are the signs of thoughts in the mind, but we can only speak and reason about the words—the symbols. They pass from mind to mind, and are common to both minds. We assume our categories, mind, matter, language, three general terms—three units, three thoughts, three things; and from one, two, three units we can deduce strictly unending numbers. Each number is a sign, symbol, word, signifying many in one—many units in one bundle, tied together by the name or symbol.

Each number is the combination of our two predicates; it is many in one. It is one number, and it is many units—at once one and many! It is many units in one unit. It is a new unit from which we can again start, and add to or multiply it, by like complex units.

Each number is a *state* as a unit, and yet stands in necessary *relations* to all other numbers. It is *one* by itself, it is *many* to others.

Every number is thus a word or name for many like units, each unit being itself a sign or symbol equally applicable to all material, mental, and verbal things. We can number our material sensations, our mental thoughts, our words. But no two sensations are the same, no two thoughts are identical.

There are no two words but differ. No two moments of time are the same, no two points of space are the same! No two things in this universe can begin at the same moment and occupy the same space and time, or be the same number to Him who can *number* and measure *all* things!

Number, then, is a perfect language; it is divine and perfect, for it is eternal and necessary and indestructible; and no two numbers can be confounded together, except, indeed, by human imperfection and incapacity. It is

divine, because it partakes of the eternal, unchangeable, and necessary qualities of the One Infinite, whose infinite perfections infinite number is alone capable of measuring.

The never-ending infinity of numbers is the scientific foundation for all true thoughts of infinity and the infinite. Man multiplies his numbers, and finds himself lost in the infinity of his own creations! No one can doubt, but that God has bestowed upon man the innate sense and capacity to number.

Numbers, therefore, are demonstrated to be verbal things or *language*. We deduce and demonstrate our numbers from our first assumption of categories by the law of identity. Mind, matter, and language are our first units, and numbers are a perfect language, as divine as humanity can create. No two words in this language are alike—no two words can in this language be confounded with each other! Each number is a different and distinct symbol, with a different and distinct meaning—a name or word which every careful arithmetician can always understand.

Each number is *one* word, or name for *many* units; and as all numbers are words, so we shall find that all words are numbers. In the *concrete*, numbers are signs or symbols, visible sensible words; in the *abstract*—*i.e.*, abstracted from the Universe of mind and matter—numbers are abstract words signifying *all the units* in the number, just as every abstract word signifies *all the units* called by that abstract or general name.

Numbers are the beginning and foundation of all scientific truth and certainty, and infinite number is the true foundation of all our ideas of infinity and the infinite, so far as it can be considered and dealt with by the human intellect.

The laws of number, then, are eternal, unchangeable, and necessary. Nor do we trench on Omnipotence in so saying; for we only speak of human signs, symbols, *words* — man's own creations, for which he alone is responsible. The marks, signs, symbols, created by humanity, by man's intellect, by the creative power of the human mind—these are the subjects of number, of arithmetic, and the foundation of all human science.

Number also affords the best proof that language is a *thing* entirely distinct from mind and matter, because numbers and their laws are not only eternal and unchangeable and necessary, or never-ceasing, but number exists wholly independently of time or space. Numbers occupy neither space nor time. Though they are eternal and unchangeable, they have no particular duration, they have no particular extension. They exist, and have always existed, and must always exist for ever and for ever, and everywhere, in every intellect capable of creating the numbers; but they have no limited *duration* such as we call time, nor no limited *extension* such as we call space. Numbers are wholly independent of both.

We number our times and spaces, and time and space can be measured and limited by numbers; but we do not and cannot time or space our numbers. We apply number to space and time, but not space or time to numbers. Numbers are words or language, and quite independent both of the mind's duration and of matter's extension.

If we could conceive God's own creation of the whole universe of mind and matter annihilated; yet surely that would not affect number or the laws of number, which would still exist as potential symbols, as arithmetic, to all minds capable of numbering. Five times five would

still remain twenty-five, and all arithmetic would still remain unaltered! Though numbers, therefore, are only poor human signs, symbols, words—yet they partake of that Divine image in which man was created. They are man's own creations, and their relations are as unchangeable and as never-ceasing as God Himself.

What, then, is time? What is space? Those "necessary forms," as Kant called them, which he assumed as given *a priori* or self-evident, yet not ideas or thinkable, but some inexplicable somethings, required to enable man to think a thought or frame an idea, and without which we could have no ideas? But Kant forgot Number!

But whatever time and space may be, I think number, as I have explained it, also affords the best refutation of Positive materialism, for the materialist cannot possibly make abstract number in any way fall into his system. Numbers, in the abstract, are to the materialist nothing. There is not a particle of matter in all arithmetic; yet a great deal of thought and mind, and a vast quantity of signs, symbols, and words, are employed in the science of abstract numbers. But yet abstract numbers, says the materialist, are nothing! How absurd and self-contradictory to every abstract thinker!

The brain works and works all about nothings, and then the nothings prove *useful*—very useful indeed; and then, the Positive materialistic Utilitarian tells us that numbers are nothings!—useful, but nothing!

In short, words with *meanings* have no place in the philosophy of the Positive materialist, and numbers are words with meanings. A materialist cannot have any *meanings* to his words, and be consistent.

Numbers, however, are equally applicable to all material, and all mental, and all verbal things; but *in them-*

selves, when we speak of them, they are verbal things—words, signs, symbols! We make, in thought, our units alike. We arrange them into bundles and name them. We choose our basis two, five, ten, &c., and every single step is strictly deduced and demonstrated to eye, ear, and understanding, from the preceding ones; and we must either admit each step, or be guilty of self-contradiction or verbal falsehood in words, signs, or symbols, first granted and then denied.

Numbers, therefore, are a perfect language, and I say that all languages are framed after the fashion of numbers. Number is the first and simplest deducible scientific cognition! It is given by every sense, for we can count touches, sights, sounds, tastes, and smells; and is therefore the fit measure of all other things, and it is the beginning and foundation of all human certainty. But number itself is not visible, tangible, or sensible; number is not material; we have a mental sense or capacity to number—*i. e.*, to arrange, methodise, and order our verbal signs or symbols; and when so arranged we call them numbers—numbers of words or symbols. But numbers are in no respect material.

Number, therefore, properly falls into our category of *language*. Numbers are the simplest of all verbal things—abstract language, signs, symbols. And all human science must be founded upon number; which itself, as we have shown, is strictly deducible from our first assumption of three words, thoughts, and things—*mind*, *matter*, and *language*—and Number is the most abstract conception of Language.

CHAPTER VII.

T I M E.

As Number is the most abstract conception or mental form of Language, so Time is the most abstract *perception* and internal *sensation* or form of the mind itself. Language, in the most abstract sense of general signs and symbols, is number. Mind, in its most abstract sense of continuous mental existence or duration, without thought, is time. If we abstract all express ideas or thoughts out of our words, leaving our words existing applicable indifferently to all things and to everything, they become *units*, or numbers of units. So if we abstract all powers and capacities and thoughts and ideas out of mind, leaving the mind still existing, and capable of possible activity in future, its mental existence is then duration or time.

Just as numbers are verbal things—purely verbal things—or like-units combined together; so times are mental things—purely mental things—or like-*seconds*,—like second thoughts, united. Numbers are units; times are seconds—successive units, not twos, like numbers or units coexisting; but twos like seconds or units of thought, succeeding each other in the mind, and noted or numbered by the mind in Time.

Every like word is a coexisting *unit*; but every like

thought is a consecutive *second*. It is a unit like the first thought ; but it has succeeded it *in time*, and is, therefore, a second of Time in the Mind.

As numbers are verbal things or words ; so times are mental things, or perceptions existing nowhere but in a mind. Time is the duration of the human mind, and we measure that duration by seconds numbered. Any second thought, remembering the first one, is a second of time—a night, a day, a moon, a sun, in a certain position repeated, is time. Time is thought and memory combined—*i. e.*, mental continuance. Time is the mental sense of a second thought conjoined to the memory of its likeness to the first thought. When this occurs, then a second of time has struck ; a like consecutive thought, remembering the first, produces a second of Time.

“ As numbers are bundles of *ones*, so times are bundles of *seconds*—one, two ; one, two ; or the tick tack, tick tack, of the pendulum. We *number* the thoughts which like things cause in the mind, and so feel time. The recurrence and numbering of like days, like nights, like moons, like suns—the recurrence and numbering of like solar appearances—the recurrence and numbering of like thoughts of any kind—that combination of thoughts produces in the mind, and is our sensation of Time.

“ However the thoughts are produced in the mind, if they are alike, we remember the former one ; and with the second, the thought of time, or the succession of thoughts, arises or is produced in the mind. In short, as we obtained and deduced by *logical* identity our numbers from language or symbols, so we obtain and deduce by *mental* identity our times from successive minds, or successive mental Thoughts.

“The recurrence or numbering (for recurrence involves number), of like mental states—the repetition or numbering of like mental phenomena of any kind—in short, the *enumeration of* like minds, thoughts, ideas, perceptions, or mental states of any kind—produces, and is, the sensation of *time* passing and past in every man’s mind.

“Here we cannot appeal to our external senses, or to our logic, for the likeness of the units of time; for the unit of time is, like Inference in Logic, a purely mental existence—viz., the mental succession of like thoughts. But we appeal to each man’s internal sense of time whether it is not a positive undeniable fact, that *like thoughts*, like mental phenomena of any kind, remembered so as to be numbered first and second, does not produce in the mind the feeling and sensation of time past between them. Therefore we say that we *deduce* time from like minds, like thoughts, and make sure of, or measure our time by means of our first deduction—viz., numbers.” We number our like thoughts, and so measure our times!

“But time itself is this recurrence and numbering of like thoughts; and for this mental fact we must, and can only, appeal to the general human sense of Time. If not this, what is time in the mind? Think! Have you any sense of time when the mind is thoroughly busy and occupied? No! Time has passed, as every one acknowledges, unseen and unfelt. But if we *repeat* an idea, if we look up and see the old familiar scene around us, a stroke of time has struck, and we ask the time, or look at our watch! Whenever *the same*—that is, a second *like* state of mind—occurs, or is forced on our attention, that is time, or realises or produces our sensation of time—our perception of time in the mind.

“To my mind, Time seems the negative of perfect mind; or the imperfection of mind. It is the obstruction to continuous and persistent thought by the familiar sound or sight, or other *material interference*, with pure thought which, as it were, compels the mind, enclosed in a body, and acting through that body, to take in once more the old familiar state of mind or thought, and so to feel a second of time—a negation of its own perfection—which would be an eternal present time.

“However, it has forced itself clearly on my mind, and I trust will force itself also clearly on the mind of the reader, that we have a very distinct and marked *idea* of Time, arising in an imperfect mind surrounded by matter. And that the true view of Time is, as human duration, the negative of perfect mind; and that times are simply the enumerated or *numbered states* of mind, produced by like phenomena causing a repetition and enumeration of old familiar thoughts in the human mind.

“There are two acknowledged facts that strongly support this conclusion: 1st, How shortly and imperceptibly time passes to the mentally active. Days, weeks, years, life itself, flies by to him who is always employed. But, 2d, How long time is to the man of one idea. The *same* thought constantly recurring, and forcing the mind to repeat itself, and remember the one thing, and so to number continually like thoughts—for example, grief, sickness, fear, remorse; an eternity of remorse, times wasted or misemployed, followed by times constantly remembered; and if no change were possible, the same eternal past, the endless, hopeless future, ever pressing the human imagination, can alone be felt—then, with the mind fixed on one idea, ever the same, and ever recurring,

and ever remembered, that hopeless duration of a single idea arises in the mind, under which the human mind itself perishes in monomania, with its one ever-recurring idea perpetually fixed in the memory, destroying the human mind for a time. Such is Time!—the numbering of one idea continually repeated for ever.

“Just as our general idea of Number is as a bundle of like units, so our general idea of Time is as a bundle of like seconds. Numbers are bundles of like *words* or states of Language, and Times are bundles of like *minds* or states of Mind. Units enumerated are numbers; thoughts enumerated are times. Numbers are repeated symbols; times are recurring *thoughts*.”

We have therefore deduced and established a very clear idea of *number* as the most abstract language. When all meaning but verbal existence or symbolic application is taken away, language is number; and so we insist that we have also deduced and established a very clear idea of *time* as abstract mind, when all thought but one possible thought or possible mental existence repeated has been taken away—that is duration or time. Take away or abstract all meaning out of the *symbols*, and we can number them as *units*! Take away or abstract all *thoughts* out of the mind but its own perception of its own recurring existence in a thought; and that is duration or *time*!

As numbers are enumerated symbols, so times are enumerated thoughts. *Number* is the first great human abstract, and *time* is the second. Accurate time is the product of thought and number!

All abstract words, as we shall hereafter see, are products. Infinite number is the product of unity into infinity or unendingness, and infinite time is the product

of infinite number into some thought or perception which is the chosen *unit* of time. The tick of a sidereal clock, a sidereal second, a sidereal day, or the passage of a fixed star across the meridian, or of the sun across a fixed star, &c., registered and numbered, are our measures of Time.

Number is *language*, time is *mind!*—each abstracted to the utmost; and so, if we abstract *matter* to the utmost, we have Space!

CHAPTER VIII.

S P A C E.

SPACE is matter mentally abstracted as far as possibility will admit—*i. e.*, absolutely and altogether. Matter is the concrete ; space is the abstract. What do we mean by space but the possibility of the existence of matter ?

It is surely absurd to say that we have no *idea* of space. We all have a very clear idea of space—strictly of the space ; a visible image of space ; as, for example, the space between two separated bodies. Put three cubes touching ! and then, that is *in time*, take the middle one away ! Is not the space it occupied a clear unit of space ? Or, take any hollow globe : is not its interior an image or idea of space which we might enlarge infinitely ?

Of course we all now know that the space we see between the cubes, or in the globe, is not empty space. We know that it is full of air or full of light, though in our infancy we were ignorant even of that. But why cannot we abstract and mentally take away all the air and all the light, just as we physically took away the solid cube, or the fluid contents of the globe when filled with water ?

We do so ! Every man in existence who can speak or reason on the subject has done and does this, and

fully understands and has an idea of space, clear and distinct, and speaks of emptiness or space! the empty space between bodies!—matter being abstracted.

Is not this a mental image, strictly an idea, a thought as clear and positive as almost any idea a man can form, though the idea is invented from matter? But then it is surely false and absurd to say with Kant that we have no ideas of space or of time!

It is true that we cannot think matter without extension, and we say that extension is an attribute of matter; but this is not because we think space first, or because space is given to us *a priori*, or before the thought of matter; but because our idea of space is subsequent to, and is derived or deduced from, our idea of matter, by the process we call abstraction; or by the mental power of imagination or *invention*—by deduction.

It is reversing the natural order in which ideas are formed, or come into the mind, to think or assume space first, and matter afterwards. On the contrary, we first invent matter to explain our sensations, or the effect of external matter, and then invent space to explain matter absent in *time*, and capable of returning to fill the space it formerly occupied.

It is unscientific—that is, inaccurate, and dangerous to truth—to assume either, more than is absolutely needful to explain the phenomena, or anything whatever which one can trace higher, or show to be deduced from something more obvious or more certain. We must begin with what is most certain and obvious, not with what is less obvious. And certainly, when Kant assumed that space and time were not *ideas*, properly speaking, but something inexplicable, “necessary forms,” “given to us *a priori*,” something “not thoughts or ideas themselves,”

but yet necessary to enable us to think at all, or form ideas at all; that is, not satisfactory or reasonable to my mind, and I deny it! And for a proof, by example, I give the instance of number, which we think of and understand abstracted from either time or space. The abstract idea of three, or ten, or twenty, or a million, involves neither space nor time. It is independent of both; it occupies no space, and endures no time in particular. It is eternal and necessary and unchangeable in every intellect which can count or think the number. It is absurd to ask, where does three or five or fifty exist, or what time does it endure? Each number exists everywhere, and endures, and has endured, and will endure, from all eternity and to all eternity. To be sure, the number is only a mere human word, sign, symbol—a thought, an idea or imagination; an existence, a being, or a thing—a mental thing as well as a verbal thing—but we all understand it; we all know what three, five, and fifty are; we all can use and apply each of them. But three occupies no space, and yet is everywhere, and endures no time, and yet must endure to all eternity, a never-ceasing and unchangeable combination of mental units. Numbers are words, thoughts, and things wholly indestructible. The annihilation of man himself would not annihilate the number three, or any number.

Instead, therefore, of thinking that we have no *ideas* of number, time, or space, I assert that they are the very *clearest* ideas that man can frame. We all have them, and know more or less how to apply them, in order to measure and make sure of external things, or some of the phenomena of external nature.

Day by day, and age by age, man improves his methods and contrivances for using these great abstract

things or ideas, numbering phenomena, and measuring their duration and extension ; and I assert that the whole object of material or physical science is, in fact, the proper application of number, time, and space to external things.

Men receive their ideas of these great abstract things so early that they forget how they acquired them. From our earliest years we have learned how, in some degree, more or less, to count numbers, to compare duration or time, and to measure material quantities or spaces. We have *internal* senses or capacities for number, time, and space, just as we have external senses of hearing, seeing, and smelling. Our sense of numbering is just as certain as our sense of seeing, and our sense of time is just as certain as our sense of hearing. We not only hear the undulations of air, but in our minds we mark and number their concords and their discords, their coincidences, which we feel and like ; or interferences, which we dislike, or their fulness or sharpness, or their pauses, which we approve. Every child can do so more or less, and shouts and marches in unison with the beat of a drum or the sound of a trumpet. We have therefore by nature, *internal* senses of number, of time, and of space, just as we have our ordinary senses of seeing, smelling, and hearing external things.

We learn to number one, two, three, and then we apply our numbers to duration and extension ; to number our days and our hours ; to measure our sizes, our weights, our quantities, which are mere modifications or states and relations of space and time.

Whatever doubt the reader may have had, or still retains, about my deduction of time from mind and number—from numbers of like thoughts or perceptions—no man, I think, can really doubt the true origin of man's

idea of *space*; that it is derived and deducible from number and time and matter; that space is the negative of matter, the possibility, in time, of one or more *bodies* existing to fill the space! Space is matter thought of, and then wholly abstracted!

The first and most obvious existence is matter, that hard and resisting something against which we knock our heads in infancy; and to the child at first the atmosphere is space, in which there appears no matter to interfere with its actions.

As we live and learn, the strength of the wind, and the hardness of his football, teaches the child that his space is full of matter. We become philosophers, and read of Torricelli, and make a *vacuum* without air, but still full of light; and we study Newton, Laplace, Fresnel, and Fraunhofer, and find our space unending, and practically infinite, but still *full* of the waves and undulations of light—imponderable matter which exists even in the gloom of the deepest mine, ready to shine around us if we only seek it properly, and the noblest material image of the Deity—that imponderable light pervading infinite space, so that even the Christian can say, “God is light,” and “Our God is a consuming fire”—the possible light and fire of Mind.

But our discovery that the atmosphere, and that the spaces between the stars, are all full of the matter of Light, does not in any way weaken or alter our first or infantile idea of space, when we thought Space for our ball or our playthings, empty of matter.

Space is the negative of matter; as we first originally met it, or imagined it in the infancy of science or in our own infancy; so it still remains. The idea of emptiness is just as clear to the child as to the philosopher.

The idea of space still involves the three ideas of matter, and number, and time—matter abstracted in time, and capable of refilling the space. We still put three cubes touching, and then *in time* take away the middle one, and say there before our eyes is our visible idea or image of space, our unit of space, the *extension* which the middle cube formerly occupied and may occupy again—that is a unit of space, matter being abstracted.

We first think matter or body; but our unit of space is mentally deduced and derived from it by number and time, and mentally abstracting the matter!

Space is to matter what time is to mind, and what number is to language; *i. e.*, they are the most abstract conceptions possible of each.

The materialist, of course, may declare all of them three great infinite *nothings!* Space is nothing; and time is nothing; and number is nothing—nothing MATERIAL! But who believes them to be nothing?

We live, and move, and have our being in these three things. Our bodies live, and move, and have their being in space; our minds or spirits live, and move, or continue, and have their being in time; and our very souls or intelligences live, and move, and have their being in Language and in Number, which is the foundation of all human certainty, the origin of all human science, for we can number everything that our spirit or Intellect can really know.

If human existence and human science are nothings, then time, space, and number are nothings. But they are all three as real as ourselves—as our minds, as our intellects, as our own actual existence.

Time is abstract mind; space abstract matter; num-

ber abstract language. But number is the simplest of the three; it is involved in the other two, and aids us to measure them. We cannot think time without numbers of seconds of time; nor space without numbers of parts or units of space!

Number is as one continuous Line; divide it in two by the point of present *time*, and we have an eternity of time *a parte ante*, and an eternity of time *a parte post*. The line when moving forms a surface; the surface, revolving, forms our *space*—a conception as solid, though ideal and mental, as the material universe of light, which, immense though it be, is but a point of that great infinite space which might or may become the blackness of darkness for ever and ever; in which all sense is extinguished, and the possibility of light alone remains—that infinite Space, which yet exists to the mind, infinitely extending beyond the whole visible universe, where falsehood and fraud may be banished for ever!

The idea of space is, I insist, therefore, as clear as the idea of matter. It is the negative or abstract of matter; but to the mind is as clear and positive as the universe of matter itself.

The idea of time is also as clear as mind. It is the negative of perfect mind, the memory of two thoughts past; of seconds and the relation existing between them as succeeding each other. Time is as clear and positive as mind itself, but is not mind itself—but the abstract Existence or Duration of Mind.

And number is that negative or indifferent symbolic language, which is equally applicable to all bodies, and to all thoughts, and to all words, considered as many and as one—number is abstract Language.

Thus we have assumed the earliest and most obvious conceptions, mind, matter, and language, known to all men from their own bodies, spirits, and words; and from these three we deduce and demonstrate, by unanswerable reasoning, those great infinite things, thoughts, and words—infinite number—infinite time—infinite space! But what is infinity? and have we no positive or clear idea of infinity or unendingness? *Infinity* must be scientifically learnt from Number alone! We must always endeavour to proceed from what is simple, and obvious, and self-evident to all men; and must require them to grant only what cannot reasonably be denied; and thence we must deduce truth and certainty on those subjects which to them formerly may have seemed all full of doubt and confusion. Logical Deduction is the only source of scientific Truth; and every falsehood the world has ever for a time adopted, on scientific subjects, has been the result of hasty and presumptuous Induction.

CHAPTER IX.

THE INFINITE AND THE ABSOLUTE.

ASSUMING that ideas are purely mental things, and admitting and assuming the existence of mind distinct from matter; then our ideas of matter, being strictly the developed meaning of the *word* Matter in the mind—our ideas of *matter* are not matter, but mental things about matter.

Matter is not and cannot be the same as our idea of matter, for the one is, by our first assumption, out of and distinct from our mind, and ideas are mental things *in the mind*, and not distinct from it, except as a particular body or bodies, which are parts of matter, may be supposed to be distinct from matter in general: so ideas are not mind, but are in the mind—they are, properly speaking, not *parts* of mind, but creations of the mind, by its powers of conception and judgment.

Mind is one and indivisible, and does not admit of parts except metaphorically. But ideas are the result of some active emotion or affection of an intellectual mind, which action is to mind as motion is to matter, or as multiplication is to number; and ideas are states or relations of mind itself, and in no respect matter or material things. Ideas, then, are to the mind what phenomena, or the sensible actions and passions of matter, are to matter. Ideas are the actions and passions of

mind in activity—thinking and emotion expressible in words.

The phenomena of mind may be called *noumena*; but the phenomena of mind are not properly *phenomena*—appearances common to many or to mankind—but are private mental appearances; not motions, but emotions, peculiar to the individual or to each mind which is capable of creating and perceiving or feeling them. Ideas are mental to the individual, but must be *verbal* to more than one man, or to mankind—all ideas are WORDS in the Mind.

Of course the materialist is here out of the question. He is contradicted, and ought to feel himself refuted, by the *meanings* of his own words; for his own words are vibrations or motions of matter. But what matter can there be in the *meaning* of a motion, an undulation, a vibration, a word? The *motion* itself is not material, or a part of matter. Motion is not matter, but a state of matter. Then what possible matter can there be in the *meaning* of the motion, the intellectual understanding or comprehension of that vibration or motion, which motion or vibration itself is not matter? Motion is a state or relation of matter—an internal state or an external relation of matter. But if motion itself be not matter, how can the idea or meaning of the motion be matter? If our words be as they are, mere motions, vibrations, or undulations—motions of matter, their *meanings* cannot possibly be material things or matter; and the materialist is always refuted by the very *meanings* of his own words. The materialist must always be in the most helpless state of logical self-contradiction!

But *ideas*, as we assumed, are purely mental things in the mind; and we have deduced and demonstrated our

ideas embodied in the words number, time, and space—ideas clearly deducible, as we insist, from our very ordinary and assumed words and ideas, mind, matter, and language—all of which are typified and symbolised to us in ourselves.

The result is, that number has been demonstrated to be an idea of language, time an idea of mind, and space an idea of matter—three great abstract ideas—things, words.

We assert that no one who can speak and reason correctly and accurately can possibly doubt these conclusions, if they grant our first assumptions. The common sense of mankind must admit and recognise these three, things, thoughts, and words—mind, matter, language! The common reason of mankind must admit, also, that from these three we can deduce and fully demonstrate unanswerably to the intellect that number is an idea of language, time an idea of mind, and space an idea of matter; when matter has fled away, or been abstracted in *idea*, space remains. The mind has extinguished matter. But what is infinity, that hopelessness of an end—that endlessness which we all attribute to number, time, and space? Infinite number! infinite time! infinite space! But ALL are infinite—the infinite MANY may be all included in the absolute ONE.

True and accurate science must ever be formed by the assumption of the least possible number of original and undeniable conceptions or words for the beginning and foundation of our reasoning, and thence by deducing as strictly as possible—*i. e.*, by demonstrating to our senses, and understanding the more complicated conceptions—we must thus arrive at those remoter thoughts which are, and are consistent with, Fact and Truth!

Step by step, with laborious accuracy from generation to generation, has science been built up, and its halls have been illuminated with the torch of truth, handed down from school to school, and from nation to nation. The sceptic, the Pyrrhonist, professes to doubt everything; but, by the laws of reason, he must hold his tongue, or contradict himself verbally in each assertion of his universal doubt; for those who assert the non-existence of truth or knowledge contradict themselves, for they assert their certainty that no certainty can exist, their knowledge that no knowledge exists—a manifest contradiction; they assert as the truth that no truth exists, which is in itself, verbally and logically as well as mentally, absurd and self-contradictory.

We might, therefore, according to the law of Parsimony, have assumed at first only one existence about which we can dispute, or about which we can have any question, and have called that existence, Knowledge or truth. But in that case our view would have been limited to human knowledge and human truth! That first assumption of knowledge or truth would have given us a thing or *object* to be known, a mind or *subject* to know it, and a word or *traject* passing from human mind to human mind to embody and express the knowledge or the truth. General human knowledge cannot possibly exist without these *three*. But object, subject, and *traject*, or things, thoughts, and words, though a popular division, is a bad division of human knowledge, and is a worse division of the Universe.

The object can become a subject, and the subject may be a word. The thing in question may be a thought, and the thought in question may be only a word; and thus the laws of logical division are violated, for the

parts embrace and overlap each other! The sound logical division, therefore, is Mind, Matter, and Language, which embrace the universe, and are all clear and distinct from each other.

But every man contains in himself a mind or spirit, and also in himself a body or matter; and also in himself his words or language! Each is distinct from the others, and the whole microcosm of man, when generalised into mind, matter, and language, embraces the whole universe of existence, and comprises all knowable, all disputable, all existing things. From mind, matter, and language we deduced and demonstrated certain ideas of number, time, and space, as the carefully-framed abstracts of language, mind, and matter respectively, and the true, and accurate, and only scientific origin of all our ideas of Infinity is, I assert, the infinity of Numbers!

Some men have never learned *number* except as an art, and not as a science; as the useful art of the grocer instead of the foundation science of all sciences—the fundamental truth deduced with logical certainty at every step, and the very foundation of all human science. Every human science depends for its certainty on Number. Even space and time must be measured by number, but Number can be only measured by itself, and by accurate deduction and reason—by self-evidence.

Number affords to man the clearest and most accurate and scientific idea of infinity—the infinite and the absolute—the MANY and the ONE. There is no number, however great, but what we can add to it and multiply it. Numbers are endless. The Infinity of number is self-evident to any one who can count. We all know that numbers are endless and infinite, and the infinity of time is clearly nothing but a unit of time added to,

or multiplied by numbers without end—*i. e.*, endless days, or years, or ages, or times—our units of times! Time is made infinite by number. But so, I say, is space! The infinity of Space is merely a unit of space added to and multiplied without end—a great growing globe, its radius doubling, tripling, expanding infinitely on all sides—a unit of space, multiplied or added to, till it extends infinitely beyond the limits of the whole material universe of life and light, and of heat and motion, into the “blackness of darkness for ever”! That is infinite space — endless finite spaces added to and multiplied by number!

But to any one who thinks clearly, and understands arithmetic, the infinity of numbers is far more extraordinary and incomprehensible than the infinity of Time or of Space. Man loses his conceptions in the thoughts of infinite duration and infinite space—great endless units of time and space, beyond which we can conceive nothing greater than themselves proceeding for ever and ever into infinite Space and infinite Time. But infinite Space and infinite Time are positive and fixed infinities, beyond which, or greater, or longer, or larger than which, no conception can be formed of space or time, which is not already included in the *words* infinite space and infinite time. And the notion that these infinities are not positive, is absurd and self-contradictory; for they are here and now.

But we cannot take infinite Number as a great unit like infinite space, and set it down in a word, sign, or *symbol* as endless or infinite, without being able to imagine and prove scientifically an Infinity infinitely greater than itself—an Infinity of infinities, exceeding each other by infinity; for, however fast and by whatever system

we suppose our numbers to grow and develop themselves, we can always suppose some system of Number producing an infinite number infinitely greater than the infinite number produced by the first system, and also produced in less time, with less trouble to our imagination. In number our symbols are ever growing, and must grow, with scientific certainty, from one infinite to an infinitely greater infinite.

Newton demonstrated that there is no kind of absurdity in supposing one Infinite infinitely greater or infinitely less than another Infinite. But numbers afford the simplest proof of the same fact, for however, and on whatever basis, we construct our numbers, we can always suppose them endless, and to go on to infinity, and can always exhibit an Infinity infinitely greater than any former Infinity—the Power, as it is termed, of the former One.

For example, our ordinary numbers—1, 2, 3, &c., to infinity—however continued, can always be taken as the mere roots of another series—1, 4, 9, &c., to infinity; in which the second Infinite is the product or power of the first infinite, and thus infinitely greater than the first Infinite. And so we can go on and on, piling series on series, and Infinity upon Infinity; and we may and can have a series of Infinites in which each step of the series is infinitely greater than the last step; and yet, by the laws of numbers, the first step is infinite! and every step beyond is infinitely greater or less than the previous one!

Space also affords us, however, the same conception of one infinity being greater or less than another infinity; for any solid angle with its sides infinitely produced contains an infinite space; but this is by dividing Infinite

space into lesser infinite spaces, which are all contained in the one great Infinite Space; but no one number can be made or supposed to contain all numbers, as one infinite space is made to contain all infinite spaces.

Thus Number, which is only human language, affords to the thoughtful mind, the best example both of the greatness and humility of man. It tells him that, humble as he may be, yet his thoughts and symbols are infinite; and yet that he may be, and must be, infinitely less than God his Creator! It tells him that he may or must endure for ever, and yet that his infinite duration may be infinitely less than the duration of God! It tells him that the infinite space—the sphere of that light to which he has been introduced, and which he is himself capable of contemplating—is doubtless infinitely less than the great infinity which is the Habitation of the One Infinite Author of all things, who in Himself is wholly incomprehensible! the Infinite of all infinities, the only Absolute ONE.

Man contemplates infinite time and infinite space, and thinks of their growing immensities, and then he is exhausted, and exclaims, Can anything be greater than infinite space continuing for infinite time? But Number reminds him both of his greatness and of his inferiority; and teaches him of the possibility of infinites which are infinitely greater than any infinity which he can conceive possible! an eternal time which is always Present Time; an infinite space which in every part is always comprehensible to its Inhabitant; yet that these may be nothing, in comparison with those infinite intellectual and moral perfections of the Deity, which are wholly beyond our conceptions.

If a man feels himself lost in the infinity of time or

space, he turns to the words, signs, and language, and to the numbers which he himself has constructed, and they tell him by demonstration—mathematical, arithmetical demonstration before his eyes—that there is the infinitely little as well as the infinitely great ; they tell him of a series of infinites, each infinitely greater than the former one, and of another series in which each is infinitely less than the preceding one ; and that though man's words may be infinitely little, yet that the *word* of God may be infinitely great—ONE to whom “all power may be given in heaven and in earth,” the beginning and the end, the Alpha and the Omega ! whom to know is life eternal, light, and life ; and whom not to know is the blackness of darkness, even of intellectual and spiritual darkness, for ever and for ever !

Man thus finds himself at once both elevated and lost in the infinity of his own numbers, which are his own verbal creations ! and if he is wise, he humbly seeks his Creator as a little child seeks its parent, to guide and protect even his intellectual progress in its search after truth, in the full confidence that what He, as a Parent, has promised, He also is able to perform ! “The spirit of truth shall guide you into all truth,” said a Jewish peasant, who yet also said, “I am the way, the truth, the life,” “Learn of me, for I am meek and lowly of heart ;” who, claiming to be the greatest, yet became Himself the least, the despised, the rejected of men ; for in man “God's strength is made perfect in weakness ;” and God's object is to teach us to overcome hatred by love, evil by good, and all visible material Forces by invisible mental Powers.

But the Infinite Absolute One is not nought and is not everything ; for He has created minds or spirits like

Himself, and He resists the proud and gives grace to the humble, and withdraws Himself from those minds who render themselves unfit habitations for His Holy Spirit. He is not far from any of us, for "in Him we live, and move, and have our being." Even before one single ray or spark from His divine Spirit has yet illumined the intellectual and spiritual darkness of our interior, He is round about us, and beholdeth all our thoughts and ways. Nature and revelation both declare unto us that the fear of the Lord is the beginning of wisdom; and that man can only reach truth, even intellectual truth, by dimly and humbly feeling for the divine Spirit within! ever ready to reveal itself to him who humbly asks for it.

There is to man a spirit of truth and a spirit of error; we are free to choose either the one or the other. But scientifically, number is to all cognition and all human science what God is to the universe—the beginning and the end—the Alpha and Omega—the primal source of scientific truth, and the end and object to which all science and all cognition must ultimately seek to reduce itself. We do not know anything accurately till number intervenes and forms a part or share of the cognition. And this is true, in my opinion, even of all our knowledge of the infinite and absolute Creator of the universe Himself, as He can be truly known to man! For no theology can be true which does not begin and end with that doctrine of Unity in Trinity, and Trinity in Unity, which worldly science may treat with scorn, but which lies at the very foundation of every true conception of God, as the infinite and the absolute ONE.

But the Infinite and the Absolute, even of all Space

and Time and Number, afford a most insufficient and inadequate conception of the Deity, even as man is able to think of Him; because they embrace only the intellectual and not the moral attributes of God. But what possible verbal, or intellectual expressions can be invented for His justice, His mercy, His long-suffering, His LOVE?

But we are here only concerned with the intellectual conception of the Infinite and Absolute; and are not in any wise discussing the Moral. But the intellectual conception of all Infinity is strictly confined to Time and Space and Number. It is only metaphorically that we can speak of infinite justice, or infinite mercy, or infinite love. All justice is in itself, and by its very nature, infinite and perfect, or it is not Justice—but partial justice; all mercy is in itself, and by its nature, infinite and perfect, or it is not Mercy—but pretended mercy; and all love is in itself, and by its nature, infinite and perfect, or it is not Love—but affected love. It is only to avoid such partial and pretended and affected *human* conceptions, that we speak of infinite justice, and infinite mercy, and infinite love. But who can reconcile infinite justice with infinite mercy? The true solution is not Calvinism but is to be found in that third conception, INFINITE LOVE, which is God Himself working with infinite Numbers, for an infinite Time, through infinite Space. But to the pious and humble Christian this becomes no longer symbolism, but reality! God is the only Absolute; and our Relations to Him are not obligations on His part, but only on ours. But God has created the human Mind, within its own limits, absolutely Free. Justice requires Liberty, but only liberty of Thought—of Mind; not liberty of matter or body.

CHAPTER X.

THE ORIGIN OF OUR IDEAS.

IDEAS we have assumed to be purely *mental* things—things in the mind, internal things, the *meanings* of our words, obvious internally to all who speak and think and reason ; with which ideas we furnish our minds as we pass through life, but of which, in our infancy, so far as each of us can remember his own history, we had and possessed nothing whatever.

Let it be granted, as I do frankly and fully grant, that our minds came into this world wholly unfurnished with ideas or mental images of any kind : whence have we obtained this “furniture of our minds” ? What is the origin of our ideas ? The original *state* of our minds being nought, whence has come their present *state*, full of thoughts and ideas ?

The philosophy of the day, very positive, at least in illogical dogmatism, since the time of Locke, replies at once, “From experience !” All men’s ideas are derived from, and founded on, experience ! “Solve first the question ; Have men any ideas independent of experience ? and then begin to speculate.”—“Philosophy has proved its incapacity by centuries of failure.” Let us then stick to the *positive*, to our steam-engines and telegraphs ! and give up all discussion of so-called philosophical ideas not derived from *experience*—*i. e.*, sensible positive experience.

My solution of the question is at least as clear and as positive as theirs, for I assert that *none of our ideas are derived from, or founded on, experience*, and that all our ideas are just as independent of experience as we choose on reflection to make them. Man never yet experienced an idea, and he never will! It seems to me mere confusion of thought and language to say that he has done or can do so. It confuses mind and matter.

The whole difficulty here is, that as the origin of our ideas is lost in the mists of infancy, we are all more or less well furnished with ideas before we can begin to discuss their origin, or to think of the mind's original state of emptiness at its birth, before it is furnished with any ideas.

Let it be at once also admitted that the senses are the only avenues to the mind, and that if we could take an infant at birth and put out its eyes and destroy its hearing, taste, and smell, and carefully divide the nerves of touch, so as to paralyse its limbs, its organic life might possibly still continue for a time—but it must and would remain a hopeless idiot, without any of the things which we call *ideas* in its mind. Its education could not commence, and its mind must remain as when it was born, in a state, which, for the sake of argument, I admit to be a state, so far as we know, wholly unfurnished with ideas—such as we all conceive them to be when we speak of ideas as mental things, thoughts—the *meanings* of our words, the furniture of our minds.

But all general Experience is bodily. There is no such thing as common *mental* experience; there is no possibility of two *minds* joining hands, and feeling the same electric shock, or the same earthquake; or of two minds looking through the same telescope, or with the same

pair of eyes, or hearing with the same pair of ears. Our minds cannot, in any manner that we know of, jointly experience the same comparison, conception, or judgment, even though we express the result in the same *words*; yet it is not the truth that we can jointly experience any one mental phenomenon—thought, emotion, or idea.

We may, indeed, sympathise at the same time at the same words; but the *pathy* is *sym*-pathy, not *ideo*-pathy, if we may say so. The utmost any one can allege is, that we can join our bodies together, and jointly experience the same bodily shock. But does the shock of our bodies, and not the judgment of our minds, produce an idea in each mind? can any one, admitting the existence of mind, pretend that either knows the other's idea?

Now, do our ideas *originate* in the shock—the bodily experience, or in the judgment—the mental act? That is the only question. Does the idea depend on the shock, or is it independent of the shock; and is it, or not, a purely mental creation of the judgment *originating* in the mind, and dependent on the mind's *powers* to understand the shock, and wholly independent of the shock, which we may perhaps never experience ourselves in any way?

If the senses be the avenues to the mind, before men discuss the origin of our ideas they ought to strive and acquire some clear conceptions of the roads or avenues by which it is said our minds have acquired all their ideas. The peasant knows as well as the philosopher the distinction between the part of his body which has neither sense nor feeling, and that part which has both. He knows that his hair and nails, for example, have no feeling, and that if a finger or limb were cut off, still,

that his mind and intelligence would not be in any wise affected.

But at first the ignorant man might well suppose that the greater part of his body is conscious! However, physiology quickly demonstrates before our eyes and microscopes, that a very few ounces of our bodies include all that is directly connected with the conscious phenomena of our internal mind. The cranio-nervous system, or network of nerves, all running into the brain from the surface of the body, with the optic and aural and other cranio-nerves, forming, together with the brain itself, some fifty to eighty ounces of matter, is the only part of the body connected with the mind, and all the rest is as unconscious as the hair or the nails! But it is also certain that the matter of the nerves and brain themselves is itself wholly unconscious.

If a nerve is cut through, the part of the nerve cut off from the brain becomes unconscious, and is wholly removed both from sensation and from will. The lower part or limb supplied by that nerve has, after it is cut through, no feeling or sensation whatever, and is no longer obedient to the will of the patient, and the nerves within that part are equally senseless. It is wholly paralysed both for sensation and perception, and for will and action, muscles and nerves, and all.

But the mass of the brain itself is also wholly unconscious, and may be cut without the patient feeling or knowing what has been done. In fact, in some accidents, nearly one half of the brain has been cut off and taken away without the patient having lost all will or all consciousness, and without his knowing what operation had been performed on his brain itself; which,

nevertheless, is the very centre and seat of what we call human consciousness and human intelligence, the very organ or instrument of the human mind.

Thus mind itself retires before us, if not to the pineal gland, as Aristotle supposed, yet to the deepest recesses of the interior of the brain ; and we are driven by the obvious facts of physiology, demonstrated before our eyes and microscopes, to admit and to conclude, that whatever the human mind or soul may be, it must be seated and situated somewhere within the brain, or connected in a manner unknown with the inner ends of our in-carrying nerves, which are themselves, throughout their course, wholly unconscious ; and it would be as reasonable to say, that the man at the European end of the Atlantic cable knows from the telegraphic signals the face of his correspondent in America, as to say that a man through his in-carrying nerves knows the Face of nature !

Man's mind, whatever the human mind or soul may be, is separated from external nature by an innumerable network of minute nervous filaments, all of which are themselves insensible and unconscious. Each of these filaments, passing from the external world into the inner recesses of the grey cellular matter of the brain, is itself a bundle of minute tubular fibrils—so minute as to be only visible under a powerful microscope, and towards the surface of the body they disappear under the greatest microscopic powers we possess.

Millions of these minute in-carrying filaments or fibrils might lie together in the tenth of an inch ; and whatever experimental knowledge the mind can acquire of external nature, has all passed along these minute filaments which flash inward to the inner recesses of

the brain—the vibrations, or currents, or operations produced by external material objects.

But besides these infinitesimal *in*-carrying nerves of bodily sensation, and alongside them, enclosed in the same sheath or outer covering, but without uniting in any part of their course to the brain itself, lie the *out*-carrying nerves of will and action. If the *IN*-carrying nerve is cut or paralysed, sensation and perception cease. We become, in the part of the body supplied by that nerve, unconscious of the outer world. If the *OUT*-carrying nerve is cut or paralysed, the limb is paralysed, and the power of the will ceases. We can no longer move the part, or express our will or wish therewith.

Disease and accidents often produce both this numbness, or want of sensation and perception, and also this paralysis, or destruction of the power of the will over the part or limb. Sometimes the one is lost, and sometimes the other; sometimes both together; and sometimes the paralysis of will and sensation is partial. The patient can only exercise his will in certain directions, and not in all, as usual; or he can only feel certain sensations, and not all the usual ones. He can walk sideways, but not straight; or drag his limb, but not lift it.

We behold a man who can still taste with his tongue, but he cannot speak. He is paralysed in his control of the organs of voice, but he can write his will or wishes on a slate. His will remains, but he cannot direct his voice and tongue. We behold another who has lost sensation in a limb, and does not feel the fire burning, and yet retains the power of his will over the motions of the limb, and when he sees the danger can withdraw the limb from the injury which it does not itself feel.

The whole perception by the mind within of the

world without depends on these minute *in*-carrying nerves of sensation, and the whole action of the mind within upon the outer world depends on these minute *out*-carrying nerves of will. And what is very remarkable, and never to be forgotten, is, that the inner ends of these *in*-carrying and *out*-carrying nerves are, under the microscope, visibly distinct and separate from each other, and lose themselves, as it were, in the grey cellular matter of which the brain is chiefly composed—a mass of microscopic globular cells which, in addition to the white nervous filaments, the nerves of sensation and will which pass between the brain and the surface of the body, compose and complete the substance or composition of the Brain. The *in*-carrying and the *out*-carrying nerves have physically distinct and separate ends within the brain itself.

We have thus in our cranio-nervous system a double apparatus—an immense number of infinitesimally minute tubular fibrils or telegraphic wires—to carry *in* bodily sensations, and an immense number of like but separate fibrils or telegraphic wires to carry *out* the mind's determination and will.

The two parts are separate and distinct, and visibly so under the microscope, at the inner ends of the nerves in all our brains. There is, therefore, a physical hiatus—a gulf of separation—between the inward impression and the outward action. This gulf is not filled up by matter, but by mind. What passes out is not, and cannot be, that physical vibration which passed in! It has passed from the *in*-carrying nerves through the mind, and has there ceased to be material, and has become mental, and then has passed into the *out*-carrying nerves of will and action. It began by being a bodily

sensation—a vibration of matter. But before it leaves the mind it has become a mental perception—a thought, an idea, a desire, a will, embodied in the resultant word or sign or action. “The sensual has passed into the intellectual, and the intellectual into words” or outward actions, which are equally signs or symbols of thoughts and of mental actions.

Thus each nerve, when carefully viewed under a microscope, is a mere bundle of excessively minute tubular filaments, each of which appears to be filled with a sort of central fluid pith, and in no instance does the minutest fibril from one appear to penetrate the others so that there might be any intermixture of their component particles; and there can be therefore, as far as we know, no physical or material confusion or intermixture in the discharge of their functions amongst those that reach the brain. Each sensation from each filament is probably separate and single.

But then, again, not only are the in-carrying fibres for sensation and the out-carrying motive fibres, though both shut up in the same sheath, distinct and separate from each other, but each sense has a distinct species of nerves for its own use, and the nerves appropriated to one sense do not transmit the sensations or perceptions of another. If the optic nerve is touched, there is transmitted to the brain, not the feeling of touch, but the sensation of a flash of light; and if the aural nerve is touched, there is transmitted the sensation of sound. The same is the case if the touch is caused by a current of electricity. And from what we know of the pressure of fluids readily transmitting undulations, the fluid pith of the interior of the tubular fibrils of the nerves may be, and must be, well adapted to transfer the outer touch

or undulating stroke from the surface of the body to the inner ends of the in-carrying nerves of sensation in the brain.

But a man might just as well disbelieve our telescopes, and insist that the sun moves round the earth, as disbelieve our microscopes, and insist that we have any direct or immediate knowledge of the outer world, or can know or be conscious of anything except some minute vibrations or undulations, which are mere motions and forms, at the inner ends of our in-carrying nerves of sensation.

Now there are but two alternatives—either to deny wholly the existence of mind and its action between the inner ends of our in-carrying nerves and the outer ends of our out-carrying nerves, which, in fact, the experiential materialistic dogmatists generally do, if they are consistent—*i.e.*, deny the existence of mind altogether; or else to admit that our ideas are not derived from experience, but are all derived from and founded on reflection and judgment—in short, from and by means of mental invention and intuition, by attention, comparison, and conception, or other mental powers.

The thing that passes along our in-carrying nerves may be called, if you please, a sensation or perception, but it is certainly bodily and material, and is in no respect mental; it can only be some motion, vibration, or undulation of the matter of our own bodies.

At the inner end of our in-carrying nerves matter ceases, and if we admit mind, the mind begins to act. Attention begins, comparison commences, resemblances are mentally perceived, conceived, and invented, and by judgment are accepted or rejected; and the result is an idea—a mental thing—in the mind! But this resultant

idea is not obtained from experience, but from the action and invention of the mind to explain to itself the experience of the bodily senses. The Body experiences vibrations—motions and forms very minute; and the Mind invents ideas to explain their causes.

In the most obvious as well as the most recondite ideas, the *action* which creates the idea or the thought is entirely mental! We have never, in fact, in the whole course of our lives, *experienced* one single idea or thought! It is mere confusion of language and of thought—confounding the body and the mind—to say that our ideas, or any of them, are derived from or in any way founded on experience, for we never experience ideas of any kind. What is probably meant by the more sensible of the experimental philosophers is, that we experience sensations and perceptions of the *body*: and then the *mind*, by attention, imagination, and judgment, invents ideas which it thinks will explain to itself and others how such sensations and perceptions are produced or caused. We experience bodily sensations; we invent mental theories or ideas. But the comparisons, the resemblances, the analogies, the judgments, the conclusions, are all purely mental operations, and the resultant ideas or thoughts are purely mental things, not derived from or founded on any experience whatever, but are all invented by our mental powers to explain our bodily experiences! and the resulting ideas are as wholly independent of experience as mind is distinct from matter. Nor is it even strictly true, as Locke said, that we experience “the materials of our ideas.” We experience the materials for thinking our ideas. We experience bodily facts: but a bodily fact is not an idea, or the material of an idea. The idea is

the theory which combines the facts, the analogy the resemblance between the facts. We do not experience analogies or resemblances; we invent them by our own powers of comparison and judgment. They exist only in the mind—not in the bodily facts, not in the things, not in the experience. No man ever experienced a comparison: no man ever experienced an analogy, nor a resemblance, nor a judgment. We experience the materials for thinking—for using our minds. We only experience bodily sensations; we invent mental analogies, resemblances, comparisons, ideas. We never experience mental phenomena; we *imperience* (if we may make a word for each man's private individual thinking in the mind, which can form no part of general human knowledge)—we *imperience* or create ideas, and we embody our ideas in words.

The error of experiential philosophy appears to me to partly arise from supposing that sensation and perception are mental phenomena, and also from a loose way of using these words, as well as the words conscious and consciousness. The dog and the man have both of them sensations and perceptions, and in some way may be said to have consciousness of each other's presence. But the man is mentally conscious that he is conscious; and he individually examines his consciousness by the second and higher mental consciousness, comparison, judgment, &c., of which the dog does not appear, so far as we know, to partake.

It is this consciousness, in the second degree, which is mental. It is this knowledge of our knowledge, and feeling that we feel, and being conscious that we are conscious, which is alone *mind*, and which the materialist denies, and therefore says that such ex-

pressions are merely "tautological." Whereas there is the greatest possible difference (the whole difference between mind and matter) between feeling and knowing *per se*, and feeling that you know and knowing that you feel! It is not consciousness which gives us the phenomena of mind, but *self-consciousness*—consciousness in this second degree—introspection of ourselves.

Accordingly the materialist attempts to confound consciousness with the reflex action of the nerves. But there are in the human body divers ganglions of nerves or nerve-centres—little brains, they might be called—scattered about along the spinal marrow and elsewhere, for the preservation of particular parts of the body, which possess and produce unconscious reflex actions of apparent intelligence, but of which the man is wholly unconscious till the danger is past.

But I believe that it is clear beyond question that, though the consciousness of the lower animals may possibly, for all we yet know, be reflex action, produced by and tracing its *origin* to the original *impression* made by the outer world on the in-carrying nerves, yet the inner *self-consciousness* of the man is not reflex action; and though it may become by habit and usage almost instinctive, yet that it is never completely free from mental attention, reflection, and judgment, the self-will and self-consciousness—the wilfulness which is the essential characteristic of the human mind in thinking. Sensation is material, but thought is mental, and all ideas are mental inventions.

In short, there are but fifty to eighty ounces of matter in the human body in any way connected with the sensation or consciousness of the human mind. All the rest of man's body is wholly unconscious, and wholly

unconnected with his mind or will, except indirectly through the unconscious sympathetic system, by affecting his general health of body.

But, again, these few pounds of nervous matter are also, as a mass itself, wholly unconscious, when and if cut off from the brain-centre, which we cannot investigate, but where must be the seat and centre of the will and mind, if we admit mind to exist in our frames. And this unconscious nerve-matter is so arranged as to make the distinction between mind and matter more and more probable, the more the nerves and the nervous system are investigated.

This wondrous network of nervous filaments, which are mere conduit-pipes, mere telegraphic wires, can only carry *in* vibrations or impressions, only motions and undulations, through the matter of our nerves. But these filaments are so infinitesimally minute on the surface of the body, that ten thousand millions of them possibly could lie side by side in the space of an inch; for when one of these minute nerve-fibres reaches the surface or periphery of the body in the case of touch, which is the coarsest of our sensations, each filament branches out into finer filaments, which are lost under the powers of our microscopes; and possibly, therefore, many thousand millions of them might lie side by side in the tenth of an inch. But these infinitesimally minute tubular threads, and such minute undulations or motions as they can convey, are the only things which reach the mind or brain!

Whatever man's mind knows of the outer world, has therefore been necessarily invented by the mind from the mental discussion and comparison of the minute waves or motions which pass along and through these

microscopical filaments! And as we know that sounds and sights are actual vibrations, undulations, or motions of the elastic mediums of air and light, it is clear that our aural and optic nerves must transmit, in some way we know not how, these motions or vibrations to the matter or fluid pith of our in-carrying nerves. Where the in-carrying nerves visibly cease and terminate, the mental actions—the Attention, the Comparisons, the Reflection, the Conceptions, the Judgments—must begin and proceed and conclude before the out-carrying nerves of human will, agitating the voice or limb, become instinct with the mental life imparted to them by the mind, and create a word or action.

It is very reasonable also to suppose from analogy that all our nerves of sense are like those of sight and hearing, and only transmit vibrations, undulations, or motions inwards; and that heat or gravity, electricity and magnetism, are merely vibrations also transmitted by the nerves of touch, smell, and taste respectively, just as light and sound are transmitted by the optic and aural nerves. But all our ideas must be obtained from reflection, and by mental comparison and judgment of these minute motions of our own nerves in our brains.

It is more reasonable to use such words as nervous motion or vibration, rather than the old one “animal spirits,” to express the material actions of the nerves produced by the operations of the outer world. Animal spirits, if we were to adopt such language, could only mean those imponderable matters which we call light, heat, gravity, electricity, and magnetism operating on our nervous organisation, the phenomena of which we investigate as matter, not as mind or spirit.

But if we admit the existence of the human mind at

all distinct from the human body, then certainly, whatever the human mind does know of the outer world is not from experience, but from *imperience* or invention—the mental *comparison* of internal bodily motions; and all our ideas are, and have always been, merely accumulated judgments formed by our mental powers, our attention, comparison, reflection, invention, and judgment, upon these infinitesimally minute nervous vibrations or “somethings,” capable of passing along nerve-filaments, of which many millions could coexist in a circle the tenth of an inch in diameter. It cannot be otherwise.

But I say that it is a clear contradiction in terms; first, to admit the distinction—the verbal distinction—between mind and matter; and then to say that the material vibrations or somethings which pass along our bodily nerves, and which alone we get from experience, and which are merely *material* motions, are or can be ideas or *mental* things which we never experienced in our lives. It is a logical contradiction.

We never experience a comparison, an analogy, a resemblance! We experience vibrations, motions, and forms, in our nerves, bodily facts, but not mental theories or resemblances; but it is our mind which *sees* the *resemblance*, which makes the *comparison*, and builds up and creates the ideas. Our minds create their mental furniture by our mental powers. We do not know what goes on in our nerves, but we do know, by reflection on our microscopes, that our mind and consciousness do not exist in the nerves themselves; and that they are merely the roads, the avenues, the telegraphic wires, or channels of communication which pass from the outer world to the mind within, carrying only material *motions* inwards; and bringing outwards, in the shape of words

and actions, the *mental* emotions which we call ideas. Motion is a state of Matter, not a state of Mind.

But experience is limited to material motions. It is certainly, therefore, *im*perience or invention, the act of the mind, the result of attention, comparison, reflection, judgment, &c., and not experience, which gives us all our ideas, all our mental furniture; and it is merely confusing mind and matter, or body and spirit, to assert the contrary.

The visibly-separate ends of our in-carrying nerves of sensation, clearly separated from the ends of our out-carrying nerves of will by their separation, assist us to perceive that the whole immense gulf of the human mind is interposed between the two parts of our bodies, the in-carrying and out-carrying apparatus. And though the one terminates and the other begins in the grey cellular mass of the brain side by side, yet the mind of man and his spirit may range the universe before he says "I will," or makes "I dare not" wait upon "I would;" or before he frames the *word* which is to express his *idea* of the *thing*.

These minute grey cells, consisting of myriads upon myriads of microscopical cells, infinite as they seem in number, with an opaque nucleus or point in each forming the mass of the brain, may well be the material storehouse of our memory, where material sensations are photographed or laid up to be ready for the mind's use when required; but the ideas, the emotions, the mental things, cannot be given us by any experience from without, but must be all invented by attentive comparison, reflection, conception, and judgment, &c., within the mind.

We thus experience material motions, but we *imperi-*

ence or invent mental conceptions, representations, ideas, which we embody in the words and signs which we send forth along our motory nerves of will outwards.

Thus the bodily organ or instrument of our mind is the brain and nervous system; but no experience gives our mind any of these ideas or mental furniture. Experience gives our bodies sensations, or gives vibrations of our in-carrying sensory nerves. The mind invents all its ideas by attention, comparison, reflection, conception, judgment, exercised by means of its mental *senses* of number, time, and space; and it invents words wherein to embody the ideas, which words, though intended to explain and to record what we often call our experience, are, in accurate logical truth, the production of the mind alone, and of its senses and powers—of its senses of number, time, and space; of its powers of attention, comparison, reflection, invention or conception, and judgment, inventing theories to explain our supposed facts. ✓

Thus, some part of the brain of man may be the organ or instrument of our intellectual functions; some part the organ of our emotions and passions; some part the organ of our senses—our internal senses; of number, time, and space, and of all our self-consciousness; and some part may be the organ of our volitions. But the grey cellular mass of the brain is, on the one hand, connected to the in-carrying filaments or sensory nerves, separate for each special sense, passing into the brain from the eye, ear, nose, tongue, and the whole surface or periphery of the body—the locality of touch; and on the other hand the brain is connected with the spinal cord and the nerves of motion, and in man and the higher animals the brain gives and possesses that con-

trolling power over the nerves of voluntary motion which are distributed to the motor muscles; and these out-carrying or motory nerves are therefore called the nerves of volition, and the muscles are called voluntary muscles, by which, at pleasure, we move our limbs. But we do not use our whole brain in every mental act.

Now, just as the astronomers and their telescopes have for ever overthrown, to those who can think and reason, the most obvious decisions and judgments of our senses and intellect concerning the motions of the heavenly bodies, and compelled us to disbelieve our senses and experience,—which, as we usually say, tell us that the world is fixed and immovable, and that the sun, moon, and stars rise and set and move round the world every twenty-four hours,—so I say that the surgeons and their microscopes have most effectually put a stop to our reason and judgment, believing that the human *mind* actually sees and hears and feels the outer world, or gains its ideas by *experience*. Every false idea has always been said to be founded on experience. But we do not experience falsehoods; we experience bodily sensations, and often invent ideal falsehoods or falsities which we afterwards reject. We do not experience mental ideas, but material sensations; and our minds from time to time invent ideas which, as we think and say, help to explain and account for our accumulated experiences! And every word involves a mental theory of external existence.

At first, for example, we invented the idea that the world was fixed in the centre of the universe, and that the sun, moon, and stars moved round it every twenty-four hours, and backwards and forwards “in cycles and

epicycles, orb on orb, *contrived* to save appearances." The whole Ptolemaic system, which is false, was invented to explain experiences. It was not experience, but the mind that contrived all this, and framed its *ideas*, which we now perceive to be wholly wrong and false; and not only independent of, but, as we now know, contrary to, our present experience, as we say; and as we now think, the old experiential idea is utterly absurd and incredible! We have still all the ideas of the Ptolemaic system, and deem them a pure *invention* of the mind, and altogether independent of, and contrary to, true experience, which we now see that the human mind formerly wrongly *interpreted*, and endeavoured to explain by the very absurd *ideal* inventions of the fixity of the world and the motions of the heavenly bodies round it!

It is surely a most perverse use of language to say that false ideas are derived from, or founded or dependent on, true experience! The rising and setting of the sun are not founded on experience, but are false inventions of the mind—*ideas*, or *theories* altogether false! But our experience is not false, not even that experience which induced man to invent the idea that the sun, moon, and stars rise and set and go round the world in twenty-four hours. The experience is true, but the *idea* is false, and is wholly *independent of experience*, though it was invented to explain it! The experience that the sun rises is still as true as ever, but the idea is wholly false. So the idea is equally false that man sees, hears, feels, smells, and tastes external things; and the surgeons with their microscopes and their experiments and observations on our nerves completely overthrow the idea that we feel the external world—an

idea which is entirely false, for we only feel things in the brain.

The human mind is separated from the outer world by those myriads of infinitesimal tubular nerve-threads which are themselves wholly unintelligent and blind and senseless, and so small that millions might be rolled up in the tenth of an inch ; and though themselves without either sense or will, yet each seems capable of carrying a distinct impression, undulation, or vibration—mere motions and forms—to the brain ; and also alongside of them others like them, capable of carrying the will of the mind outwards to our limbs or organs of motion and tongue. All this, again, is not experience, but a theory—an *idea* to explain our microscopical experience.

The mind is at the inner end of these minute insensible telegraphic wires, and the outer world is at the outer end—that is the idea of the man who believes in both matter and mind, as I assume the reader does ; and all that the mind can possibly know of this outer world of matter must necessarily have passed to it in the *form* originally of those infinitesimally minute somethings or vibrations or undulations, the motions which pass along these minute nerve-fibres. Our bodies experience bodily vibrations or motions, and our minds invent ideas or theories. All our ideas, as they now exist in the mind, must have been invented and created by the attention, reflection, conception, judgment, &c., of the mind from time to time, correcting our previous false ideas, and so we have arrived at all our present ideas and our present judgments concerning this outer world ; which itself is a mere theory in the mind expressed by the words matter and external universe—but is a fact so indubitable to

every one possessed of a body, that we all assume it to be true ; and to deny it, is to deny our own bodily existence ! But what the mind beholds is not the outer world, but the minute undulations, motions, and forms which reach the brain ; but which motions exist only in the nerves of each man's own body caused by the outer world.

To say, then, with "common-sense" philosophers, that man sees and feels and is conscious of the outer world as we now all behold it and speak of it, is just as false a representation or explanation of the facts before our microscopes, as to say, that the sun, moon, and stars actually rise and set and move round this world in twenty-four hours is a false representation and explanation of the facts before our telescopes.

Most of us have neither looked through the telescopes nor the microscopes, but we receive the *words* of the astronomers and physiologists who have, and which words we can verify or disprove whenever we choose to look for ourselves. But the cardinals who shut their eyes when requested to look at Venus as a crescent emerging from the sun's rays in Galileo's telescope, are the prototypes of the positive philosophers of to-day, who say that all ideas are derived from and dependent on experience ! For the experiential philosophers shut their minds' eyes to the manifest fact, that every idea is the *act* of the mind, independent of experience, setting experience against experience, feeling this and feeling that, judging between opposing experiences, comparing and contriving and numbering and timing and spacing our bodily sensations ; thinking, supposing, inventing, conceiving, and *mentally* concluding on questions or matters other than and always wholly beyond any experience what-

ever! such as atoms, undulations, velocities almost incredible, &c. Galileo's telescope gave us the experience of Venus as a crescent; but it is the mind that thence concludes that the world is flying through space eleven hundred miles per minute, contrary to all experience!

The comparison between two experiences is not an experience but a *comparison*—a mental act; the inventing of some deep-seated *resemblance* between two experiences is not an experience but a mental perception and invention—the conception of a state or relation—*possibly not* existing in nature at all; like the idea of that savage tribe who thought that eclipses were caused by a great wild beast eating and consuming the sun, which they ought to drive away by noise, and by beating their tom-toms! or like the ideas of the ancients, that the earth is the centre of the universe, and a flat plain surrounded by water; or the idea of the poor New Orleans slave, that the normal state of things in the world is to have the water higher than the land, and to keep it always out with levées and dykes; or the whole Ptolemaic system itself—these are not experiences, but false ideal *inductions*.

All false ideas are said to be founded on insufficient experience, and all true ideas to be founded on sufficient experience; but this is a false mode of speaking and using *words*. And it is a perversion of language to confound the act and invention of the mind with the experience or sensation of the body. All ideas are relations, mental things, which have no proper existence out of the mind—the relations between many things, or the relation between the many parts or powers of one thing, and called its states. Ideas exist only in the mind, and are its own inventions and creations by means of *atten-*

tion, comparison, reflection, conception, judgment, powers of mind; and it is a mere perversion of language to say or think that men's mental things are founded or dependent on bodily experience, which has no means of giving us one single idea, one single comparison, one single resemblance, or one single judgment!

It is one thing, and the duty of every man, to strive and contrive, if possible, to reconcile together his mental ideas and his bodily experience—for the object of all ideas is to explain and account for bodily experiences as far as possible; it is quite another, and entirely false, to think or to say that our mental ideas are really and truly dependent or founded on our bodily experience—it is to make nature or God the author of falsehood; or indifferently, both of truth and falsehood.

We can only experience matter, and matter is only the *type* of mind; and we never experience mind or purely mental things, and we exercise our internal mental powers to invent ideas, theories, mental things, and we embody them in *words* in order to express our thoughts about our bodily experiences. The mind and its powers are the original and only active source of all our ideas, and none of our ideas are, properly speaking, derived from or founded on experience. Experience does not give us mental theories, but material facts; experience is wholly bodily. The mind invents the theories, and struggles, and properly struggles, to make them accord with the facts. The body experiences bodily facts; the mind invents mental theories, and every idea involves a theory, and every word expresses an idea.

In fact, to take our example, nothing can be more absurd and inconsistent than for a man who believes and says that the earth goes round the sun, to say at the

same time that his *ideas* are founded on or derived from experience, or that truth is to be built on induction.

How does the fact stand? Millions of millions of men in all ages have seen, and still do feel and see, the earth fixed, and the sun to rise and set every day, and move round the earth, and also move through the fixed stars every year, and have never at any time experienced any sensation or fact whatever to the contrary; and then they are told to believe, and do profess to believe, that a man at the equator is travelling twenty-four thousand miles every day of his life, and that this great world and all its inhabitants are flying through space constantly at the rate of eleven hundred miles in a minute! a rate of travelling which takes away one's breath to think of.

And then we are told that all this violation of all the experience of all mankind in all ages, and in the present age, is all established by a few astronomers looking through their telescopes, and seeing the star Venus sometimes as a full moon and sometimes as a thin crescent. Not one person in five hundred could explain intelligibly how this bears in any way at all on the question of the earth's motion round the sun; and still fewer could measure the relative sizes and distances of the heavenly bodies, or could explain or exhibit an experiment with a pendulum in azimuth to prove the earth's motion on its axis; and yet the experiential ideas of all men in all ages, and of ourselves at the present time, are set aside, and men disbelieve their senses as to motions which they see with their eyes every day, and believe in the unexperienced and unperceived and positively frightful velocities of this whole world on its axis at one thousand miles an hour at the equator, and at eleven hundred miles in a minute through space round the sun,

going on at this enormous velocity from day to day and year to year, and without any man ever experiencing it in the least !

I say, if men really believed in experience as the origin and foundations of their ideas, they would still believe, like the cardinals, in the stability of the world, in spite of Galileo and all subsequent astronomers, and all their ideal calculations ; for they are wholly ideal.

But all men in fact and truth see in their heart and mind that it is not *experience* or bodily feelings that we really believe in, but it is in the effects of mental attention, comparison, reflection, conception, or invention and judgment, by which alone any *ideas*, true or false, are created, that men really believe in, even though they are wholly opposed to all the past and present experience of themselves, and of all mankind ; for we never do experience our mental conclusions, but we calculate and invent them. Our minds remain for ever attached to the inner ends of our nerves, hopelessly separated by them from the universe exterior to our bodies, but judging and calculating between divers experiences of the body.

Thus, however, the thoughts and discoveries, the mental conceptions and inventions of the few, overrule the constant experience of all the rest of the world. But how do the few get their thoughts? By observation and experiment? not at all! but by *comparison* of divers observations—by reflection on sensations otherwise inexplicable—by the mental exercise of conception—by invention and calculation and judgment that so it must be—by the careful exercise of their mind and of their mental *powers*, dealing indeed with material sensations of the *body*, not ideas, but working mentally with the mind, and in their mind, creating *mental rela-*

tions or ideas possibly existing nowhere, and to be afterwards, perhaps, discarded by the mind; and by finding and inventing appropriate *words*, signs, and *symbols*, in order to express such mental *ideas* and creations of the intellect, wholly removed from all bodily experience whatever. It is mere logical confusion between *mind* and *matter* to think otherwise.

It is equally false to say that we have innate *ideas* born with us, and to say that all our ideas are founded on experience. We have internal innate senses and powers and capacities, such as our senses of number or of time or of space, just as we have innate external senses, as we might for distinction call them, of seeing, hearing, touching, tasting, and smelling, though these also are all internal in the brain. Children of the same family differ as much in respect of their capacities for arithmetic, music, and geometry, which are the abstract sciences of number, time, and space, as they vary in short sight and long sight, in bodily strength, or quickness of hearing. They vary in muscle, and they vary in nerves, and they vary in mind and spirit and intellectual acumen.

However, the fact is rendered by our microscopes utterly indisputable, that the human mind is separated from all external nature by a wonderful nervous system of minute filaments or infinitesimal tubular threads of matter filled with a fluid pith, in themselves and in itself wholly insensible; and the mind knows nothing whatever of the outer world but certain infinitesimally small somethings, which are able to pass along these threads or filaments, the millionth of the tenth of an inch in diameter. And all that we know, or suppose we know, of this outer world, is the result of our mind's internal attention, comparison, reflection, conception,

and judgment, by applying our external senses of seeing hearing, tasting, smelling, and touching; and our internal senses of number, time, and space, &c., to the effects of external things on our bodily nervous system.

We must therefore either become materialists, and deny altogether the existence of mind, and so deny not only the existence of number, time, and space, but of all abstract ideas whatever, and all the abstract meanings of our words; or else we must admit with Berkeley and his true followers, "that the reality of the objects we perceive still remains a profound and apparently insoluble problem," and I say, must ever remain so, while the Body, the bodily veil of our nervous system, remains constantly interposed between our minds and the external face of nature, or that exterior cause which agitates our nerves. ✓ —

But the reality of the universe of Mind or Spirit, *external* to ourselves, is as much beyond our means of knowledge as the reality of the universe of Matter. For even if we beheld a spirit or ghost, or *mind* made visible—or heard a Divine voice—or even what some would term an inborn or inborne idea or revelation—it is, and must be, something which acts through either our in-carrying or our out-carrying *nerves*—*i. e.*, it must be our own spiritual appreciation of the sight, or the sound, or of the impression on the soul. We must believe that the Divine *afflatus* either passes into our minds through the nerves—or, being something different from ourselves, impresses our souls, and passes out of our minds through our nerves; and in either case we have no means without FAITH of judging of its *reality*, independent of ourselves. With faith we may judge and reason; but without some faith, we cannot even begin to reason, either about Reason or about Faith.

The reality, therefore, of any Spiritual World other than ourselves, and different from the current of a man's individual thoughts, remains a more profound and more insoluble problem even than the reality of the external world; for observe that we are less able to distinguish the spiritual *non-ego* than the material *non-ego*; we are less able to separate the other spiritual object from our Mind, than we are able to separate the other material object from our Body.

The suggestion of Hume is the natural corollary of the suggestion of Berkeley; and, having abolished both mind and matter, if we really have faith in our argument, we may proceed to abolish language also, and deny the law of contradiction, and say with Hegel, "Being and nothing are the same, and yet they are not the same"! and so conclude that "nought is everything, and everything is nought." And when we have reached this sublime or ridiculous eclipse of both FAITH and REASON, we may then possibly think it reasonable either to take a dose of hellebore, or lay some foundation for FAITH in the truth of our WORDS—mind, matter, language. For if we believe in mind, we believe in God; and if we believe in matter, we believe in the Universe; and if we believe in language, we believe in ourselves.

And then we may and must logically discover, that in place of faith being founded on reason, the reverse is the fact, and that all reason must be founded on faith; and we may then, perhaps, become more humble, and conclude with St Paul, that "if a man thinks he knows anything, he knows nothing yet as he ought to know it." But if a man sets out by resolving to *believe* in the existence of nothing but what can be proved by reason, then he had better shut his eyes and his ears,

or contemplate his navel like a Buddhist; for he can never believe in anything but the existence of himself.

As to *matter*, our minds cannot possibly reach the outer world; and as to *mind*, there is the double difficulty of first reaching the outer world, and then penetrating to its causes or cause, involving the other *minds* which operate without us and upon us; and as to *language*, we have to penetrate to the *meanings* of the words—the *mental* force of each *material* motion within our own soul and spirit; and thence we have to judge of the mental force or capacity which created the words we have received as true—a threefold or triplicate difficulty to be afterwards considered.

But we conclude that ideas are purely mental things, and are not derived from or founded on any experience whatever, but are the creations and inventions of mind itself, created by the exercise of its innate senses and powers, and they are all embodied in WORDS in order to fix and consolidate our own ideas, and to transmit our ideas to other minds. Ideas of sensation are, properly speaking, ideas of *matter*. Ideas of reflection are, properly speaking, ideas of *mind*. But besides these two, we have other ideas, which are partly of matter and partly of mind, vibrations of matter with mental meanings, which are WORDS or language. But no ideas whatever are, properly speaking, founded on or derived from experience. And I say that all *ideas* are WORDS, signs, symbols, and are logically nothing else. The origin of all our ideas is simply the origin of LANGUAGE. ✓

CHAPTER XI.

WORDS—SIGNS—SYMBOLS.

THEY commit a great error who treat “the speech of man as of the same nature with the signs with which animals express their feelings and purposes ; and they leave out of sight the essential character of language. For the essential nature of language consists, not in its expressing *particular* feelings and purposes, but in its expressing thoughts and things in a *general* manner. Words express abstract thoughts, each of which may be applied to innumerable particular objects ; and human reason can deal with thoughts so abstracted, and can by means of them express truth, which it is her peculiar privilege to contemplate. But there are in animals no germs of this power of abstraction—of this apprehension of general abstract truth” ! *

But we have not to discuss the language of animals, or the cries of intelligent beasts, or their signs or actions, but the words, signs, and symbols—the instruments of human science—the medium of human cognition—whereby one man can convey his thoughts of things to his neighbours, or to all mankind possessed of sufficient intelligence to comprehend the words, to apprehend the thoughts, to understand the things in question.

We have shortly discussed the origin of our ideas on

* Dr Whewell.

the assumptions that all men have *minds* distinct from their bodies, and that all ideas are purely mental things; and we say that all mental things, when made generally intelligible, as subjects for human discussion, are merely *words*.

But if, as Locke thought, and some moderns still think, the whole stress and real difficulty of philosophy and its disputes is the true origin of our ideas, and you refuse my definition of idea as a mental thing, the whole dispute becomes a mere question of words. The word *idea*, and every other word you choose to select—thought, concept, representation, &c.—has three different significations: 1, a bodily signification—the motion, impression, or bodily vibration; 2, a mental signification—the thought, idea, or emotion in the mind; 3, a verbal signification—the word, sign, or symbol itself.

But “it is absurd to expect to settle questions by means of our words till we have first settled what our words are in scientific truth.” What are words?

The ancient materialist exclaimed, “I see a table; I don’t see the idea of a table”! “That,” said Plato, “is because you look with your *eyes*, and not with your *mind* ;” which was merely assuming the distinction between mind and matter, and assuming those *words* as intelligibly distinct to all! Then the materialist or experimental philosopher dissects the eye and exhibits the *ειδη*—the physical image on the retina, or in a camera obscura, and he exclaims, “Behold your ideas; they are only physical *impressions*, or images on the nerves.” And then he says, “An idea is therefore only a bodily image or impression carried to the brain and stored up in a brain-cell”! But Berkeley nearly hit the mark when he asks, “What is a ‘general idea’?”

and declared Locke's "general idea" of a triangle, which is neither equilateral, isosceles, nor scalene, but all three at once, a "stark staring absurdity"!—a self-contradiction—a physical image of a sensible thing called a triangle, which is not an image of any possible or existing sensible thing!! But, nevertheless, every *word* in every language, and in all reasoning, and in all philosophy and logic, is a general term generally supposed to be the name of some general idea; and to the materialist every general word and every general idea must be a nonentity, a "stark staring absurdity," a form, an image of no material thing in particular! And so they, the materialists, must abolish number, time, and space, cause, resemblance, force, and the rest; and also, every abstract or purely mental relation whatever. All general words are nought! or they contradict themselves, and for a time turn idealist, and say ideas are everything. At one time all is material and concrete and positive; at another all is mental and abstract, and ideal or conceptional!

One philosopher will only speak of concrete and positive *facts*, and the other of concepts and conceptions, and abstract *theories*.

Both equally neglect or leave out of its proper place—*i. e.*, confound and confuse—the reality of words and *language*.

Berkeley, however, was very near hitting the truth when he observed that all material phenomena may be considered as the "*language* of God," and only erred in supposing it necessarily or always *of God*, and not of other minds also. And Locke was also near the truth when he observed that all the *language* of metaphysics is probably only the metaphorical *language* of physics.

“I doubt not,” said he, “but if we could trace them to their sources, we should find in all languages the names which stand for things which fall not under our senses to have had their first rise from sensible ideas” *—*i.e.*, the words for mind are only the metaphorical language for matter; a truth which is self-evident to the thoughtful, for how could it possibly be otherwise (though probably Locke was the first to clearly put it forward)? How can any man explain to another what goes on internally in his mind or brain but by taking a sensible external material metaphor, and making it the image or sign of what he desires to explain, and then says that *the like* metaphorically goes on within his brain or mind? Nature herself compels man to use matter as the type and *symbol* of mind, and to use the language of matter metaphorically for mind and its operations.

And so the language of physics and metaphysics grows up, and men think they are disputing about things (material things) and thoughts (mental or immaterial things)! But all the while they are only, as we assert, disputing about the *words* which express both thoughts and things, and are the assumed symbols of each—the visible symbols of their thoughts of matter, and the material symbols of thought itself.

“But no philosopher has ever given, and I say that no philosopher can possibly give, any sufficient reason why we are to stop at the inner ends of our in-carrying nerves, and think that we are disputing or can possibly dispute about the unknown something there produced in the mind, and called an *idea*, or a thought or concept, instead of going on to the outer ends of our out-carrying nerves, and to the effect made by the mind

* Locke, III. iv. 3.

upon the larynx and the pen, to the actually known or knowable effect about which alone we have any mutual knowledge, or can possibly dispute—viz., the *word* which the human mind has created, and caused the outward vibrations to create and produce externally as an actual *factor* of human knowledge—a symbol of our thought of the thing—the word.

“The word expresses and embodies the idea. The word is the creation of the mind, the best evidence of its existence. It is the very substance and body of the idea itself. The word denotes the thing and connotes the thought, and is the *word*—the very thing and thought in question.

“The unknowable *thing* has passed into the idea, the thought; the unknowable *thought* or idea has passed into the *word*; and the *words* are the only things or general ideas or thoughts which can be known or discussed as they are actually in themselves by any child of man, let him talk or write as long as he may. To acknowledge and to submit to this truth is the first step in all true philosophy.”

[> All human knowledge is symbolism—the proper use of signs, symbols, *words*, language, invented by the human mind to describe and explain mind, matter, and language.

The whole history of mankind, and of his mind, and of his civilisation, must be rewritten from this point of view. What are the words, the signs, the symbols which express the principles that have governed man’s mind, his motives, and his actions—all must be produced and examined; for the individual is governed and impelled by the idea, and mankind in general are jointly impelled and governed by the *word*.

The true and real inspiration of evil is and always

has been the suggestion of some false word or image, which helps to hide the truth; and the inspiration of truth is only the suggestion of true words, and true symbols. This overlooking and undervaluing the importance of words and language, the paramount importance of words in every human question, seems to me the true source of the vain materialism with which the world of man is filled—at one time panatheism, at another pantheism; the two poles between which the materialist and idealist perpetually oscillate in doubt, ignorance, and confusion, not properly valuing or understanding the words they use.

If any man says, "Surely I know more of the *real* nature of this world when I have learnt the great truths of gravity or chemical affinity, or chemical composition and reduction, than I did before." I answer, No! you do not. You have learnt to think with Newton, with Lavoisier, and with Dalton, and to use Newton's words, and Lavoisier's words, and Dalton's words. You have learnt to think with the great modern astronomers and chemists, and to use their *words*. Neither they nor you know anything more about the realities of matter and the universe than you did before. You have learnt a number of appearances, phenomena which affect the human senses, and have learnt to give them orderly *names*, so as to speak correctly with your fellow-men who have examined the same appearances, and have agreed to use the same names and words to express those *numbers* of appearances. Both they and you are as ignorant of all the realities in the things you speak of as ever savage was. You have learnt some new human *words*, signs or symbols—the breath from our larynx and tongue, or black marks from the ends of our

pens ; and how to make and use those words, signs, and symbols, in consonance and mutual agreement with your well-instructed fellow-men, and therewith to fix and consolidate your own individual mind. But you have learnt nothing more whatever ; and any other imagination of your heart is mere folly, emptiness, and delusion. " But surely, when I have learnt the truth concerning chemical combustion ; when I have learnt to look on the smoke and the ashes as containing all the matter consumed ; when I have seen a grain of metal consumed in a bright flame, and know that the ashes produced are greater in weight than the metal burnt ; and when I can say the metal burnt is all here, and something else besides, and I will now take that away and restore the metal as before—surely I have learnt something more than language—than *words*. These are facts—these are theories ; this is not language ; this is chemistry—chemical reduction and composition, chemical combustion. This is not words, but thoughts and things,—things before my eyes—thoughts before my mind's eye ! What folly it is to call all this words and language ! "

Hold, my worthy chemist ! What are these facts—these theories—these things—these thoughts ? What is this *combustion*, or this *reduction* and *composition* ? Merely accurate words for human thoughts of material things. You have measured by number and space and gravity the ashes and the smoke, but you know no more what *fire* is than the savage who never heard the word *combustion*, and worships the sun. You have developed this word *combustion*, or these words *reduction* and *composition*, accurately, under the advice and assistance of the great chemists of the past age, thinking

their *thoughts* about *things*, their minds about matter, and you have adopted their *words*. You have made their observations your own observations, and their experiments your own experiments, and have drunk in and imbibed their *words*, as well expressing the whole phenomena of fire. But what fire is you have yet to learn. The savage thought it probably a *demon*. Zoroaster and the Parsees thought and think it *god*; and what do you think it, my worthy chemist? God is light, says the Christian; but is light God, most worthy materialist? or is there no God, most worthy positivist? Which of you know more about *fire* in itself than the poor savage who thought fire a demon?

You have fine words—combustion, reduction, combination—and now know what the modern chemists think about these words, and how they apply these words to practical uses; but you are as ignorant about the real nature of fire as the savage. But your knowledge of all these *words* and their chemical *meaning* is still knowledge, true cognitions so far and no further than the accurate measure of number, time, and space have been able to carry the chemists and yourself in understanding these *words*; and so we may say God is the *light* of the mind, and that Light, is His most worthy material emblem, as the one source of life; for “our God is a consuming fire,” if so be that you have learnt the truth concerning Him.

But what fire, and Light, and atoms, and their undulations, &c., are, you have yet to learn, most learned chemist, whether you be materialist, idealist, or conceptualist.

But just as the great chemists developed combustion and reduction into clear scientific words, so we must

develop mind, matter, and language into clear scientific words—at least, into better words than the words of materialism or of idealism or of conceptualism, for all these, so far as they are true, are contained in SYMBOLISM, which wraps all that is true of each in *one*; for all that man knows or can know are WORDS symbolical of the *truth* within and without him. And light and fire are worthy symbols of God and His Holy Spirit, if so be that you believe in the *words* which I believe to be Spirit and to be Life—the spirit and life of the soul.

Let us not, therefore, shrink from the clear avowal, and the manifest fact and truth, that all human truth can only be true words, signs, and symbols—pure symbols received into our minds, and then individually understood—mathematical truth, verbal truth, symbolical truth. Words are necessary to our thoughts, and our thoughts are words within us. But are words “the names of things themselves,” or merely “the names of our ideas of things;” or have words, “strictly speaking, no signification?” Till we settle these questions, we are mere logical and philosophical shufflers.

Men are no doubt placed in this world to investigate phenomena, and to gain by experience. “My son, get wisdom,” is the language both of nature and of God. But till we have some common verbal interpretation of the phenomena, the wisdom is of the individual, and not of the race. We must have a *word* for it, or the phenomenon is dead. We may remember it ourselves, and repeat it as an experiment; but if we attempt to reason about it or to think of it, even to ourselves, we must have some internal idea, some image within us, a symbol—some *inchoate word*, or perhaps inarticulate symbol, about which we think and reason.

The word is the external body of the thought, and without the word the thought perishes and dies.

“Language is not the dress of thought, it is its *living expression*; and it controls both the physiognomy and the organisation of the idea it utters.”* “Language is not a tool, or even a machine, but is of itself an informing *vital agency*; and so truly as *language* is what man has made it, just so truly is man what language has made him.”†

“Language is often called an instrument of thought, but it is also the *nutriment* of thought, or rather it is the *atmosphere* in which thought lives: a *medium* essential to the activity of our speculative power, although invisible and imperceptible in its operations; and an *element* modifying by its qualities and changes the growth and complexion of the faculties which it feeds.”‡

But “we think, indeed, to a considerable extent by *means* of names, but what we think of are the things called by those names. There cannot be a greater *error* than to imagine that thought can be carried on with *nothing* in our mind but names, or that we can make the names think for us.”§

“‘I believe,’ said Leibnitz, ‘that languages are the best *mirrors* of the human mind, and that an exact analysis of the signification of words would make us better acquainted than anything else with the operations of the understanding.’ But there are tribes that have no numerals beyond four; should we say that they do not know if they have five children instead of four? They certainly do, as much as a cat knows that she has five kittens, and will look for the fifth if taken away from her. . . . They would not know as our children know that two and three make five; *i. e.*, they cannot reason beyond four, but only that two and three make *many*.”||

Such are some of the ordinary popular floating notions about language and words; but it does not appear, so far as I know, that any philosopher since the days of Plato has clearly perceived, and held fast and maintained, the truth, which I say is indubitable by any man who can reason; that not only *Mind*, but *Matter* also, are to

* Marsh Lect. Eng. Language, p. 454.

† Ibid., p. 460.

‡ Dr Whewell.

§ J. S. Mill.

|| Max Müller.

the human reason, and to every philosópher, merely words or *Symbols* in which he has faith; and that words, signs, and *symbols* are the only thoughts or *things* about which any human minds can possibly dispute or reason. But it is most certainly so in every nation and language under the sun, even in the language of the tribes that cannot count beyond four, and in the Chinese, where every word or sign, at least the most ancient words, are "at once verb and noun and adjective and adverb," as well as amongst ourselves; all cognition, all knowledge, all science, must begin and end and wholly consist of words and SYMBOLS.

Now it is at least clear that until we can come to some understanding or fixed agreement or arrangement about our *words*, it is perfectly idle and useless to set to work debating and disputing about other things, whether things of matter, or things of mind, or things of language, and philosophy includes all three. It is as useless as throwing stones into a muddy pool in order to make it clear by that operation; though if there were an outlet to the pool from which we could draw our water, it is possible that our stones might help to filter it at last. Now the scientific outlet to the muddy pool of philosophy is, in my opinion, NUMBER.

We all have very clear and indubitable ideas of number and of arithmetic, how *one* number includes *many* units, and though many, yet is one—a new unit always capable of being added to and multiplied with and by; and how each unit can be subtracted from and divided with and by—treated, in short, at once both as infinite and absolute, as absolutely *one* and yet infinitely *many*—many fractions, each itself a new unit.

All language, then, is composed of words; which are,

as we have already observed, common and accepted vibrations or undulations of *matter*, which all men can hear or see, but with mental meanings or significations in the *mind* attached thereto; but which meanings are private and unknown, except to the individual. Words are living *forms of thought*—*motions* of matter producing forms in the soul.

A sound is not a word till we fill it with thought. A *sign* is not a part of human language till it is understood by the mind; till we know its force, its meaning, its signification, and application in our minds. Every sound or motion in nature is not a word; but if man can repeat it, then it may become the sign of the thing, or of the thought caused by the action of the thing which causes the sound, as *cuckoo* is the name of a bird, or *tick* is the name of the action of a clock. But, till men join in creating and adopting the word, they have no general idea in common. But all language and every language is composed of the names of individuals, or of the universal term or general class—*i.e.*, of the *one* or of the *many*.

But we do not reason of the individuals, except as *types* or examples and symbols of their class; and thus by the induction that as we find John or Ponto, so we shall find all men or all dogs. Sometimes this is a reasonable and sometimes a very unreasonable induction, but every general term adopted assumes it to be true and universal. But we can only reason with general terms or class-names—the universal words which compose the language.

Thus all language and every language (excepting the names of individuals) is composed of these *general terms*, which logicians reduce all to nouns, as the subjects or

predicates of a sentence or proposition ; and grammarians reduce all to nouns and verbs, and philosophers to things and relations. And so in logic, categories are class-names for *things*, and predicables are class-names for *thoughts*, or relations of things.

But as all words for reasoning in every language are these general terms, general names, or universals, so each signifies and means *the whole number* of things in the class called by the name. Every word is thus a *number*, and means the many things combined by our thoughts of the nature of the things, and called by the word under one name ; and the word signifies also and is the mental *product* of the thoughts or resemblances between the individual members of the class, which has caused man to give them the common class name. It denotes the *things* by its connotation of *thoughts*. The *word* is the one generalised *thought* of all the classed *things*.

We have already demonstrated that arithmetical numbers are general terms or universals—*i.e.*, words signifying *all* the units comprised under the name. Ten means all the units in ten, and fifty *all* the units in fifty. Pure arithmetical numbers, therefore, are general terms, the only perfect ones in any language ; for each arithmetical number is distinctly marked and separated from every other number, and cannot be confounded with it by any one who understands the language of arithmetic, whether our numbers are formed on the binary, quinary, decimal, or any other system of arithmetic, and we proceed to infinity—that is, without end, or till we choose to leave off. Every one who can count always perceives clearly the hopeless endlessness of our numbers !

But as all numbers are general terms, so I say that all general terms are numbers. This is a truth which every peasant who ever spoke, as well as every philosopher who ever wrote or spoke, has in words admitted and must admit. All men have admitted and exercise the power which man possesses to *generalise*, or make general terms or class-names. And the meaning of every general term in every language under the sun as spoken by mankind, is, that it shall stand for and represent *the class*—*i. e.*, the *whole number* of things called by the name or term. Every word can be reduced to a general term.

Whenever we use the words *man* or *tree*, we always, whether peasant or philosopher, mean the *whole number* of things called men or trees. Man means all mankind, the *whole number* of men who ever did, or do, or will, exist. The same is true, not only of visible bodily things, but of all invisible mental things. We mean by virtue the *whole number* of mental thoughts and bodily acts called virtuous, or by the intellect, the *whole number* of things possessing mental powers or processes called intellectual. In short, every class, kind, or family is the *whole number of units* called by the name of the class.

General terms or names, therefore, signify to every man who understands the language the *whole number* of the *units* of the class called by the general name. Every man who speaks intelligibly in every language admits this, that every general or universal word is a number, the *whole number*, so called; and that when we say Plants live and grow, we mean that the *whole number* of things properly called plants do so; and that when we say Stones do not live, we mean that

the whole *number* of things properly called stones do not live.

Well, then, a general word is a *whole number*, and a number is a number of units. But the units meant by a word are not the units meant by a number, which we must now call an arithmetical number, to distinguish it from a verbal number. But still they are units. One plant, stone, man, or planet is a unit quite as much as one dot or one stroke, or as an arithmetical unit made on paper, and called one unit. The units of every word are different from the units of other words, but they are all units—men, trees, laws, virtues, or attributes; minds, bodies, words, or causes, ratios, or resemblances, all are numbers of units expressed in words, just as ten, or twenty, express a number of units.

But we say also that all general terms are *products*—complications of thought. Now, as we made our arithmetical units alike by drawing strokes upon paper for example, so we *make* our verbal units alike by drawing words upon paper to express their supposed likenesses, which was commonly called by the Greeks defining the general term. It is merely taking other words, signs, or symbols, which we make, for the thoughts, which go to form or complicate the *product*, or generalised thought in question. If we look through distorted lenses or coloured spectacles, our units are likely to be drawn distorted or coloured. But it is the object of discussion to remove the spectacles, or say, for example, to remove the stereoscope, and show one solidity vanished, and two pictures, both flat, instead of one picture apparently quite solid. What passes for the most solid truth is sometimes altogether flat, stale, and unprofitable; but all our words are *numbers* of things

and *products* of thoughts—the *names* of our thoughts of things.

If, for example, I take a definition, and say that every man is composed of body and mind, and again, that every man's mind is composed of soul and spirit, then, when I speak of mankind, I mean the *whole number* of units, each unit being composed of body + soul + spirit, that ever were or ever can be called men; and my word *man*, mankind, or men, means, and includes, and expresses all the bodies, all the souls, and all the spirits of mankind. Arithmetical units are simple units, but men are compound units. But each body is also a unit, and each soul is also a unit, and each spirit of man is also a unit, so that my word man, meaning the whole number of men, means the sum of the sums of these compound units, and that, I say, is a *product*, or $\text{man} = \text{body} \times \text{soul} \times \text{spirit}$, or a spirit into a soul into a body. This is clearly demonstrable.

Some men never learn arithmetic except as a useful practical art; but to the arithmetician who has properly learnt the grounds and elements of his science, I say that this is manifest. The summation of equal compound units is multiplication. Everybody knows that three times four means adding three four's—*i. e.*, three compound units of four each—or four times three is adding four three's—*i. e.*, four compound units of three each—that is, in multiplication to find *the product* we add compound units, in the one case of four, in the other case of three—therefore arithmetical numbers are bundles of simple units, and *products* are bundles of compound units; and general words, or verbal numbers, are all *products* of compound units.

Of course the reader will understand that the defi-

nition, or choice of likenesses, the family or class likenesses, which makes man ticket a bundle of such compound units with a name, word, or general term, depends entirely on the true or false perceptions which our minds have obtained of one or more of the units. We can either *choose* what we believe to be true likenesses, as I have done in saying body, soul, and spirit for my definition of man, or else false likenesses, and find very little difficulty in making general terms to express our meaning. But we cannot leave well-established likenesses out of well-known and understood words, if we wish to be understood. Sometimes men do not wish to be understood, and more often the likenesses are neither well known nor well established. But no one can possibly deny the fact that every general term or name means and expresses both the whole *number* of things, and also the *product* of the thoughts, expressed by the general terms, which express the likenesses of the class of compound units called by the name. I subjoin in a note *

* To prove this truth ; that every general term is the *product* of the general terms, which express the likenesses of the class of compound units called by the name, to those philosophers who get over geometrical problems "by intuition from a figure," I give the following demonstration by a figure.

Let the following figure be *any number* of units arranged in equal sums—

$$\begin{array}{r}
 1 + 1 + 1 + 1 \ \&c., \text{ to } n \\
 + \quad + \quad + \quad + \\
 1 + 1 + 1 + 1 \ \&c. \\
 + \quad + \quad + \quad + \\
 1 + 1 + 1 + 1 \ \&c. \\
 + \ \&c. \\
 \hline
 \text{to } n'
 \end{array}$$

If we stop at any *time* and count the units in the horizontal and perpendicular lines respectively, we have any two multipliers, say 4 and 3, and we have three sums of four each, looking at the page as it now

a more strict or scientific demonstration of this truth, first published many years ago ; but the general reader will probably admit, as proved by the example above,

stands, and four sums of three each by turning the page sideways, therefore $n \times n' = n' \times n$, and by multiplication, therefore, we mean the addition or summation of equal sums—*i. e.*, the addition of the compound units called sums, when we say four times *three* or three times *four* ; and a *product* is a *sum* of compound units. We here, it will be observed, *make* our sums of compound units equal without abstraction, in *pure numbers* ; for we have nothing to leave out, nothing to abstract—that is, having in the beginning made our units as nearly equal as we could, we are wholly ignorant of their differences. But if we learnt to count on our fingers, we should have to abstract, or ideally cut off the differences of our fingers, of course ; until we learnt to make equal signs ; or, if the number cannot be arranged in equal sums, then it is a product + part of a compound unit, which occurs in accurate mathematical language, but never occurs in the language of existence, *i. e.*, of logic and philosophy ; where the units are necessarily things, individuals, or atoms ; not like numbers and mathematical quantities, infinitely *divisible*. This demonstrates and deduces the meaning of the word “*product*.”

Now the mind goes through the same process exactly with every *abstract* or general term whatever, in considering the units alike ; and all philosophers say, and truly say, we abstract by not attending to the differences, though they be wholly or partially perceived. They say the mind knows that one man differs greatly from another man, or one tree differs greatly from another tree ; and that when we speak of *man* in general, or *trees* in general, we abstract or leave out of our consideration our knowledge of these individual differences, and attend to the likenesses only. All philosophers and all languages agree in this, and it is true, so let us put the process into a visible figure. Take the abstract word, man or mankind. Each man, we have said = body + soul + spirit. That is, my word, for each man, means one body + one soul + one spirit + a difference, say, a different colour, a longer body, or a greater soul, or a finer spirit ; and we use the mathematical symbol of equality instead of the *copula*, the logical symbol of existence ; therefore—

		Differences.
John	= body + soul + spirit	+ &c.
Thomas	+ = body soul + spirit	+ &c.
all	&c. . &c.	

And abstracting by cutting off the differences, as we have done by the

or attributives, appears to my mind mere mental confusion. It introduces grammar into logic, and introduces into philosophy, secretly, and not openly, the notion "that one *thing* cannot be the attribute of another *thing*, a proposition which denies the existence of mind and of all mental things, and assumes that there is some fun-

difference between a number and an abstract word—the number is a number of *simple* units assumed to be like by man; the word is also a number of compound units assumed like by man, and being compound, is *the product* of the abstract likenesses taken to form the class called by the name of the abstract term. If we had called man a rational animal, then "Man is Reason \times Animal;" and so for any other definition we please to give.

Of course the reader will see that we ultimately arrive at the most abstract term known on the subject, which is itself \times unity; for example, heat, light, electricity, magnetism, affinity, polarity, matter, form, and so forth. We thus arrive at abstract terms indecomposable, so far as human knowledge has yet extended.

Perhaps, still more properly speaking, it might be said that A varies as, or is a *function* of the product, B.C.D. This function depends, of course, on the internal relations of b. c. d—the likenesses which produce the general word; but logically, we cannot distinguish between a product and the unknown *function* of a product. Thus, for example, the great discoveries of Newton were simply these—viz., that FORCE is the product, M. S. $\frac{1}{T}$, or of *Mass* into the *Space* divided by the *Time*;

and that GRAVITY is the product of M. $\frac{1}{D^2}$, or of *Mass* divided by the *Distance* squared. Thus the meanings of the words mass and gravity, which had before been quite uncertain, became scientifically defined. The definition of KNOWLEDGE as the product of mind, things, and words should be written thus, M. $\frac{T}{W}$, where M is not matter, but *mind*, and T. and W. *things* and *words*. For knowledge increases with the powers of *mind* and with the number of *things*, but does not increase, but diminishes with the number of human *words* or signs required to express the knowledge. In *self-knowledge*, of course, the whole three become *unity*. And so, as stated hereafter in the text, this thought of the composition or product of self-knowledge does not violate the unity of the Godhead, when we consider it as a Trinity in Unity.

damental and admitted contradiction or distinction between an *object* and its form, colour, or other attributes ; but if this be the fact, it should be proved, or openly assumed.

It is quite true that in ordinary language men distinguish between thoughts and things, between mental and bodily existences. But this distinction is the fundamental distinction between Minds and Bodies, and not a distinction in Words. All words in logic are at the same time denotatives and connotatives, and *mean* mental existences—*i.e.*, mean at the same time both thoughts and things. And although a man chooses to say he is reasoning about external bodily existences, or other men's mental existences, yet it is clear, as we have already shown and proved, that he is only reasoning, and can only reason, about what is in his own mind ; about his own thoughts of such external bodily or mental existences, and not about the external existences themselves.

But to assume as well founded, an original distinction *in words*, and to call the *names* of some sensible objects differently from other words called names of our ideas, or of connoted or connotable attributes of such objects, is to enable the reasoner to assume at any time as well founded a distinction in the things themselves—*i.e.*, between the visible or sensible objects and the mental likenesses or attributes we discover in and attribute to them ; for we must have words to denote our connotations, and then such logic becomes utter confusion—the confusion of mind and matter.

We say, therefore, that every name, whether general or individual, every word, whether universal or singular, has, in honest and true logic, some meaning, some thought, some idea attached to it, and is, at the same

time, both denotative and connotative, and it denotes an existence solely by its connotative meaning.

We can turn every word into an adjective, and be perfectly understood, so far as the meaning is fixed. This is true even of proper names singular. Socratic, Platonic, Kantian, connote certain loose ideas of the individual's philosophy. So in any family any peculiarity of the individual is attached to the individual name. Such expressions as "Coming John over me" would be perfectly understood if John had any peculiarity sufficiently marked to justify the expression; and every individual has such peculiarities known to his intimate associates. All England rang for some years with the name of Burke the murderer, and every kind of violent destruction was for a time called "Burking." The Reform Bill was to be "Burked," &c. And now we hear of "Bismarking" Baden and Wurtemberg, &c.; all which is perfectly understood. So, *a fortiori*, all general names are always at the same time both denotatives and connotatives, and signify both thoughts and things. The distinction, in short, seems to me only a covert and secret way of quietly assuming a distinction between certain things and certain other things; between some ideas of external objects and some ideas of other objects, not objects of our external senses—*i. e.*, of assuming mind and matter as a distinction of words and not of things, and so establishes a confusion between Mind and Matter themselves.

If such distinction exists, it must be either proved or openly assumed, and not confounded by a distinction of *words* or logic only.

All words are merely assumed as names to denote things, and to connote the ideas or thoughts of those

relations, or resemblances, which give rise to, or are attached to the things in or by the mind. All words are, in truth, the bodies or embodiment of thoughts; and it is as absurd and erroneous to treat words as being ever at any time mere marks or denotatives, as to treat the dead body of a man as being a man: to treat a dead body without a mind as a man is, in truth, the same thing as to treat a word as a mere mark or denotative only. If a word ever becomes such, it is dead; it ceases to be a sign of anything whatever; it has become an empty and unmeaning sound, an unintelligible blot, without thought attached to it.

It is the duty, therefore, of every one who reasons about words to express the *factors* which in his opinion go to form the words—*i.e.*, to define his words by the resemblances which make the things alike. If he says the word is simple and indecomposable, then he is bound to show how, or by what observation or experiment, and by what comparison and reflection thereon, the thought can be produced in his mind; to show what act of body, and what action of mind, may produce the thought to which he intends his word to be applied by his fellow-men.

But the truth has hitherto been almost entirely or too much overlooked, that the *word* or symbol is always a necessary *factor* in all human knowledge, even in self-knowledge. Knowledge is not, as almost all philosophers have held, “a relation which supposes two terms only—the knowing mind, the thing known—and that the knowledge is the relation between these two.” Knowledge is not “the two unities which become one unity.” Knowledge is not “object + subject;” and “object + subject” is not “the absolute in cognition.”

And I say that this is clear and manifest to all who think ; for knowledge or human cognition—*i.e.*, general cognition known or knowable to all mankind in general, and about which we can reason or dispute—is not a relation between two, but is the *Product of three factors*—the thing or object ; the mind or thought ; the word or symbol—each having an existence and continuance of its own, and each operating to produce the knowledge or cognition in every intelligent human being. There must be, then, three factors, and they must all three continue, in thought or memory, to exist distinctly and to be combined in one Cognition, or there can be no cognition cognisable by man in general.

The wise and the ignorant, for example, may receive the same shock, the same stroke, on their nerves, even from the same vibration, undulation, or electric current ; but the wise man revolves the shock, the stroke, in his mind, and compares it with other shocks, and observes some mental, material, or verbal resemblance, and invents a *word* to express and embody his idea—his general idea—and then, and then only, possesses a cognition about which he can discourse—*i.e.*, cognisable by man in GENERAL. The ignorant creates no word ; he perceives like an animal only ; he does not generalise or abstract, so as to be understood, and passes on as ignorant as ever of any general human cognition.

The word gives life to the cognition, and without the word the cognition, as human knowledge, cannot be said to exist, but dies before it is born ; for without the word the sensation or perception passes off, and the cognition, as general knowledge, is never born, or is dead before it lives for mankind.

The word is the embodiment of the thought, which

combines into one the object and subject and word, or rather the thing and the thought and the word, all operating in and through and by the word. Knowledge, therefore, is not a relation of *two*, or two unities that become one unity, but is a *trinity in unity* intellectually combined.

The *thing* passes into the *thought*, the *thought* passes into the *word*, but all are engaged in the cognition. We must believe in the existence of the *thing* and in the existence of the *thought*, and actually possess the *word* itself, which is the living expression and material body of our real thought of the real thing in question, or else our human cognition cannot be said even to have commenced its existence, for without the word the cognition is dead ere it lives.

But still the question remains, "Of what use is this arithmetical theory of language? Supposing that we admit that you have proved that language is a factor, a necessary factor, in every human cognition, and that all language is composed of general terms, and that every general term is a *number* of units, and is a *product* of thoughts, the relations or resemblances which are themselves the mental factors of the class numbered in the general term, of what use is such a theory, even if we admit it to be a fact?" The answer requires fuller development; but we say at once that we thereby get rid of "the fundamental contradiction and antithesis of all philosophy;" we get rid, in fact, of the whole system of German transcendental philosophy—of the supposed "contradiction of the one and the many"—of the interminable and absurd logomachy about "the two unities that are one unity"—about "everything being nought, and nought being everything;" and we get rid of the

confusion of philosophical dualism—of “object + subject,” and ego and non-ego, and of the philosophical confusion of twenty centuries—the heathen philosophy and metaphysics that have erected themselves into Socratic systems of Reason altogether opposed to the humility of simple faith in Jesus Christ. We get rid of the whole, and bring mankind back to true common-sense and to intelligible science! And as to faith?—that cannot come from any system of *words* whatever, but from one WORD—a Spirit sought and found.

Language in its most general sense, however, includes *action*. It involves the operation of mind upon matter, and of matter upon mind. Every action is, in truth, a motion of matter unintelligible without a purpose; and every action is therefore a word, sign, or symbol of the capacity and intention of the actor.

All action necessarily implies an actor or *mind*. Matter does not act except as it has been made and constituted to act by the Creator. Gunpowder does not explode except the spark is applied by some person, and according to its constitution. The action of a steam-engine is the action of him who made and of him who directs the engine. Chemical action will not commence till the elements are brought by some person within the necessary limits and circumstances. So all material action—attraction, repulsion, chemical action, electric action, &c.—all imply a mind or minds originally constituting and directing—at first making, and then placing the bodies within the spheres of attraction or repulsion, either in chemical contact or in electrical *rapport*, or otherwise in a position to act and react according to their natures.

There is always a mind or minds behind every material

action; and it is always necessarily assumed or supposed; and the action is not properly the action of the matter, but is properly the joint or several actions of the mind or minds which created and constituted and arranged and directed the energy or forces of the matter so as to operate the action. Matter is like a steam-engine, dead and inert until it has been placed by mind in the surrounding circumstances which call forth its latent energy—*i. e.*, those forces given to it by its creator. It is better and more proper, therefore, to say chemical or electrical force, than chemical or electrical action, when referring to our arrangements. The action is the effect of the directing mind; the force is the effect of the applied matter.

Every action, therefore, is properly a word, sign, or symbol of the mind producing the action; and in this sense it was that Berkeley called the phenomena of nature "the language of God," of which man is the appointed interpreter. And when spoken of the great and original powers and motions of matter, this is, I think, a true and correct view. But we must never forget, that God has certainly placed many of the powers and motions of matter (we know not how many) under the control even of man's mind; and we have no reason to doubt, but every reason from analogy to believe, in the existence of other intermediate superior or inferior spirits between man and God—either as angels higher than men, or else lower than men, as devils—who have in various ages, and under divers circumstances of the world's history, exhibited their powers and influence over persons and things on earth—from the demon who tempted our first parents to sin, to the demon who spoke voices to Socrates, and taught him many things true and

useful, and saved his life, as he tells us, when flying from battle, but nevertheless left him in the lurch at last, and would give him no advice, and even forbade him to meditate how he should conduct his public defence against that accusation of blasphemy for which he died.

Every action is therefore a material motion of matter directed by a mind ; and motion is the action or operation of matter abstracted from its mental cause, and considered only in reference to the material *force* preceding and producing the motion in space and time.

As mind is the supposed and invisible mental cause of action, so force is called the supposed and invisible material cause of motion. But every cause implies a mind. When we abstract the mind from the action—*i.e.*, the invisible mental power of the actor out of his visible action—we have an action without mind—*i.e.*, mere *motion* of matter. And when we abstract mind out of cause, the cause becomes a *force* or energy, a material force only—*i.e.*, the state and relations of the matters preceding the material motion in question, and then exercising their natural energies !

So when we divide the universe into mind, matter, and language, we must divide their sorts of operation into actions, motions, and influence. We properly say the action of mind—motion of matter—and influence of language.

But though we all agree in believing that the universe, exclusive of mankind, is composed of mind and matter, spirits and bodies ; yet to the philosopher, who knows that these things are *in themselves*, as God's creations, wholly beyond man's knowledge and cognition, and that man only knows the minute motions and forms, the *effects* of these things at the inner ends of his in-carrying

nerves in his brain, if he deems his thoughts of mind and matter, as objects of human *cognition*, to be accurate; then he is bound to say that, the *cognisable* universe external to himself, is composed of the WORDS mind and matter and language, as he to himself understands and realises these words; for he otherwise asserts that to be cognisable which is not cognisable. He reasons to himself and others about these words *mind* and *matter*, about spirits and bodies, their true meanings, their true contents, true states, and true relations. Because, if he believes the truth of his *words*, he must believe, of course, in the real existence of spirits and bodies, of mind and matter, and in the truth of all that he utters about them.

But his *belief* is not *cognition*, for that would contradict his microscopic investigation of human physiology.

His knowledge in *words*, of the visible microscopic phenomena of the human cranio-nervous system, forbids him altogether from believing that the human mind knows, or can possibly know, anything whatever of external things, except certain microscopic somethings which he believes to be vibrations, undulations, waves of his own nervous pith or matter—minute motions and forms only—at the inner ends of the in-carrying nerves situated in the human brain.

And so man's knowledge of "mind" and "matter" is necessarily reduced to the verbal contents and meanings of those words or formulæ in his own mind, or else his philosophy contradicts his physiology, and the language of the philosopher contradicts the knowledge and the language of the physiologist.

The true philosopher, the *Symbolist*, is not less a *believer* in matter than the Materialist; nor less a *believer*

in mind than the Idealist; nor less a *believer* in ideas, thoughts, impressions, intuitions, conceptions, and representations, &c. &c. &c., than are the *word-warriors* respectively of each opposing school of successive philosophers who have hitherto appeared in the world's history; but have overlooked and neglected language and logic as the science of all human TRUTH.

The symbolist accepts what is true in the foundation of all; he accepts mind, he accepts matter, he accepts language. But he goes on to say that, when he has accepted mind and matter as fundamental things, and general human conceptions, they have thereby become *words* in human cognition, and so are to the true philosopher swallowed up and included in the third category—LANGUAGE. He does not mean or allege that mind and matter are less mind and matter than before, because he asserts that all human cognition of these things consists of words—fundamental words—assumed in the beginning as a division of the Universe, including therein all mankind and all philosophy and all cognition.

If the reader cannot see or understand this, he seems to me simply slow, or verbally confused, or deficient in abstract comprehension of the actual contents and meanings of the words—mind, matter, and language—which he has himself admitted and adopted as fundamental and true. If he will first remember that it is clear, that of the *general things* or *general thoughts*, other than his own idiosyncratic conceptions, represented by the words mind and matter, he knows and can know nothing—that language is the only philosophic medium between his mind and other minds—that by adopting the *words* mind and matter, he has laid fetters on his own thoughts of the universe,—he will see, I hope, that to think or attempt

to get out of those fetters is logical self-contradiction; and that to say he knows or can know anything of mind or matter, except as *words*, is to stand self-confuted by his own language in open and manifest contradiction to itself.

If the reader sees this, as I trust he must do, clearly, he will also see that the first possible or most abstract and concrete state or relation of these three words, mind, matter, and language, is as his own Division, into one and many—*i. e.*, as number in general in the abstract; or as *three* like units in the concrete, composing the universe as *one*; *i. e.*, as a division $1 + 1 + 1 = 1$ (Universe); whence all arithmetic can be deduced as signs, symbols, or language—a science of abstract signs, which is, by demonstration and deduction, altogether pure, eternal, and necessary, and such as cannot be otherwise in any intellect capable of receiving and comparing and registering the human signs or symbols of which it is composed. But of course the mathematical reader is not to confound mental or material existence with verbal equality because we use the same signs for each. We must not confound logical equivalents with mathematical equations—nor philosophy with mathematics—nor mind with language.

Having thus by deduction arrived at NUMBER as the first *necessary* state or relation, the most abstract form of language, we can deduce TIME as the first necessary state or relation, the most abstract existence, of mind; and SPACE as the first necessary state or relation, the most abstract conception or thought of matter. And the reader who started with the common-sense belief of his childhood in mind, matter, and language, finds that he has deduced, with absolute logical certainty,

and is lawfully and logically and scientifically in possession of the three great abstract words, ideas, and things, *number*, *space*, and *time*, which we all, more or less, understand, and by which all scientific philosophers measure the universe. Number, in short, is abstract language; time is abstract mind; and space is abstract matter!

But how do we measure or make sure of time and space? I say that it is always by number. We take a *unit* of time—a day, a month, a year—and add and multiply them into ages and centuries; or we divide a day into its parts—an evening and a morning, an hour, a minute, a second! So of space we take a unit of space. A barleycorn's length, a thumb's breadth, or an inch—a cubit, or forearm's length—an ell or yard, the length of the whole arm (a guard) from the shoulder to the middle-finger nail,—such were the rude measures of our ancestors; and these were multiplied and divided by number.

Thence we have gradually arrived at an arc of the earth's meridian, or the length of a second's pendulum in a fixed latitude, or the world's radius at the equator,—all of which are merely imaginary and indefinite numerical units as measures of space, of which, perhaps, the most proper and most easily tested and corrected is the length of the second's pendulum in a fixed latitude; because it unites number, time, and space with this earth on which we live.

Thus time, space, and number are the most abstract states (or relations in and to themselves) respectively of mind, matter, and language, and become words, thoughts, and things, accurately explained and strictly deduced.

Spirits exist in time, bodies in space, and words in numbers infinite. And as mind and matter are to the

true philosopher only words to his logical reason, thoughts to his personal mind, and things to his spiritual faith, so the infinity of space and time is only the infinity of number applied to finite spaces and finite times; and the only three pure sciences are those of number, space, and time — universal arithmetic, universal geometry, and universal harmony or music, in their largest senses. In this sense arithmetic would include every science of abstract language, arithmetic, algebra, the calculus and logic; which last is merely the laws by which we properly substitute one verbal expression for another, as its equivalent, in ordinary language. But Language presents itself to the mind, either as a proposition or word expressing *mental* material existence, or else as *mental* relation and harmony, or else as equal in logic—*i.e.*, either as an existence, as an analogy, or as an equation.

There are certain simple scientific questions which from the earliest times have puzzled men of science, but which God has rendered it impossible for imperfect minds to solve. These are, for example, to find the square root of 2, or double the cube; to find a perfect musical scale; to find the exact length of or square the circle; and to find a law of prime numbers may probably be added to these.

Foolish men, not sufficiently humble, by long puzzling over these apparently simple questions, have driven themselves into a state of lunacy.

All fractions of two are open to us to choose from, as one would think; and yet we cannot find what fraction of two multiplied by itself is exactly two! All numbers and all scales are open to us, as we think; and yet we cannot find a perfect scale of harmony! All

lengths and all fractions of length are open to us, as we think; and yet we cannot find any true and exact expression for the length of a circle, whose radius is given as one.

All lengths are open to us to choose from, and nothing seems simpler than to have two cubes, one of which is exactly the double of the other; and yet we cannot, with all the numbers of arithmetic and all proportions and all fractions open to us, fix on the exact proportion, the true and exact relation, of the two sides of these two cubes! Whatever you say, the mathematician who goes a step further can prove you to say falsely!

Most of these questions seem simple enough, and quite possible enough, and yet we can neither prove them to be impossible nor find a perfect solution—a true and perfect symbol or expression. Man has, as it were, at the very outset of science, to learn humility.

These questions involve number, time, and space. To find the square root of 2 seems to involve only number. Why in three thousand years has it never been found?

To square the circle or double the cube seems to involve both number and space; but why have they never in three thousand years of inquiry been accurately solved? A perfect musical scale involves number and time and space perhaps, and has remained a desideratum for three thousand years! Why has it never been found?

Thus man's thoughts and conceptions are easily shown to be more perfect than all his signs, symbols, and language yet invented. His intellect is pure mind, but his symbols are involved and complicated with matter.

His mind is made in the image of God—a spirit; but his language is his own creation, the vibrations of mat-

ter counted and measured by his mind, and registered in signs, words, symbols.

When men are inclined to boast of their knowledge and science, one might justly reply to them, Why! are not men contemptible insects, who, with all their intellect, in three thousand years have not yet found the square root of 2; or doubled the cube; or squared the circle? Do these first, and then boast of human science! Give us the accurate fraction which, multiplied by itself, is exactly 2! or square the circle, or else become humble, and acknowledge that you know nothing, which is the truth; for all our knowledge is only human signs and symbols! mere breath from our mouths, or black marks from the ends of our fingers; vibrations, undulations within us, measured and compared by the mind.

The fact seems, to my mind, to be this; that there is a certain insoluble relation between the three prime numbers, one, two, and three, just as there is an insoluble relation between the right line and the circular line when the two lines become purely mathematical. If we assume a line to be length without breadth, then the relation between the right line and circle is an infinite relation. There is something fundamentally absurd or self-contradictory in thus supposing the circle straightened out! How can a circle become straight? it is impossible, or a contradiction; and the numerical relation between the two conceptions is like the approach of a curve to its asymptote, which always approaches but never reaches it—an infinite relation inexpressible in finite terms; it can never be expressed perfectly in merely human terms—signs or symbols, except as become infinite.

The human *mind* as an intellectual spirit is perfect;

but it has to work with *matter*, whose motions or vibrations can be varied infinitely in the human soul, the seat of reason, emotion, and will; and *language*, which partakes of both mind and matter, being a *motion* of matter duly recognised as a *form* by the mind, of necessity is unable, and refuses to express with perfection that which is purely spiritual.

Language is motion and form combined into one; but form is fixed, and motion not fixed; and when we suppose a form to move as in an undulation or vibration, we are combining space and time, or mind and matter, and are seeking in number for a fixed *form*, the symbol of that which we start with considering as unfixed or infinitely different!

So it is also when we seek a perfect musical scale, which is, in fact, seeking a fixed numerical value for the infinitely unfixed combinations of harmonious vibrations or undulations in time and space.

Harmony, we know from experiment, is the union in space and time of spatial vibrations or undulations of a given medium, like air or light. There is a harmony of colours as well as harmony of sounds, and no doubt also a harmony of all our other senses. But seeking a perfect musical scale is like seeking to square the circle or to find the square root of 2—it is seeking to fix a material form of Harmony, which is purely spiritual, either into matter, or into language, which are not spiritual—*i. e.*, a contradiction.

These questions show to us that man is like God, in his spiritual mind or Spirit, *perfect* and *free*; yet infinitely less in his freedom than God, in that his spirit is connected with matter, which he did not himself create, and from which he can never be free.

But that part of a man's mind which we call his *soul* is neither free nor perfect; it is connected with man's body, and subject to many of the influences of external matter through the body; but, nevertheless, the *spirit* of man, though thus connected with the matter of the soul, and through the soul with the matter of the body, is both free and perfect—at once infinite and absolute. "Ye are all gods!" said Christ Himself to His fellow-men! There is a part of us divine, and made in the image of God! It is the spirit and intellect—proud, haughty, and unsubdued—which, like a demon, is ready to treat its own soul and body as merely counters it has to play with, even in a contest with the Creator Himself—the intellect of man, unsubdued by the Holy Spirit of God through Christ, is the fit habitation of the devil!

We can, however, solve suchlike mathematical questions nearer than any assignable quantity. We can go on to infinite mathematical perfection; but it is by going on, not by stopping—and we can never reach it. But utility limits the intellect as the body limits the mind; and utility, which is the great *material* teacher, brings back the intellect from its abstract flights, and shows us that such intellectual exercises soon become out of all relation to man's bodily position on earth. Though utility itself has exhibited its own madness in its search after perpetual motion, the philosopher's stone, &c. It is only when the *moral* intervenes that man can be properly told to go on to perfection, and to be "perfect even as our Father in heaven is perfect." On moral and intellectual subjects alike, however, we may avoid foolish and unlearned questions, which only generate verbal strife.

Language and words and numbers seem to be and are infinite, and man seems at first to be completely their

master ; but, on the contrary, he is their slave. Words are the fetters which man often, to his own destruction, places upon his own intellect. Symbols, which he is free to choose, nevertheless bind his soul. Signs, which he himself freely creates, fetter his understanding. "By his *words* he shall be justified, and by his *words* he shall be condemned ;" and yet he has without question an unlimited choice of symbols ; but for every idle word which he speaks, he will have to give account in the day of judgment.

To interpret language in its most general sense, is to interpret not only all the words, signs, and symbols which man uses, but is to interpret also, all the *actions* which he has ever performed or can perform. And of course, therefore, the true philosophy of history, which is the true interpretation of human action, is to trace that human action to all its mental motives, and in all its states and relations. And when we consider how there are no actions which men commit, which are not influenced by what they call their principles of action, or their motives—which at bottom are only the ideas, the shibboleths, or words and symbols of their sect, their nation, their party—or else of their ambition, or their private conceptions or enthusiasm—all symbols of mind—we must perceive that Language must play a much greater *rôle* in the philosophy of history than has ever hitherto been assigned to it.

If a mountainous country, for example, produces superstitions, superstition, no doubt, produces creeds, and creeds produce devotees, and devotees produce human history, under certain circumstances. Is the history, then, caused by the mountains, by the superstitions, or by the creeds—*i. e.*, by matter, by mind, or

by language? The matter influences a few minds at most. The mind influences the individual! The individual, with his Language, his creed, his *symbolism*, making the mountains respond to his language, moves the mass to devotion, and the devotees make history. But it is not mountains only that have made history, but also the deltas of the Nile and Ganges, the triple delta of China, the delta of the Rhine; and are the islands to be left out, Delos and Iona? The mind, in all cases, without doubt, created the language! But, O shades of Comte and Buckle! did the matter create the mind?

Most men will perhaps at once perceive, and frankly admit, that the national, religious, and party flags under which we fight, and for which many men have been and are ready to die, are merely ideas, conceptions, principles, words, signs, and symbols, which they who adhere to them have adopted as parts of their very nature, and of their existence as intelligent men. But it is these watchwords which have always produced the greatest events in human history. Thus ideas and principles, which have worked out human civilisation, are merely *words*, symbols, language—the language of the nation, sect, or party.

But the private and secret idiosyncrasies—the private conceptions, ambitions, and enthusiasms or fanaticisms, which also have played their rôle in human history—are also nothing but mental ideas and conceptions, which may be and are reduced into *words*; and the actions which they have produced are the true symbols of the original ideas or conceptions.

The actions caused by ambition or enthusiasm are surely the very language which they speak, sometimes, of course, with the false attempts to conceal the truth,

of the Pharisee or the Jesuit, of the statesman, the lawyer, or the warrior. The leaven of the Pharisees and the leaven of Herod—hypocrisy or statesmanship; or else the leaven of the Sadducees and lawyers—disbelief in the invisible or in the spiritual,—all are expressed or to be found in the words and familiar cant of the epoch—of the individual—the party, the sect, or the nation.

In fact, if we believe in Christianity as the very centre and key of all human history and human civilisation—if we believe that Christ “has made us unto our God kings and priests,” and that we, as Christians, in the true sense of the word Christianity, as a Spirit, “shall reign upon earth;” all human history becomes reduced to *language*—to the words and actions, which from the earliest age have tended to retard, and the words and actions which have tended to promote, the ultimate triumph of Christianity! The philosophy of history is, in fact, that Divine wisdom, which has prepared mankind for the ultimate triumph of love and truth—for the final triumph of the Spirit of Christ, over all nations and all tongues.

And this wisdom of history, as it appears to me, must be sought for and found in the science of language—in the science of the words, signs, and *symbols* which have governed and still govern mankind—as the *true* wisdom is to be sought for and may be found, as I believe, in the words of Christ himself.

Language is the efficient ruler of human souls, either acting separately as individuals, or conjointly as a people. The one human soul submits to and adopts the language separately, and one or more submit to or adopt it conjointly with others; and these are the efficient cause of human history. And language, therefore, ultimately rules the destiny of nations.

Any other conception or principle of human history necessarily ends either in pure materialism or in an idealism—which is the worship of a mere mechanical and physical reason—in atheism or pantheism ; whilst, on the other hand, fixing on Language, as the fundamental principle and efficient cause of human history, leaves full room for the admission of the influence both of matter and of mind ; for the wisdom both of God and of the devil, both of good and of evil spirits—for the influence of *mind*—and also, as well—for the power and influence of those physical and material circumstances, which have tended to modify for a time the current of human affairs.

Hegel starts with the assumption that REASON is “the sovereign of the world, and that the history of the world, therefore, presents to us a rational process.”—That “reason is the substance of the universe, the infinite energy”—“the infinite complex of things”—“the true”—“the eternal”—“the absolutely powerful”—“its own infinite material”—as well as “the infinite form which sets this material in motion.” “The domain of history,” he tells us, “is this hypothesis” ! and he ends with the conclusion, “that what has happened, and is happening every day, is not only ‘not without God,’ but is essentially ‘His work.’” “This,” says he, “is the true Theodicæa—the justification of God in history—the process of the development and realisation of SPIRIT—the history of the world” !

This is an *idealism* which leaves no room for *matter* ; which either denies the existence of evil, or makes God responsible for such existence ; which considers Buddha, and Confucius, Zoroaster and Socrates, as forerunners of Christ, and equally, or perhaps more highly, inspired

than Christ Himself; who, on these principles and in such case, becomes only the narrow resultant of "the Hebrew myth"—partaking of the narrow religious prejudices of the mountain tribe of Judæa, though still more or less, perhaps, inspired by the Reason of the universe.

Comte and Buckle, on the other hand, turn to a materialism and positivism, which make the "grand être de l'humanité"—man and his history—the mechanical result of the mingled influence of light and darkness, of sea and land, of mountain-chains, fertile deltas, and sandy plains, of animal or vegetable diets, and throwing theology and metaphysics, and language also, to the dogs, as the mere idle dreams of the infancy of mankind, worthy of the attention only of priests and children, treat human history as the mere effect of material causes! Their system necessarily terminates in a pure *materialism* similar to that of the Chinese and Confucius, who anticipated Christ by five centuries in proclaiming the golden rule of "doing as we would be done by," or as Comte expresses it, "Vivre pour l'autrui." Upon this principle of universal materialism, Brahma and Vishnu and Siva, Ormuzd and Ahriman, Jupiter and the God of Abraham, as well as the Divine Reason of Hegel, and the Divinity of the "grand être de l'humanité" of Comte,—all become equally violations of "the Reason" of individual humanity, which is the true god of the rational positivists, or the positive rationalists, as well as of the German idealists.

Both these schools equally forget and omit human language; and the one denies practically the existence of *mind*, and the other the existence of *matter*. All other schools are mere confused modifications of these two—dwelling for a time on the material, and for

another time on the ideal, influence in human history, but never clearly perceive that both must merge in the influence of language—of the words, signs, actions, symbols, which are all subject to man's free will and free choice, and yet are all symbolical of pure mental emotion, intellect, and will—of Minds, the authors of human history—minds which are either good or bad, but that the bad are limited and restrained by *matter*.

Matter is the first creation of the one God self-revealed to Adam and Abel and Enoch—to Noah and Abraham, Isaac and Jacob—to Moses—the God of the Jews, who first said, "Let there be light, and there was light"!—And to suppose another source of mental truth is to divide and dualise the Deity; and to say that *all* human wisdom is from the one source, is to confound the Deity with the Reason and intellect of mankind!

We cannot now pursue this scheme of history. But mind is active and matter is passive; matter is the fetter, the limit, which God, the first mind, has placed on all created minds, because through this matter they must necessarily act. And as matter is the visible type of invisible mind, so language is the symbolical action of mind, using matter as its instrument.

Human language, therefore, necessarily becomes the fundamental element in all human history! for man is ruled by words, governed by words, directed and excited by words, urged to action by words. And all his actions are the mere symbolical result of all the words and language which his Mind has submitted to and accepted for its direction and government within.

Positivism, as it appears to me, means nothing but mechanical *materialism*, leaving out of consideration

the great hidden Mechanic who first made and moved the matter. If He is pre-supposed, He is mind or spirit; and matter must be deemed either distinct or not distinct from spirit. If not distinct, the system becomes *idealism*; and thought and Reason, or Spirit and Idéas, take the place of the mechanical and positive. But if matter be thought distinct from spirit, the reasoner usually falls into some *system* of eclectic conceptualism; and vainly endeavours to distinguish his idea or conception under some form of *language* not previously adopted—either in whole or in part—not perceiving that every idea, every thought, every conception, can only be generalised into a cognition, common to mankind, in words and by *language*.

The symbolist admits and submits to this truth, and perceives and admits that the external phenomena of sense are all generalised into the word *matter*; the internal noumena of individual thought are all generalised into the word *mind*; but that both, and all their phenomena and noumena, only become the objects of the conjoint cognition of mankind by the third generalisation of both into words or *symbols*, accepted by the sect, the party, the nation, the tongue, in which they become established instruments of thinking and of acting.

Language, then, being symbols or *words* known, acknowledged, and accepted, they—the words—are used and treated as being the very thoughts and things themselves; which to doubt or deny, offends the conscience of the whole community, who deal out death in this world and damnation in the world to come, as hardly sufficient to expiate the offence against the established mode of speaking! If the minority are

strong, they argue and resist—if weak, they dissemble and sneer,—till some man loves a true thought better than a false and empty form of language, and dares to face the martyrdom which Truth has usually met with!

But martyrdom is not the test of truth, and men have freely given their life's blood in support of what is false. Just as we too often, alas! behold "the animal within us first kill the man and then end by killing himself," so we may behold a wicked spirit within first poison the intellect and then destroy the soul; and the great instruments of such mental destruction are only false SYMBOLS, or symbols falsified by spirit.

How and by what means Man is to distinguish true symbols from false symbols—true words from false words—thus becomes, to our human intellect, the question of questions; the end and object of all purely intellectual thinking and reasoning—the great riddle of Philosophy—the science of Truth.

CHAPTER XII.

THE RIDDLE OF PHILOSOPHY.

IT has been said that many philosophers have written on philosophy without having "once touched on or understood the fundamental question—viz., how that first perception, seeing, or cognition of the individual object itself takes place." It is said "the true riddle to be solved is not how order and connection are brought to bear upon the whole multiplicity of objects already known and treasured up in the memory, but as to how any single image first enters the consciousness, or, if you will, how an impression, a motion, or determination of the psychical organ converts itself into something known."

This is said to be the grounds and reason, and to exhibit the cause and extent, of "the contempt poured by speculative philosophers in general upon the logic of Aristotle—viz., because it does not serve to explain this fundamental problem," "but always pre-supposes ready-prepared notions, and deals with them by a process of combining and decomposing, instead of diving into their genesis and origin"!! In short, this wonderful, transcendental philosophy is expected to enable A to explain to B his and their knowledge without any *words* or ready-prepared notions in common! The first, if not the whole, question and difficulty manifestly arises

from such philosophy overlooking or neglecting the true position and importance of human *language* and of general terms ; and from being ignorant of the fact that men have no possible power to speak of anything whatever but words only, some of which must be assumed at first, or taken for granted in the beginning of every discussion.

The first cognition takes place in the creation or adoption of a word!—*i.e.*, a mutual sign, mark, or symbol, internal and external, made in order to express the cognition to one's self and others. And till men can mutually adopt a general term, or a set of general terms, to express some cognition admitted, they cannot possibly discuss anything whatever—neither the first nor any subsequent cognition! This is manifest and beyond dispute to all who can think and reason.

Men, by their nature, as minds or intelligences shut up in bodies, cannot possibly know anything until they have formed a thought of the thing ; and they cannot possibly reason or speak to one another of things, but only of their individual thoughts of things ; and the thoughts are private and individual, and not general or mutual : so that men or mankind cannot possibly speak of *general* thoughts of things, but only of their general and mutual *words* invented or adopted for their thoughts of things. To deny this is merely to deny the existence or distinction of mind, matter, and language.

Men *feel* the outer universe through their senses, but this is feeling with the body, not thinking. We have to generalise the particular sensations into the *universal*, the general conception or thought, before we can begin to think even to ourselves ; and we must adopt and

assume the *word* before we can reason about the thought of the thing to other men.*

For example, if we receive and feel the prick of a pin, the *pain* from the prick of a pin is particular, and we *feel* it with our *bodily* senses as a sensation; but when we think of it, and before we can *think* of it, we must generalise it into human *pain* as a concept or thought; but when we think of it as a thought, the concept or universal human *pain*, it still remains individual to the mind, until we again generalise it into the *word*, to represent not only our thought of human pain, but the general thought of pain as felt from the prick of a pin, in men, in general; and not till we have reached this third generalisation can we reason about human *pain* to the multitude.

Thus we think of things and speak of thoughts, but can only reason to others about *words*. We feel the sensation from the prick of a pin or other injury to our nerves; we first generalise all the circumstances into our own thought of human pain, or form in our own minds a thought, a concept, or conception; but that concept or conception—the thought—must be again generalised into the human *word* or general term before it can be spoken of; and it then represents not our individual thought of pain, but all men's thoughts of pain; and this verbalisation of all these general thoughts of human pain is a third generalisation of the bodily sensation. And this is self-evident to every one

* The first and second generalisation are very well expressed in Ferrier's Lecture on Socrates (Ferrier's 'Remains,' p. 220 *et seq.*); yet he did not see, that what is true of thought in respect of sensation, is equally true of language in respect of thought. We cannot speak of the individual thought, but only of the *general* thought, which is merely an accepted or universal word.

who admits the existence of things, thoughts, and words, or mind, matter, and language.

Our bodies feel, our souls think, and our spirits reason. There are, in truth, three generalisations of external matters; for the same thing is true if we take a material object without us, like gold or a rose, instead of a bodily sensation within us, like pain. There are not two but three generalisations. First, we generalise *many* qualities into *one* object—the colour, shape, smell, &c. This is not thinking, but simple perception with all our senses of the object in question. Next, we class the objects together which are like to one another. We think of the *many* objects as *one* class—metals or flowers. This second generalisation is still individual in the mind to form the general thought or conception. But then there must be a *third* generalisation of all the thoughts and conceptions into the general term. 1st, Therefore we have *many* qualities into *one* object—a material object; 2d, *Many* objects into *one* thought of the class; 3d, All the thoughts into *one* word, the accepted name for the general idea of the material object. It is only of this third generalisation—the *word* called the name of the thing—that we can possibly reason. But the word is, in truth, the name for our thought of the thing.

The same three generalisations also take place concerning all *internal things* in the mind. There is always the thing, the thought, and the word. “The conception present to the intellect” is an object with qualities or powers; and then we each form the general *thought* of that conception, and then adopt the general *word* for our thought of the conception. We can only speak and reason to one another about this third generalisation, which

is the *word* or general term. There is always, in short, the *thing* we think of, the *thought* we think of it, and the *word* or words which express the cognition. There is no *cognition* that can be spoken of till we arrive at this third stage, which already involves categories, predicables, and axioms—existences, possibilities, and principles; for the individual *thing*, the individual *thought*, the individual *word*, always involve number and time and place in the fact of the existence of the cognition.

The contempt, therefore, is not deserved by Aristotle or his logic, but rather by Gernian transcendental philosophy, which proposes the absurd and self-contradictory question of *discussing* cognition without *words* to reason with! of discussing a *word*, and yet not recognising the existence of *language*! This has been, ever since the days of Plato, the fundamental error or confusion in all philosophy—the not recognising the existence and true importance of human language. Men can therefore neither speak nor reason of either things or thoughts themselves, but only of general *words*; not because words are everything in nature, but because they are everything in general human *cognition* and human reasoning.

Men must begin by assuming some common words expressing some ready-prepared notions admitted by mankind—some thought and belief in nature, or in the universe within or around—before they can possibly begin to reason at all.

They must assume the word "cognition," for example, before they can possibly discuss or solve the question of how the first cognition itself takes place; they must assume the existence of *knowledge* before discussing its

origin ; and they must assume "ready-prepared notions," and not only the unknown notions, but the known *words* for them, before they can possibly discuss their "genesis or origin," which is, in fact, the first predicable of Aristotle, the "genus" of the things.

The creation of a general word, sign, or symbol, or its mutual adoption, is therefore the first general intellectual intuition ; and all or most speculative or transcendental philosophers have been ignorant of this logical truth, or overlooked its philosophical importance ; and they hide their ignorance in a cloud of new words often badly chosen or ill-regulated, and only partly understood.

But the only origin of the first cognition which we can discuss is the origin of language, or of the first words we assume ! But words are all *forms* in space, and *motions* in time. Philosophers have been thus always ignorant that words were not only needful and necessary to all cognition and all thought, but also that they could, in truth, speak and reason to others about nothing else in the universe but words ! So we have been told that "Fichte, Schelling, and Hegel substitute a constructive method which essentially depends on the warmly-contested doctrine of intellectual intuition," "which consists in the very activity of the inward sense, which is a productive process of definite intuitions and intuitive perceptions," &c. &c. ; "and that, as philosophers, we must lie in wait to surprise nature in her most secret laboratory ; and so that it resembles the direct process of artistic production, not knowing how or why until the thing is done by an insight and potentiality, an absolute quality of *self*," "which requires methodising in order to prevent it degenerating into an unscientific game of the imagination," &c. &c.

All of which, and much more suchlike, transcendental language, used by all speculative philosophers of the object and subject school, merely expresses the fact, that speculative philosophers, like all men in general, must and do adopt or invent words, and manufacture systems of thinking with these words, with more or less consistency ; and hitherto generally without the slightest perception of the fundamental truth, that they are only talking and writing and reasoning, and can only talk or write or reason about their *assumed* words, and words alone,—not because, as we all believe, there is nothing in the Universe but words ; but because we must assume a word for our thought of the thing before we can reason about it. And when we do reason about it, we are only reasoning, and can only reason, about the “ready-prepared notion” expressed by the word so assumed at the beginning as being self-evident to all men.

Out of this verbal cage, or logical prison, no philosopher and no man can possibly escape, simply because it is the limit put upon man by his nature, and upon man's thoughts by the Author of his being. Man by nature or by God is perpetually involved in a prison of symbols from which it is impossible for him to escape ; for our only possible plan of trying to escape is to think internally new thoughts of things without us, and invent new *symbols* for them, a new or more varied prison of *words* for our thoughts of things, which things and thoughts are unknowable to mankind in general ; and all that we can do is to offer new and more perfect *symbols* of such thoughts of things, for the acceptance of our fellow-men, in such forms as their faith and reason compel them to adopt.

Then, however, comes the believer in so-called "inductive truth," who declares that "man's intellectual progress consists in the idealisation of facts, and his moral progress in the realisation of ideas"! not perceiving that the true idealisation of facts is only the *creation of correct words* or symbols within himself; and the realisation of ideas is also only the creation of correct words adapted to promote human knowledge without himself. And that "the peculiar sagacity or power of divination, for which no precepts can be given," which, as he thinks, "catches at the discovery of inductive truth," is again merely the power to create new or adopt old but true and appropriate self-evident words, signs, and symbols, from which the so-called inductive truth can be legitimately *deduced*! We must, in all science, start from what is self-evident.

But what is deduction? and what is legitimate deduction? That we must discuss hereafter. But the whole riddle of philosophy in this point of view, or how cognition in general, or the first cognition about which we reason, first takes place, is merely the question, "What are words?" and "what part do words occupy in philosophical research?" raised and proposed by philosophers, who have themselves forgotten the existence and importance of *language*; and that words are things as well as thoughts; and that everything reasoned about is a thought unknowable, and every thought spoken of is only a *word* generalised and adopted by mankind.

Of course it is a great, and must remain a great, riddle to explain the *word* "cognition," or induction or deduction, or any other word, without knowing the nature of words in general!

But the *first and second intentions* of the medieval schoolmen illustrate the difficulty and the question :—

“The schoolmen taught that the ten categories or predicaments of Aristotle (substance, quantity, quality, relation, action, passion, ubi, quando, posture, habit) were first intentions—*i.e.*, likenesses of real external existences—and that the predicables (genus, species, difference, property, accident) were mere human conceptions, or second intentions. ‘A first intention,’ says Aquinas, ‘is the likeness of something existing external to the mind—as, for instance, the conception which follows on hearing the word *man*, a conception which is founded immediately on the thing.’ Whereas a second intention ‘is not a likeness of anything existing external to the mind, but a conception following on our mode of understanding such things. These (the predicables) are invented by the intellect itself—as, for instance, the conception which is signified by the word *genus*. Intentions of this kind have their immediate foundation not in the things, but in the understanding, though the remote foundation be in the thing itself.’—Thus the schoolmen supposed that they had both the objective and subjective requisites of a perfect system of the universe of all existing things, external and internal, and betook themselves to syllogising.”*

Now this method or arrangement of reasoning has been supposed to be peculiar to medieval philosophy, and to be the cause of its barrenness. But this, I say, is a total mistake ; for every system of reasoning whatever, and every man who thinks and speaks, must have categories and predicables, and axioms of some sort, and use them logically. He must have assumed classes of *things* or existences, and assumed questions as possible about things, certain *existences* which are assumed to exist, and certain questions which are assumed to be *possible*, before he can think or reason at all.

So when Kant arrived at the conclusion that “all our intuition is nothing but the representation of phenomena,” and asserted that “the question, what are objects

* Chretien's ‘Logical Method,’ p. 48, 49.

considered as things *in themselves?* remains unanswerable, even after the most thorough examination of the phenomenal world," he proceeded to lay down his "*categories*," which, as he had thus abolished the reality and truth of things *in themselves*, he thought, were not things like Aristotle's categories.

The categories Kant adopted were quantity, quality, relation, and modality, which he said "are not in themselves cognitions, but mere forms of thought for the construction of cognitions from given intuitions." But, in fact, Kant's categories were not classes of things, but were classes of judgments or noumena—assumed forms of mental *questions* about phenomena. Kant's categories were what Aristotle's logic would justify us in calling concrete predicables. His categories were *phenomena* reduced to *noumena*—internal mental imaginations without any scientific measures whatever. And I see little or no reason to think that the foundation of all reasoning, as exhibited by Aristotle, is worse than that exhibited by Kant, though Kant made a great step in advance.

The first took man's language as he found it, and said, There are ten *things* generally acknowledged by mankind about which we speak in ordinary language, which ten things have, as is now perceived, a remarkable analogy to the ten grammatical parts of speech in the Greek language; and about these things, said he, we can ask five questions, which were in substance—1st, Its origin and history (or *genus*); 2d, Its form and nature (or *species*); 3d, Its essential peculiarity, which, we suppose, makes it itself and nothing else (essential difference or *essence*); 4th, Its other properties and peculiarities (or *property*); and 5th, All its accidental belongings (*accident*). All five are very important questions

about things, and much more useful and general than Kant's quantity, quality, relation, and modality.

But no man can reason at all without doing, in some way or other, what Aristotle and Kant did—*i.e.*, unless he assumes some *things* or *existences* to talk about, and also assumes some *questions* or *possibilities* about the things to discuss. Without such assumptions, reasoning and thinking cannot even commence in our own minds; and he must, besides, have and assume some fundamental *axioms* or self-evident principles of the Logic or science he intends to discuss.

I venture, therefore, to think that Aristotle's method is more reasonable than that of Kant, who first abolishes what everybody believes in—the *exterior* world—and reduces all *phenomena* to *noumena*, and then proceeds to establish a system of new language about that *interior* world of noumena which no two men can in any way compare together! This seems to me altogether absurd, or at least less reasonable than the course taken by Aristotle.

Now Kant's argument, which reduces all external things to noumena or thoughts, like Berkeley's, is unanswerable! But it is a most absurd and illogical conclusion therefrom to proceed at once to talk and reason about thoughts in our minds, or *noumena*, which we cannot in anywise examine or compare, and attempt to compare internal instead of external things, which all say they do and can compare. After proving that we cannot know or reason about external things as they are *in themselves*, it is, doubly manifest that men cannot reason about other men's thoughts as they are *in themselves*. If, then, the external world is only phenomena, and they are turned into noumena, *a fortiori* the noumena of

mankind in general can only be human *words* mutually agreed on and adopted to express these noumena! Kant's reasoning is unanswerable, but his practical conclusion is absurd. The only rational and common-sense method seems, therefore, to be that of Aristotle—viz., to take the words which we think men ought to, and which they do, call *things*, to be spoken of, and then divide them and distinguish them as accurately and scientifically and as well as we can; and then to raise such *questions* about them as we think *possible*.

Aristotle's division violates both laws of Division, and is neither clear nor complete. The parts overlap in all directions, and pure *mind* or spirit is wholly omitted, unless we confound mind and matter together under the word *ουσια*, being or substance, which involves us with Spinoza and Hegel. His division of questions into genus, species, essential difference, property, and accident, is, however, very acute, but it landed mankind in a hopeless search after *essences*!

But the reader may reply, "But are not you doing the same thing? and are you not equally or more inconsistent than Kant? for you first abolish both mind and matter, as they are *in themselves*, and declare them both unknowable by man, and then proceed to reason about them, and discuss their powers and qualities, just the same as if you were a positive or materialistic philosopher!"

But I say and answer, that it is not in the least inconsistent for me to abolish mind and matter as being things *in themselves* unknowable by man in absolute truth, and to bring them back as subjects of *faith*, which everybody who believes the *words* he uses must believe in! I abolish them as *things* unknowable; but

I restore them as *words* believable, and to be believed by all men! And it is for a purpose, and because I am discussing the most serious of all possible questions—the nature of man and of man's mind, and his true relations to the universe around him—questions which lie at the very foundation of every discussion, not only concerning the external universe of matter, but also concerning morals, politics, and religion—questions which underlie all our rules of conduct here, and all our hopes of life hereafter! And pure symbolism is, I assert, the only true solution; and I reject materialism, idealism, and conceptualism as all verbally contradictory or confused.

Kant very justly remarked, that upon these high questions “the meanest understanding” and “the highest philosopher” were on an equality, and that a thoughtful peasant may really know as much as the wisest amongst us. But “vain philosophy” “and the oppositions of science, falsely so called,” are for ever assuming new forms, and disturbing the minds of the intellectually weak; and it is right, therefore, to expose their emptiness and self-contradiction, and to exhibit the true relations of man to the universe around him.

No man can possibly know in *truth* anything but the workings of his own individual brain, and these workings are words; and whenever he attempts to travel out of that internal word-working or word-making, either into the external world or into the brains of other men, and says he knows anything about what is going on there, *really* or *in truth*, “he is doting, knowing nothing yet as he ought to know it, vainly puffed up by an ignorant and fleshly mind,” which has not learnt its entire dependence upon God!

Man is so constituted, that by the working of his brain

he can create *words* and can adopt *words*. He can receive their words from his fellow-men, and can transfer his words to them! And that is all that he can do, and all that he knows in *truth*. And all the science and philosophy that ever was or ever can be in this world of ours is merely such human words logically dealt with—neither more nor less!

Of course I am bound in candour to admit that my philosophy is in the same condition with all other philosophy, and that the reader can, if he pleases, blow my whole fabric to pieces by denying my foundation, my original verbal assumptions—if he is a materialist, by denying the existence of mind; if he is an idealist, by denying the existence of matter; and if he is some other anti-symbolist, by denying the truth or proper existence of my fundamental words or language! But then he does this at the risk, as I say and prove, of self-contradiction, by denying the existence either of his own *mind*, or of his own *body*, or of his own *language*, in and by and with each of which he attempts to contradict my system, and to overthrow my philosophy! He is, in his words, symbols, and actions, therefore, self-contradictory, as I say and prove.

If he dares not to do this, then I have obtained my vantage-ground! I have obtained my three WORDS, three THOUGHTS, three THINGS! Then I can demonstrate and can deduce my numbers unit by unit with orderly *names*, and can defy him, without verbal self-contradiction, to stop me at any step before I have the whole of arithmetic demonstrated to eye, ear, and understanding.

But we must, I say, therefore begin with assuming the obvious existences, mind, matter, and language, and then we deduce number as the first and simplest cognition

—*many* units under *one* name—and assume it as the first possible predicable ;—the one and the many. But in the very adoption of our categories and predicables—our very first step—we are already involved in the whole riddle of philosophy, in the nature of language and of words ; and we cannot proceed to discuss any question whatever until we have settled what words are, and have fixed on some axioms or self-evident principles and laws of logic or language which all believers in and searchers after truth must admit and submit to as fully self-evident.

But as soon as we perceive and know that every word is a *number* of things and a *product* of thoughts—*i.e.*, a complex number—and discern that the number of the *things* depends on the thoughts—or as the Aristotelian and all other logic must say, that the proper extension of the word depends on the proper comprehension ; or, in other words, that the more undefined its comprehension or product of thought, the greater the extension, or the *number* of things which can be called by that word as a name, and *vice versa*,—we then begin to perceive that the classification of things under a common *name*—*i.e.*, verbalisation or language for our thoughts—is a mutual act of cognition by all those who accept the assumed *word* or name, and that the assumption of the word is the first act of cognition of which we can mutually speak.

Thus the first act of cognition which we have recognised is the triple verbal distinction of mind, matter, and language, when we assumed those words as given *a priori* as a logical division of the universe. Though we go on to say, as against those opponents, the materialists and idealists, who dispute these *three* words, that

the one word knowledge or "cognition" in itself implies three things, three thoughts, and three words—the thing knowing or cognisant, the thing known or cognised, and the thing between them, or the word expressing the cognition or knowledge. In short, *the object* or thing, *the subject* or thought, and *the word* itself, are three things quite as clear and distinct, and deduced from the ordinary meaning of the word cognition or knowledge, and as self-evident to all men who think, as our original assumption of mind, matter, and language.

But the objection which we have made to the assumption of the word knowledge or cognition standing alone as a first assumption is, that the word is not complete as a distinction or division of the universe by leaving out the *unknown*; and also that things, thoughts, and words is not a *clear* division; for thoughts and words are also things, and words are thoughts within us, and thoughts are words without us; and that the language of the conceptualists is therefore ambiguous, as that of the materialist and of the pure idealist is self-contradictory.

Having, however, assumed the universe as being the product of three great categories of mind, matter, and language—of spirits, bodies, and symbols—which we assume as both a complete and a clear distinction or division; this assumption, of course, necessarily includes what is *unknown* as well as what is known of the universe, and therefore openly exhibits and acknowledges the fundamental insufficiency of all human philosophy.

But being granted *a priori* our three *words*—mind, matter, and language, each of which is in itself a *word* to all men in general, and is, besides, also a *thought* to each and every man in particular, and also is a *thing* in which or in whose positive existence all men must be-

lieve—we also assumed three self-evident logical axioms: 1st, The right to use words or reason, which we call the law of *identity*; 2d, Denial of the right to speak falsely, which we call the law of *contradiction*; 3d, The denial of the right to speak ambiguously, which we call the law of *division*. These three rules, we say, are three self-evident axioms or laws of logic or verbal philosophy, which all who speak and profess to reason are bound to admit and obey—*i. e.*, all men are bound to speak truly and clearly and completely—or else they are bound to admit their ignorance by inquiry or silence.

Thus the true solution of the riddle of philosophy, or how the first cognition takes place, is to our minds a very simple solution when understood—*viz.*, we say it takes place in the *creation of a general term*; the *word* as well as the *thing*, and the *mind*, being all three constantly factors in all human cognition. They are the three factors of human knowledge. And the cognition takes place in the invention or adoption of the general *word*, sign, or symbol, to express the *thought* or mental perception of the *thing* or object thought of. And the first origin, or genesis of a *general term* is the axiom of number, or of the one being the many, and the many being the one—*i. e.*, the fact of many things being all included in *one* general name, and the *one* general term newly created being a proper name for a number of like things! That is the fundamental fact in all human language. And the whole difficulty of the riddle has, therefore, arisen from the ignorance or neglect of philosophers themselves, in not perceiving the fundamental and paramount importance of human language or words in all human questions, including,

of course, the fundamental questions of philosophy itself.

Words, then, are the only thoughts and things about which men can speak or write or reason to themselves or others, not because, as I have so often said, words are the only things in existence, as we *believe*, but because all things and thoughts must be converted into and expressed in human words, signs, and symbols, before we can, in anywise, speak or write or reason about them as cognitions. This is the fundamental fact in all true philosophy, and the true reading of the riddle.

But, then, what are the *axioms*, or the first and self-evident propositions, which we make with our assumed or adopted and admitted words? Axioms, as self-evident truths, have given rise to an almost infinite amount of confusion, mostly produced from philosophers not perceiving the true relations of language in respect of thoughts and things. An axiom appears to me a *self-evident* proposition necessarily involved in the meanings of the words adopted or invented, and mutually agreed on! The words Liberty and Truth—logical liberty and verbal truth—involve and assume the axioms of Identity, Contradiction, and Division.

But it is clear that the whole riddle of philosophy, which has so puzzled philosophers of the speculative class, has arisen from nothing else than a mere absurd and self-contradictory attempt of the philosophers themselves to explain *language*, which is philosophy; and, at the same time, to leave language out of consideration! A's cognition is not and never can be B's cognition, and the only thing in common between them is the *word* cognition, which can be only explained by other *words* either adopted or invented. And till some

such fundamental *words* are adopted, and till some self-evident possibilities or *relations* between them; and some axioms are acknowledged in words—*i.e.*, till we have categories and predicables and axioms—*i.e.*, things and thoughts expressed in words and ready-prepared notions—we cannot begin to reason at all, or even have a riddle to explain, much less give any explanation thereof! Speculative philosophy, therefore, like all other science, must submit to *logic* as its beginning and origin; and no doubt, to men who despise logic and words, this must appear a very humiliating conclusion! But to us, who believe that human words have governed human history, and will continue to govern it, the humiliation is lost in the deepest interest, wonder, and admiration—beginning with fear and reverence for the Creator of mankind, and for man born in *His image*.

We find in Reid's so-called overthrow of idealism, and of Locke's theory of primary and secondary qualities of matter, an example of how closely he touched on the truths of SYMBOLISM.

"Suppose," says Reid, "that a sensible day-labourer should meet with a modern philosopher, and wants to be informed what smell in plants is. The philosopher tells him that there is no smell in plants, nor in anything but the mind; that it is impossible there can be smell but in a mind; and that all this has been demonstrated by modern philosophy. The plain man will, no doubt, be apt to think him merry; but if he finds that he is serious, his next conclusion is that he is mad, or that philosophy, like magic, puts men into a new world, and gives them different faculties from common men. And thus philosophy and common sense are set at variance. But who is to blame for it? In my opinion the philosopher is to blame. For if he means by smell what the rest of mankind most commonly mean, he is certainly mad. But if he puts a different meaning upon the word, without observing it himself or giving warning to others, he abuses *language* and disgraces philosophy, without doing any service to truth."

Thus again he says :—

“ Their paradoxes are only an abuse of *words*. For when they maintain, as an important modern discovery, that there is no heat in the fire, they mean no more than that the fire does not feel heat, which every one knew before. And with regard to primary qualities, these philosophers erred more grossly, by rashly concluding that the sensations of figure, extension, and hardness, perceived by means of touch, must be images and resemblances of figure, extension, and hardness ; and Bishop Berkeley gave new light to the subject by showing that the qualities of an inanimate thing, such as matter is conceived to be, cannot resemble any sensation ; that it is impossible to conceive anything like the sensations of our minds but the sensations of other minds. Therefore, when they had explained and established the distinction between the appearance which colour makes to the eye and the modification of the coloured body which by the laws of nature causes that appearance, the question was, Whether to give the name of colour to the cause or to the effect ? By giving it, as they have done, to the effect, they set philosophy apparently in opposition to common sense, and expose it to the ridicule of the vulgar. But had they given the name of *colour* to the cause, as they ought to have done, they must then have affirmed with the vulgar that colour is a quality of bodies, and that there is neither colour nor anything like it in the mind.

“ Now we have,” says he, “ considered extension, figure, solidity, motion, hardness, roughness, as well as colour, heat and cold, sound, taste and smell—we have examined with great attention the various sensations we have by means of the five senses—and are not able to find among them all one single image of body or any of its qualities. From whence, then, come those images of bodies and their qualities into the mind ? *Let philosophers resolve this question.* All I can say is, that they come not by the senses. I am sure that, by proper attention and care, I may know my own sensations, and be able to affirm with certainty what they resemble and what they do not resemble. I have examined them all one by one, and compared them with matter and its qualities, and I cannot find one of them that confesses a resembling feature. Common sense hath led men to investigate by experiments the nature of colour and sound and heat in bodies. If, then,

natural philosophy is not a dream, there is *something* in bodies which we call colour and heat and sound."

But it is surely equally certain that there is something also in the mind which we call the feelings, perceptions, or ideas of heat, colour, sound, as well as of extension, solidity, roughness, &c. We know, if we know anything, that light, heat, and electricity pass along our nerves from external objects; so there is something in the mind to which we give these names—colour, sound, extension, solidity, &c.

Thus these are most certainly things and thoughts; and we give, and of necessity we give, the same names, or use the same words, to express both the thing and the thought of the thing. But what, then, are we speaking about? Is it not clear that we are speaking of our *words* for our thoughts of things, and not of the thoughts or things themselves.

Reid, although he thus clearly touched upon the truth that all philosophic disputation is only about *words*, never, however, so far as I know, distinctly perceived the whole consequence of his own clear observation—viz., the inevitable conclusion that all man's knowledge is *verbal*, and that man can only speak or reason about his own words or signs and *symbols*.

Reid very distinctly lays it down that "we are inspired with the sensation, and we are inspired with the corresponding perception by means unknown." And because the mind passes immediately from the sensation to that conception and belief of the object which we have in perception, in the same manner as it passes from signs to the things signified by them, Reid, for that reason, called our sensations *signs of external objects*—

“finding,” he says, “no *word* more proper to express the function which nature hath assigned them in perception, and the relation which they bear to their corresponding objects”—*signs of external objects!*

But what is the difference between the word *sign* and the word *idea*? Is it worth while disputing whether we know external objects by their *signs*—the sensational effects they produce on our bodies—or by their *ideas*—the perceptive effects they produce in our minds? Is it worth our while to declare ourselves a modern realist with Reid, or a modern idealist with his predecessors? Is it not clear that both parties are disputing only about the words “signs” and “ideas” or “concepts,” to which neither attach any distinct or settled meanings? Is it not clear that in this respect the philosophy of common sense is quite as much in fault as the philosophers whom Reid condemned, or as any philosophy that has preceded or succeeded the philosophy of common sense? Who can possibly distinguish between the sensation in the body (the sign) and the perception in the mind (the idea), or the *word* for that perception or sensation, or show when the bodily sensation ends and the mental perception begins, unless and until he invents or adopts some word or other which the opponent will grant him as a common medium of discourse, as representing the perception to express some fact as mutually admitted? In every discussion we must start from some *words* admitted to be mutually understood as being our assumed *word* for the unknowable *thought* of the unknowable *thing!* But when the word for our idea of the thing is once invented and adopted and granted on both sides, then, and then only, can rational discussion begin on the subject of that word. Until this is done, and the word

admitted, we can arrive at no rational conclusion whatever on any subject of debate !

The operation of the external thing produces a sensation in the body, and the sensation in the body produces a perception in the mind, and the mind by reflection invents a *word* to express its perception of the external thing. But the word is the only existence that can possibly become the common property or possession of two human minds in any discussion or discourse. The thing is only known by the thought, and the thought by the word. And the philosopher who thinks and says that he can speak of the *common* sense of mankind will find that the plain man can in words make himself quite as merry with the realists or common-sense *feelosophers* as the common-sense philosophers made themselves merry with the extreme idealists ; and the simple truth is, that man is by nature so constituted that the unknowable *thing* passes into the unknowable *thought*, and the unknowable thought passes into the human *word*; and man cannot in anywise distinguish where or when the operation of the thing begins or ends in the thought, or where or when the operation of the thought begins or ends in the word, for we do not know how or when the word begins in the mind of the reasoner to be distinct from the thought in the mind, or the thing itself expressed by the word. We perceive and know that all the three—viz., *things*, *thoughts*, and *words*—are distinct ; but in every human discussion, nevertheless, they are the same in all respects for the purpose of discussion. The word is the thought of which we are speaking ; the word is the thing of which we are reasoning ; and the only thoughts or things that can be discussed or compared by men are

their words for their unknowable thoughts of unknowable things.

Philosophers and mankind, therefore, only deceive themselves and others whenever they think or say that they can discuss anything whatever but human words. Man is cut off and separated from the world of mind and the world of matter as they are in themselves, and all knowledge and all philosophy is only the science of human words ; and that science must at all times commence by assuming certain words as common to both sides, and as acknowledged and admitted by all who speak and reason.

The great difficulty is to fix our attention on the *words*, instead of on the thoughts which they signify, and on the thoughts in our minds, instead of the things of which they are the signs or ideas. Till we can do this we can arrive at no certain conclusion on any subject whatever. Thus Reid says :—

“ When one speaks to us in a language that is familiar, we hear certain sounds, and this is all the effect that his discourse has upon us by nature : but by custom we understand the meaning of these sounds ; and therefore we fix our attention, not upon the sounds, but upon the things signified. In like manner we see only the visible appearance of objects by nature, but we learn by custom to interpret these appearances and to understand their meaning. And when this visual [natural] language is learned and become familiar, we attend only to the things signified, and cannot without great difficulty attend to the signs by which they are presented. The mind passes from one to the other so rapidly and so familiarly, that no trace of the sign is left in the memory, and we seem immediately, and without the intervention of any sign, to perceive the thing signified.”

Now this is strictly true, but what is the consequence? Words are the signs of thoughts, and thoughts are the signs of things. We have no know-

ledge of things but by our thoughts, and we have no knowledge of other human thoughts in general but by their words. If a man says he knows things themselves, he clearly contradicts the best established facts of physiology and the laws relating to man's nervous system. All that the mind of man knows are the minute infinitesimal somethings which pass along his own nervous system. If a man, again, says he knows other men's thoughts, he evidently is greater than man, or says what is not true. He only can know men's words. Men's words, however, do pass and repass in common from man to man, and along their nervous systems in common; and they can make their words agree by alterations and modifications, and so can hope and believe and trust that their thoughts also agree, and thence can conclude that they have acquired what they call the same knowledge of external and internal things.

But still this is only *hope* and *belief* and trust about human consciousness, and not in any respect knowledge or certainty about thoughts and things themselves. It is knowledge of words, and hope and belief concerning things and thoughts.

Of course ordinary men, and all men, in common discourse, do and must, in order to be understood, by ordinary men, call this confident hope, belief, and trust, *knowledge* and certainty of external nature and internal mind; but that is no reason why men of science and philosophers should go on for ever puzzling themselves and other men upon so plain a subject, or in any scientific or philosophic discussion make over and over again so gross a blunder, and be guilty of such manifest self-contradiction, as to admit at first that mind and matter

are distinct and different, and that by reason and in consequence of our blind bodily nervous system that we cannot reach things themselves; and then, notwithstanding, say that their *words* mean any external things themselves, instead of meaning, as they only can mean, each man's own private individual *thoughts* about external things! These private thoughts no one can possibly know but the man himself.

Such logical folly is only fit for shallow and confused thinkers, or men who have not learnt the first rudiments of philosophy or of logical truth. So when the importance of human words is clearly pointed out and perceived, and it is seen that all human knowledge, all human certainty, consists of human words, and words only, no rational being, if well instructed and sensible, will say that useful and intelligible human words are *nothing*; or that *numbers*, which are very intelligible and useful human words, are nothing; or use or repeat such foolish language as that "all numbers must be numbers of something, and there is no such *thing* as numbers in the abstract." Such language is only the self-assumed stupidity of materialism. All men not idiots can understand numbers more or less, and numbers are very orderly, intelligible, and useful human words, signs, and *symbols*.

Words, then, are something; they are signs of thoughts: thoughts are something; they are signs of things: and as we can know nothing of other men's thoughts of things, we can only discuss other men's words for their thoughts of things, and we can discover and invent new thoughts of things, and express them in some new, clear, orderly, and intelligible words. And the first and simplest and most orderly of all intelligible

human words are certainly numbers ; for every unit is assumed entirely alike to every other unit, and each number is clearly distinct from every other number, whatever may be the assumed basis of the numerical system. No man who has learnt arithmetic can possibly mistake one number for another, except for want of time or ability to do a sum in simple subtraction, in order to find out the exact numerical difference, if any, between them. Thus numbers are the simplest and most certain of all human words, and the foundation of all human science and certainty, and nothing can be properly said to be part of accurate human science until its internal states and external relations are reduced to numerical calculation.

Thus it is clear that our knowledge of human physiology, which of necessity compels us to admit that all human knowledge of external nature must be confined and limited to a knowledge of the infinitesimal somethings which pass along the human nerves, and that the human knowledge of those infinitesimal undulations must be confined and limited to a knowledge of the *words* which man invents and adopts in order to express them to his neighbour—that knowledge which we obtain by proper mental reflection on experiment and observation of the methods by which external things pass into internal thoughts, and internal thoughts pass out into human words, compels us to admit that no human discussion whatever can ever really take place about anything except about *words*.

It is useless to attempt to pass what is clearly impossible—the barrier of the human body—and it is worse than useless, it is folly or madness, and self-contradiction, to pretend to pass the limits which the God of

nature has laid down, beyond which man's powers do not extend. The limits appointed by nature can never be humiliating in man to acknowledge. Men and philosophers may, with affected pride, pretend to despise mere questions of *words*, but they only exhibit their ignorance of human nature and of all human truth by such pretentious superiority to verbal questions. They only show that they have never yet fathomed the bottom of one single subject of human science or human opinion upon which their philosophic or rational energies have been expended! They have yet to learn true humility; they have yet to seek for the only true foundation of all human knowledge. They have yet to learn of St Paul, and to say, "If any man thinks he knows anything, he knows nothing yet as he ought to know it."

Realism in all its forms, idealism in all its phases, are mere self-contradictory verbal traps into which successive generations of philosophers have from age to age fallen and stumbled and blundered on, contradicting, confounding, and confusing each other; and all men who venture within the attractive magic of their ill-defined words—relating, as they do, to the most interesting and most important subjects on which the human mind can speculate—should carry with them some thought of the importance of words and of the truth of symbolism.

But once let the limit of man's "*tether*," to use Locke's phrase, be clearly apprehended—let it be once acknowledged that it is by nature impossible to discuss real things or real thoughts, or anything existing in the universe, except only human words—let it be once acknowledged that each man's reality is only a solitary world in which he is altogether alone with his God, into

which no other man can possibly enter,—and it may be hoped that in time *symbolism*—a true science of human words—may at length supersede the noisy but shallow systems of ancient, medieval, or modern philosophy.

We only mention grammar in order to distinguish and avoid it. Philosophy may be called, no doubt, a universal grammar of mind and matter and language. But grammar proper consists of the laws and relations of each particular language or tongue; and universal grammar properly is logic and philosophy, and would consist of the necessary laws and relations of all tongues or all languages in general, as representing thoughts, things, and words.

When we find, as we do, that logic is nearly the same in Sanskrit, and in Greek, and in Latin, and in English, that resemblance shows to us that there is some underlying law of mind, some cause at work which can only be in the mind of man—*i.e.*, in general the laws of the human mind—which framed in such distant centres such resembling methods of argumentation.

But it is mere mental confusion to introduce ordinary grammar proper, the grammar of any particular language, into logic and philosophy.

The grammarian discusses nouns, verbs, adjectives, and adverbs, &c.; but these are distinctions of words as parts of each particular tongue, parts of speech logically corrupted, covering and caused by the peculiarities or the errors and falsities of each nation and people.

If a word ever becomes a mere sign or denotative, it is for the time dead; and has ceased to be a sign of anything in particular—it has become an empty and unmeaning blot. The thought or meaning is extinguished, the life is gone, and the word is dead. If it be

still the name of a thing, we have ceased to understand it. We look on it, in fact, if it be visible, only as the infant looks upon the light when it first enters its eyes! It has no thought about it.

We must therefore confine and limit grammar to its proper office of describing the forms and inflexions of words—the verbal contrivances which different peoples and tongues and nations have invented to express in language *things* and their supposed *relations*, and true or false *axioms* or principles. Underlying that universal grammar, which might possibly be extracted as a science of observation and induction from the varied etymology of different languages, which of course must include both true and false analogies and laws and contrivances, there is another and deeper truth—the science of truth itself—a science of deduction or philosophy properly so called—which we have named *Symbolism*.

Grammar, in its most extended and universal sense, is only one of the many inductive sciences—the science of language—which may be founded on the observation of man and his actions. But true language is true philosophy, and true philosophy is a science of deduction from categories, predicables, and axioms. Man is body as well as mind. And man's mind is soul as well as spirit. And man's body and soul are both subject to laws, which no doubt may be sought for by means of proper observation and experiments, and reduced to some sort of science and order by induction, in the same way as the laws of other organised beings are reduced to order and science by induction. But such inductive sciences are not TRUTH, but guesses at truth. We must try and bring all such sciences within the sphere of accurate logic, within the range and accurate

measurements of number, time, and space. We must search for self-evident words, relations, and axioms from which to start, and thence *deduce* pure scientific truth, which no man can possibly doubt who grants the *data* from which the deduction begins.

But the riddle of Philosophy is the question of the true and proper place and importance of Words, Signs, SYMBOLS—*i. e.*, of human Language—in all philosophical and scientific discussion. And the reading of the riddle is that, in Philosophy and Truth, *symbolism* is all in all; and the fundamental fact is the obvious and certain fact, that human language, in every nation and people and tongue, has been formed and framed according to the framework of arithmetic or NUMBER—the most simple and accurate of human sciences, and the basis and foundation of all philosophic truth, concerning the Universe around us. All human Truth must begin with Number.

CHAPTER XIII.

AXIOMS.

No science can begin to exist till we assume fundamental categories, predicables, and *axioms*. Things, thoughts; and words self-evident or assumed to be so—existences, possibilities, and self-evident principles—lie at the very foundation of all true science; and it must ever be so, for without these three, accurate human language cannot begin to be. And whatever knowledge, cognition, science, or *truth* may be, they must, if general, be expressed in human language.

Truth cannot be founded on falsehood, nor is the Universe a lie. We cannot begin to reason without FAITH in some things, some thoughts, some words—*i. e.*, some existences, some possibilities, some principles.

To say, with Hegel, that “being and nothing are the same,” is to give the lie to our own being; and then immediately to say that “they are not the same,” is to give the lie to our own words: and the assumed reason for, or conclusion from, these two lies, “because being is *werden*,”—*fieri*—becoming, growing, &c.—is a third lie of confusion and ambiguity; and confounds, being the thing, with being the thought, the verb with the noun, the existence with the possibility, the category with the predicable, the Being with the State of its being, the Thing with its mental condition or thought—it

confuses Mind and Matter. The axioms of Hegel, therefore, are not only not self-evident, but they all are evidently false—excusable, perhaps, in a youth misled by the antinomies of Kant, and the *two* unities, supposed to be *one* unity, of Fichte and Schelling. But the pride of the Professor, or else ignorance of true logic, must perhaps answer for their permanence in the world.

There are not *two* unities, but *three* unities—the object, the subject, and *the word*—or else your mouth is shut about them! There are *three*, not *two*, factors in every human cognition; and till the *word* is created or assumed, your cognition is not complete, your reasoning cannot begin; because other minds cannot share in your cognition or conclusion.

But there is not the least antithesis, antinomy, or contradiction between the three. On the contrary, matter is the type of mind, and language is the symbol or type of both mind and matter. Matter wholly abstracted, but yet possessed of form and motion—*i.e.*, of language—is the symbol of Mind; and mind wholly abstracted and deprived of motion and form—*i.e.*, of language—is symbolised by dead or inert matter! And language, which is an undulation of matter, with an emotion of mind added thereto, forms our only symbols of both matter and mind. Language is motion and form combined.

Matter is the fundamental form, and mind creates the motion, in the thought, the conception, the idea. But the word is not matter, but a form and motion of matter; and the word is not mind, but only an emotion or metaphorical form and motion of mind. Yet to all of us, in our reasoning, matter is a word, and mind is a word; but there is no antithesis, antinomy, or contradiction between the three, except that the three are distinct in

every *cognition*, and are active *factors* in its creation and its life! They are not opposed to, but are props, and supporters of each other, in each new mental creation; and they are all necessarily interwoven into every human cognition.

As an axiom is assumed to be a self-evident proposition, to ask for the evidence of an axiom is a self-contradiction; for it is to ask the evidence of that which we have already said requires none.

To discuss the evidence of an axiom, therefore, is an absurdity; and it is an absurdity and self-contradiction also to discuss whether what we deem axioms in this state of existence would be or not self-evident in some other state of existence, or otherwise; for that introduces possibilities of existence, of which we can have no ideas; and of which we can therefore form no true words. Our words are necessarily limited to this state of existence; but our minds can imagine states and relations not existing here, and only metaphorically expressed by our existing language, and we can say of our axioms, that they *must* be true to every intellect, created like our own.

But every man is entitled, of course, to deny that every proposition is properly an axiom or self-evident, or even true, and is bound to prove the contrary by an example, if he can! And there the discussion ends, or should end, till he can offer something more evident or more true! But a man contradicts himself if he calls a proposition an axiom and admits it to be self-evident, and then demands its proof; as if he admits that a man sees, and then demands how he knows he sees. That is self-contradiction, for the other can only answer: "My sight is self-evident to myself, though a matter of

proof to others, who have better or different or worse organs and instruments of vision; but what is self-evident requires no proof to the man who sees it is self-evident." The true way to proceed is to ask and require accurate *words* for what he says he sees, and says is self-evident, and then examine the words for ourselves!

But it is not only, however, the fact, that axioms are often assumed to be true, which are not true; but also "that truths are often assumed in a form which is far from being the most obvious and simple; and that truths once discovered are gradually simplified, so as to assume the appearance of self-evident truths!" An example of this is Dalton's celebrated discovery of definite proportions in chemistry. His law is self-evident to every man who understands the words "number," "proportion," and "atom." The instant that we assume the word "atom" as an indivisible, or ultimate particle, there must of course be a definite proportion in *number* between every *two* combinations of atoms which have reached their *limits*; for numbers are infinite, but the word "atom" assumes limits for both. To help the doubting reader, we have given a demonstration in a former publication.*

But it is also true that fundamental ideas are very simple when found out, and are then often undervalued. The ancients had no clear ideas as to how space and time could be combined to measure and compare motions and forces numerically, and therefore possessed no science of dynamics, which was reserved for the genius of Galileo, Descartes, and Newton. The ancients did not see clearly, what is now quite self-evident to every one who can think clearly, that the

* 'Philosophy, or Science of Truth,' p. 207.

forces of nature are to a great extent under man's control, and that a double material force is proportional to a double material motion, and that a double motion is a double space in the same time, or the same space in half the time. And so, till "God said, 'Let Newton be,'" these self-evident relations of force and motion, and space and time, were to all men vague and mysterious, *intensive*, but not measured by extension or space. But ought we to suppose that there is no distinction to be made between revelation of material truth to Newton and the revelation to Isaiah and by Jesus Christ? This raises a different question—viz., the distinction between the intellectual and the moral. It may be quite possible that God does not reveal the material and intellectual, and yet may specially reveal the moral and religious.

But axioms are only arrived at on intellectual subjects by gradation or by steps. Men, for long, had had the words and thoughts vaguely, but had no clear and certain—*i. e.*, no numerical or scientific cognition, concerning space and time, and their relations to the words and thoughts of force and matter and motion! But Newton saw and said, "What is the measure of a double force but a double motion of the same matter? or of a double motion, but a double space in the same time, or the same space in half the time?" and assumed certain axioms of motion, and thereon founded the science of modern dynamics, of which the ancients knew nothing! They could measure space and measure time, but they could not measure, scientifically, force or motion. Leibnitz disputed Newton's definition of Force; and, strange as it may now appear to most men of mathematical education, some of the most distinguished men of science

in Europe could not then perceive *clearly* in their own minds the difference between the force of a single stroke and the force of constant successive strokes, or of a continued push or pull—*i. e.*, they could not accurately compare them by number, space, and time. This Newton taught the world to do scientifically and logically; and Leibnitz and his supporters on this subject, were in the course of two generations logically extinguished.

But to those who have not yet acquired clear ideas of space and time and of motion by the scientific study of dynamics, even still the composition of motions is a subject of vague mystery. The questions, how one motion can always be resolved into two? or how any one motion may be conceived to be always produced by any number of selected forces? still appear to such men mysterious! In short, to some it is still a subject of mystery how any given motion, however small, in any direction, can be treated as the result *in part* of any given force, however great, acting in any other direction! or how equal infinite forces, directly opposed, would produce no motion at all! All such questions appear ambiguous and doubtful till we acquire the fixed and scientific ideas of the *words* force and motion, for which we are indebted to Newton. But there are still very few metaphysicians who have written accurately and logically on the subject of motion; and some of the greatest English conceptualists have written in hopeless ambiguity and confusion.

Thus, also, when Kant said and assumed as axiomatic, that "the original measure of space is the time which is required by a uniformly-moved body to traverse the space, and inversely the original measure of time is the space which such a body as the sun traverses,"

and also said and thought that "time and space are necessary conditions of all intuitions"—and that we cannot think anything except in some place or during some time—he assumed a false set of axioms, which he used as fundamental thoughts in his system. Space is not measured by time, nor time by space, but both are measured by number—by taking units of time and units of space, and numbering them. Motion is measured by space and time, not space or time by motion. Kant's mind was full of, but probably confused by, that very dispute between Newton and Leibnitz concerning modern dynamics and its fundamental ideas; and he forgot *number*, to which time and space are not in any wise necessary conditions.

Dynamics, or the science of force and motion, was wholly unknown to the ancients; but they originally, nevertheless, measured space and time as we all still habitually do—with units of space or time—*i. e.*, by number. But the ancients knew and understood geometry, or the measurement of space, as well as we do, though their instruments were inferior. The *original* measure of space, therefore, is not, as thought by Kant, time or motion in any shape or form, but a unit of space, and those units numbered; and time is not measured properly or originally by motion in any shape or form, but by a unit of time, and those units numbered! Motion, I repeat, is measured by space and time, not space or time by motion; and this is clear and manifest by example, because we can and do measure spaces and times without reference to any motion whatever.

This original oversight or error as to *number*, and this confusion as to motion, space, and time, pervaded all Kant's reasoning.

And many modern metaphysicians since the days of Kant, by their reasonings concerning Motion and Infinity, show that they have not acquired the clear thoughts and clear language of modern dynamics. But when a dispute arises about an axiom there can be no appeal except to language and logic ; for nobody can possibly hold a dispute about *self*-evidence except with *himself* ; and good logic will ultimately extinguish bad logic, though the art is a long one. But the history of the measures of Space and Time shows clearly the error of Kant's assumed notions of the relationship between them and Motion.

Thus, as we have already said, the ancients began by numbering spaces by the breadth of a man's thumb, or an inch ; by his hand, or a span ; by his forearm, or a cubit—even by barleycorns and elbows, or ells and yards, and by paces or steps, ages before any clear idea of motion was acquired. The ancients therefore originally measured accessible spaces not by motion and time, but by the numerical application of lineal units of space, or superficial units of surface, or cubical units of capacity, or solid space—*i. e.*, with the assistance of *number*. Ancient or pure geometry, which was the accurate measure of space, is the very model of good logic, but had nothing whatever to do with Motion ; which the Ancients did not scientifically understand.

So when the ancients measured Time by days and months and years, it was not by *motion*, but by heavenly appearances succeeding one another—by second events or *numbers*, not motions—numbering day after day, new moon after new moon, the risings of the stars, the pleiades, &c., so as to be visible at even-time—for a year. So in an ancient klepsydra or water-clock, or in an ordi-

nary sand hour-glass, it is not the motion that measures the time, but the successive fillings and emptyings; for if we saw only motion, or the sand moving, and not the state, and successive states, of the fulness or emptiness of the reservoirs, the motion would not measure the time at all.

We Moderns measure space and time by *number*, just as did the ancients, but we use better instruments, and greater accuracy. But the figures on a foot-rule, and the numbers on a clock's face, refute Kant's axioms.

Thus Kant's *axioms* or assumed self-evident propositions about space and time and motion were false in fact and history. He mistook their original measurements. The reverberations of the celebrated dispute between Leibnitz and Newton, and the importance of modern astronomy, may have assisted to confuse his notions of motion and space and time, and their order and relations. And I think the same confusion still lingers amongst the Comtists, in Comte's very absurd objection to the word *force*; though he finds himself logically compelled to use its counterpart *dynamics*! But it is most certain that space was not originally, and is not properly, measured by motion and time; and time was not originally, and is not properly, measured by motion and space. But, on the contrary, motion is measured by space and time, and space and time by number. Space and time are not so obvious to any person as matter and mind—they do not come to our minds so soon, and are in fact abstract deductions from matter and mind, as we have already shown.

Motion is the complication or product of the space divided by the time—*i.e.*, $M = S \times \frac{1}{T}$; which is axio-

matic or self-evident, because we all see in our own minds that a *double* motion means a double space in the same time ; or the same space in *half* the time—we see this numerical relation ; and clear ideas of motion, number, space, and time lie at the very foundation of all scientific reasoning.

Thus also, when we introduce the word Force, we have to introduce the mass or weight ; which is the relation between any material thing and the globe itself, the attraction or force of Gravity. And men of science are compelled to adopt a *Unit* of Force in order to accurately measure material forces, the expansion of steam and other gases, the pressure of liquids, the resistance of the force of cohesion in the strength of materials, &c., and the unit now growing into use is the foot-pound, or the force required to raise a pound weight a foot high in *space* against the force of gravity in a fixed *time*. Thus all modern physics bear a *numerical* relation to the globe on which man lives, and are measured by number, space, and time, and gravity.

Number, then, is first and simplest, the one and the many, reduced to orderly names, and is therefore most properly selected as our first predicable. After that comes time and space, which are deducible from matter and mind, and are both measured by number—*i. e.*, by choosing and adopting certain units of time or space respectively.—Then we adopt a unit of weight or gravity.

But it has been said that “it is not only that the mind does not, but that it *cannot*, apprehend any thing or event except conformably to the properties of space, time, and number.” This is not strictly true. It is true only of *material*, and not of mental or verbal, things and events. It apprehends number itself and lan-

guage, and the meanings of abstract words, without either space or time.

The truth is, that number, time, and space are three of our internal senses and capacities, and are all self-evident when presented and explained—just as seeing, hearing, smelling, tasting, and touching are self-evident. The three—number, time, and space—are internal mental senses; and the five we may call external bodily senses of matter, or internal senses of external matters of which the three are the only true measures.

We have an internal sense of number, an internal sense of time, and an internal sense of space given us by nature in the brain, by which we seek and try to measure external things, and arrange them in order, and reduce them to their proper classification or laws—*i.e.*, to order in language; or to their proper causes—*i.e.*, to order in mind; or to their proper weights and affinities and forces—*i.e.* to order in matter. We have a sense of number, just as we have a sense of sight; but we do not experience numbers as we experience sights, for numbers are produced by the mind within us, and sights by the vibrations of Light without us, and we have to invent names for our internal numbers, just as we have to invent names for our external sights. But we reduce sights to number and space and time, as they are our only internal measures of all external things. But we do not experience numbers; we invent numbers, in order to name our many external units, or bundles of units, so as to know them again.

We have thus seven bodily senses, including our vegetative senses of hunger and thirst, which are two senses on the interior surface of our bodies, while seeing, hearing, touch, taste, and smell have the beginnings of

their proper organs on the exterior surface of our bodies, and thence communicate by nerves with the brain. But all these seven senses are self-evident to the individual who possesses them, but they are not self-evident to anybody else. The blind man cannot judge of colours, nor the deaf man of sounds.

And if men, as sometimes happens, are born without any sense of number or of space or of time, they cannot learn arithmetic or geometry or music! And of course to such unhappily-constituted individuals there are and can be no axioms of these senses which they can comprehend — neither in arithmetic nor in geometry nor in music. Self-evidence is individual evidence. General consent is testified only by words.

But when we are reasoning, or attempting to reason, about axioms or self-evident truth, that must be a matter of *self* to each individual; and an axiom is only an axiom to him to whom it is self-evident, and of that he is alone judge. If he denies its truth, he should show how or when or where it is false; if he admits its truth, but denies its self-evidence, he should try, and is bound, to show some simpler self-evident truth from which its truth can be *deduced*.

If I deny that space and time are given to us *a priori*, and deny that they are at the foundation of *all* our intuitions, then I refute Kant's axiom, not by the denial, but by giving the example of *number*, which is simpler than either space or time, and is an intuition altogether out of all space and altogether out of all time, and which itself helps us by its application arithmetically to measure space and time; but yet it is not built or founded on them, or on either of them.

Can anybody, for example, tell the space or time of

the numbers 2 or 3? If he cannot, then to him Kant's axioms are false! and he must adopt some other axioms. But if he says they occupy space on the paper before him; that is merely seeing with his eyes and not with his mind, and confusing the existence of mind and language; but the universe might be annihilated, and numbers would still remain unaffected intellectually.

If a man asserts as an axiom the constant uniformity of what we call the laws of nature, and asserts that *all Truth* is founded on induction from a *number* of events, judged of by means of this axiom of the uniformity of nature, or by the like axiom of the universal reign of law; then I again refute him by citing the example of number, whose truths cannot possibly be founded on induction from any *number* of events; for number must exist before any induction whatever can be drawn, and though induction is founded on number, number cannot possibly be founded on induction. He who doubts or denies this is logically false and self-contradictory; because of two things both cannot be first, and every induction requires a *number* of instances.

If a man says and assumes that "number is a modification of the conception of repetition, which belongs to the idea of time"! I refute him again by showing, as the fact is, that every repetition involves the number *two* at least, which number must therefore have existed before we could in any wise observe and compare the repetition—that is, feel or perceive time! *Ergo*, time may involve number, but number does not involve time, for repetition involves number, and time is measured by number, not number by time.

No axiom, in fact, can be suggested which does not involve number, for every axiom, as a proposition, in-

volves three terms at least—the subject (1), and the predicate (2), and the asserted relation between them (3)!

Thus every proposition or axiom whatever involves number, as well as every time and every space involves a number of parts. Number is, therefore, the first of all our intellectual cognitions, and is given to us or is present to our intellects in every conception; and the only question is, What number of things shall we assume to begin with as self-evident things, thoughts, and words?

In short, all experiential and all inductive philosophy involves “the paradox of universal propositions obtained from limited experience,” which is not, I say, merely “a paradox,” but is a falsity in *logic*, being a conclusion more general than the premises! and therefore truth cannot be founded on induction which is logically false. And every falsehood which the world in general has received as a truth, has been a false *induction* from a number of facts, misunderstood by the mind; like the inconceivability of the antipodes, from seeing everything fall down, and concluding that there must be an up and down in space, as well as an up and down in the atmosphere! This was a false induction.

But a man might as well assume as an axiom that nature abhors a vacuum, which for some generations before the days of Torricelli was an inductive truth founded on experience, as assume with the positive philosopher of to-day that “*nature abhors variety*,” which is the true meaning of the universal uniformity of nature’s laws, which is the modern axiom assumed by the experiential and inductive philosophers. The universal reign of law, and the constant uniformity of what we call laws of nature, assumed as general and self-

evident universal axioms, are in fact no better than the medieval abhorrence of a vacuum, or the ancient inconceivability of the antipodes. They are all false or very silly inductive general conclusions from partial experience. For the abhorrence of a vacuum was the inductive conclusion from the rush of water and of all liquids and gases into a pump; just as the inconceivability of the antipodes was an equally false inductive conclusion (from all bodies falling *down* to the earth) that there was therefore an up and a down in nature, and in space.

So the modern axiom of experiential philosophy concerning the universal reign of law, or the constant uniformity of nature! is a mere misunderstanding of the true nature of the laws of matter which we have discovered in the universe.

The laws of matter are only uniform and necessary and constant until some *mind* intervenes, able and willing to direct otherwise; but matter, as sensible to man, is only a part of the universe, not the whole! Man finds himself and his senses always placed in the midst of a series greater and less than he can comprehend or perceive. The motions and vibrations which affect his senses cease to affect them if they become slower or faster than man's range or limits of sensation. And though God may not think proper now to work by angels and miracles; and though the devil may not now think proper or be able to inspire a Socrates by a demon, or a priestess of idolatry with a true or false response; or may not choose to promote the present worship of idols by such or like contrivances; yet he may still be able to promote the worship of reason by the suggestion of a false word or a false thought to some philosopher, or whomsoever else he finds without

faith in the one true God, and secretly desirous of making the worse appear the better reason.

In fact, this new axiom of the absolute universal reign of fixed laws in nature, as known to man, is a *teleological* axiom of the most pernicious kind, invented to hide or deny the existence of mind, the freedom of the human will, and the responsibility of man to his Maker! It is even false on the most mechanical theory of the universe, as Mr Babbage has shown us.*

But it is worthy of remark how man seems self-compelled to condemn himself by his own words; and it is curious to trace the positive and experiential philosophers, who deny final causes and the theological altogether, falling back on this *teleological* principle or axiom of the universal reign of law, the uniformity of nature, and of the laws of God. Thus, while denying the mind the foundation of metaphysics, they fall back upon the metaphysical principles of dynamics and statics, or moving forces and fixed forces. They thus exhibit themselves violating their own false assertion of the positive absorbing all into itself! or, in other words, they exhibit the falsity of the principle that matter is everything, and mind and language nothing!—they logically contradict themselves, and fall back into the *theological* and *metaphysical*.

I know of no source of truth except the one source. Directly or indirectly, all truth must come from that Spirit of truth whom Christ promised to send “to guide us into all truth,” and “to teach us things to come.” He alone can give us “a right judgment in all things.” And I know of no test of human truth except the logical test of a proposition when true being able to stand, while

* Babbage's Autobiography, chap. xxix.

all other logical contrivances ultimately fall into self-contradiction or ambiguity. We cannot logically describe the most obvious human phenomena without some word signifying Mind.

But it is certainly pitiable to behold men professing to love wisdom, and calling themselves philosophers, actually afraid of such words as *force* and *cause*, and yet pretending to talk, and feeling themselves obliged to talk, about *dynamics*, as if the Greek word for forces and powers would help to hide their confusion! * Force is the power of matter, and cause is the power of mind, and law is the power of language. The first—matter, exercises its power of necessity, and according to law, until mind suspends the law. The second—mind, exercises its power by liberty, and is a law unto itself, and language is the influence of mind upon mind by means of *symbols*.

Thus the laws of matter are only uniform until mind introduces by its power some other law. Every force and every power involves a Cause, and every cause involves a Mind; and the influence of language is exercised over mind.

True axioms seem to me only accurate explanations of the word or words in question; but sometimes these words have a popular and indefinite meaning, as well as the scientific meaning involved in the axiom, and so confuse the mind.

* “Ces deux termes, statiques et dynamiques, sont devenus *indispensable* à toute exposition sérieuse du positivisme”!—Comte, ‘Catéchisme Positiviste,’ p. 40. It is sometimes quite ludicrous to observe the logical shifts of the materialist to slip in the idea of *mind* without openly admitting the existence of mind; and Comte’s turning out the words *force* and *cause*, and admitting *δυναμεις*, though constantly applied to God, angels, spirits, and mental powers of every kind, is a remarkable example.

Thus, for example, when we say to an ordinary person not much instructed in mathematics, It is a self-evident proposition that "two right lines cannot enclose a space," he does not at first understand the word *right* in its geometrical meaning, because we speak of right actions and right sums and right times, as well as right lines. We have a mental, numerical, and logical meaning, as well as a geometrical or spatial meaning, for the word right, and we apply it indifferently to all these cases. The ordinary man uninstructed in geometry has therefore a right to hesitate till he understands the words "right line", as terms of pure geometry.

Again, a man who has never thought about the production of a right line, or about infinite space, may well hesitate over the words "never" and "enclose;" also about the word "space," a thing which no number of mathematical lines without breadth can ever enclose. He may ask, Why can't I go under the line or over it? What space do you mean? May not there be something at the end of the two lines to enclose the space? and so on, if the words and ideas of the mathematics of pure geometry are not previously familiar to his mind.

It requires a little turning over of the words by his internal sense of space, in order to fully apprehend the scientific meaning of the words "right line" and "enclose" and "space" before the true force of the axiom, as self-evident to our sense of space, breaks in on the mind. We then see internally, by our sense of space, that right lines which cut at one point must diverge and separate more and more for ever the farther they are produced straightly, and can therefore never enclose any part of a plane surface. This becomes self-evident as soon as

ever we have thoroughly sifted and understand the meaning of the words a straight or right line and plane surface, and it amounts to no more than a clear definition and explanation or understanding of the words right or straight lines cutting each other.

So when we say, "the whole is greater than its part," it is clearly a mere explanation of the words "whole" and "part," which may not be at first quite understood as referring to the same material thing or to space or time. But mind has no parts, but departments, powers, senses, and capacities—metaphorical parts, as all mental words are metaphorical; and time possesses parts, because it involves number and thoughts.

So the idea of parallel right lines is clearer than any scientific definition of them whatever. We cannot make the words so clear as the material symbols themselves, or the physical images are, to one who sees them; and so we find geometricians have fought over what is the best verbal definition of parallel lines; and whatever verbal definition we begin with, we have often to go to the visible sign or figure in order to explain our words to the beginner.

We must always remember that Euclid did not invent geometry, but only reduced it to logic—the logic of syllogism. A figure on paper, or a mark on the dust of the academy of Plato, *like* a right line, or *like* two parallel right lines, is not less a word, a sign, or *symbol*, than an audible or logical word. And *lines* and *figures* upon the dust of the academy as symbols of the true mental conceptions, in fact, preceded Euclid's logical words, and were not less words, signs, and symbols than any general words or universal terms, that can now be written or understood.

If we wish to understand science, we must sometimes return to its infancy, and perceive that a stroke drawn in the dust is as much a word, sign, or symbol of a general idea or notion, as any word we can now invent and write upon paper.

For though, as Berkeley said, a general *idea* or image of a whole number of things all different is a "staring absurdity," yet any sign at all will do for a *general word* if the sign is understood to be general and not particular. I have already observed that the suggestion that a man living on an infinite railway must necessarily believe that two right lines always enclose a space is merely supposing that such a man could never acquire a knowledge of the laws of perspective ! just as the poor but intelligent New Orleans negro, who had never seen any part of the world in which the land was higher than the water, and asked about the levées at New York, and how the water was kept out, might be supposed incapable of understanding that the whole lands of the world are not below the level of the water, because he had never seen it otherwise !

But what are called axioms, are all, as I think, truly involved in the proper understanding of the words themselves ; and they cannot be called truly axioms if they are not self-evident when the words are fully understood by our internal senses. But it takes time to revolve and settle the true meanings of words in our own minds ; and that is a very laborious mental exercise to the conscientious thinker.

It is the business of the man of science, however, to simplify the fundamental words of his science, so as to make his axioms self-evident to all who understand the words. But minds vary, and words vary so much, and

have such various unscientific meanings in popular language, that what appears to some persons quite self-evident in one set of words, seems full of difficulty in another set of words, all through the careless or wilful misuse of words, and the consequent misunderstanding of the same words by different people.

There is no magic in the mere words themselves ; but dubious words are the most effective instruments of dubious thoughts, and false thoughts always seek to hide themselves in dubious words.

It is an absurdity, therefore, and a self-contradiction only worthy of men whose ideas of language are wholly ambiguous and confused, to discuss the evidence of axioms we admit to be true. I never experienced an infinite right line ; but nevertheless I see, with my sense of space, for certain, that two right lines having once cut can never cut again, though produced infinitely.

It is self-evident to me from the meaning of the words right line ; and so it will be to you, if you think accurately about what a perfectly straight or right line means, and what producing it means.

We never yet experienced a perfectly straight line, yet we can make sufficiently near approaches to one to act as the sign or symbol of the more perfect scientific thought of the external things we call mathematical right lines.

But we cannot dispute about self-evidence, which can exist only in self. If we admit the truth, but deny the self-evidence, we should seek for, and are bound to show, some simpler truth from which it may be deduced. But every induction is a logical falsehood. And "*the necessary uniformity of the laws of external nature,*" which is the axiom now usually assumed in all induction con-

cerning material things, is neither *true* nor *self-evident* to any one who believes in his own mind and freedom ; yet that is the axiom on which the inductive philosopher attempts to found the truth of mathematical axioms !

We know of no necessary or universal laws of matter. The laws of matter may be suspended by sufficient powers of mind ; just as inferior laws of matter are suspended by superior laws of matter ; just as we suspend the action of gravity by holding a stone in our hands ; or as the action of gravity is suspended by the repulsion of gaseous particles or by chemical affinity ; or as chemical affinity and gravity are suspended by the laws of life ; or as man's will can suspend the laws of cohesion, and enable his muscles to bear a strain which would tear them asunder after death. Nature is not limited by our ideas and principles, or by our words, to express our limited peeps at external nature, which is all that our boasted laws of *matter* really amount to.

An axiom, therefore, is a self-evident mental relation involved in the meanings of the words themselves. *Language* involves the law of identity, or the liberty of speaking and making words, signs, and symbols. *Truth* in language necessarily involves the laws of contradiction and division—*i. e.*, forbids the use of false or ambiguous language. The first possible predicable is *number*—*i. e.*, the question whether the thing is, or is to be considered as, one or many, is the first possible question which can be put about it ; for our first possible conception of the thing gives us existence and number. If we say it is one, then we are considering its *state* ; if we say it is many, then we are considering their *relations*.

Unity and plurality are involved in our first and

every cognition—one, two, three, the *mind*, the *thing*, and the inchoate *word*, which last expresses the cognition of the thing—*i.e.*, the mental perception of or about the thing which we may seek to transfer or *traject* by means of the word into the mind of our neighbour.

All this, I say, is self-evident to every one who speaks and reasons without ambiguity or self-contradiction. But of course the reader may, if he likes, prefer a falsity, and can try and force his mind to agree with Hegel's self-contradiction, that "being and nothing are the same, but yet they are not the same," for "being is growing," which reason for the self-contradiction, to my mind, is, as I have said, merely the ambiguity or confusion between "being" the noun or thing, and "being" the verb or action; between "being" the category and "being" the predicable; and at the same time altogether neglecting "being" the *word*, a mistake which it is easier to make in German than in English; because the German interchangeable use of the verb and noun is constant and more common than our English interchangeable use of the present participle for a noun.

But, fundamentally, in the origin of all languages, things and questions, categories and predicables, existences and possibilities, nouns and verbs, were at first all mere expressions for men's original views of *matter* and *mind*—that which was dead and passive, and that which was alive and active. And in the early ages of mankind possibly every motion was conceived to be the action of a Mind.

What we call nouns, existences, categories, and things were at first probably supposed by mankind to be *material* things; and verbs, possibilities, predicables, and motions were all supposed to be *mental*. And philoso-

phers have been misled by this antithesis of language as originally framed by mankind in all countries and all ages, when every motion was supposed to be the action of a mind within.

Language overlooked itself, and still overlooks itself; and most men are and have always been so eager about *matter*, and what their *minds* shall think and their bodies do about it, that they have hitherto overlooked the necessity of language as a factor in every human cognition.

They not only overlooked it, but they despised it, and still, for the most part, do despise it as a thing of no moment and no importance! Whereas in philosophy, and in all cognition and all science, which is to be held in common by men, the importance of language is absolutely paramount; for we can have no general science or philosophy, and no general cognition whatever, without *language*: and language is all that we can reason about.

But when we have admitted that this Language is a joint factor in all science and all cognition and all philosophy, we find that, so far as these are human creations, language swallows both mind and matter in itself, and becomes all in all to men or mankind in general; because we cannot reason about human *actions* except as *symbols* of the mind which produced and caused the actions; nor of mind and matter, except as *words*.

Language seems to the individual nothing, but both to him, and to the race in general, it is all in all. The general thought of mankind, the general thing as understood by all men, are, and must ever be words—*i. e.*, everything about which they can reason. Yet to the individual, if he can frame a sounder language in his

own mind, language is really nothing but vibrations of air or light, of no importance whatever to him as an individual, if he believes his own ideas, which are his own *words* so framed. But if he accepts another's language, then it becomes part and parcel of his own intellectual existence—the necessary framework of his ideas of things. The words enter into him, and remain in him—possibly as a *form* of matter in his brain—certainly as a conception of mind in his soul, and as words or symbols in his memory and intellect, for ever afterwards leading or misleading him to or from the Truth.

But how are we to distinguish true axioms from the false ones, since false axioms have been assumed as self-evident? I know no answer to this, except by comparing and reflecting upon the logical deductions and relations which we can make from them. Truth may follow logically from a false assumption, but falsehood cannot follow from truth. If the consequent is false, the antecedent must be false; but the contrary is not true—as, for example, the false assumptions that the earth was the centre of the material universe, and that the heavenly bodies moved in circles, as being the most perfect figure, and the whole Ptolemaic system enabled men to calculate eclipses with great accuracy, and the conclusions were true and useful, though the antecedents were false.

We can only refer the reader who seeks for accuracy of thought and clearness of symbols to the writings of the mathematicians; and to their methods—to combine like things by the method of curves—to take averages by the methods of means and least squares—to seek for final conclusions, by the method of exhaustions or

residues—but in all with patience and conscientious and reverential thought upon the symbols and their meanings.

In my opinion, all human truth has this defect, that it is always hypothetical, in so far, that what we think self-evident may not be self-evident, or even true. But in our search for strict and positive truth, we can only humbly proceed from what we think self-evident truths, and deduce from them those remoter truths which can be demonstrated to hang on the first self-evident assumptions, by self-evidence, at every step of the demonstration.

Induction may sometimes or often seem to suggest to the mind a truth, but does not, and cannot, make it such. All truth must be obtained by deduction from what is self-evident. We must begin with what is self-evident, and must thence, by unanswerable, self-evident inference and reasoning, deduce our truth. Logical inference is always hypothetical in form, and depends on the premises being true; but the inference itself is absolute truth—the connection and mental deduction are absolute and necessary, and the conscientious intellect must distinguish between the necessary and the possible. Induction supplies us with guesses at truth; deduction gives us absolute truth, for every step, including the first, has been self-evident. Such are all the truths of mathematics. Such are all the truths of mathematical physics, if the fundamental assumptions are true. Such is Dalton's law of definite proportions, if we adopt the word *atom* or ultimate particle. Such are the truths of optics, if we adopt the undulatory theory of light. Such are the truths of Newton's astronomy, if we admit the law of gravity, and his fundamental axioms

of force and motion. Some study of mathematics, and some knowledge of what mathematicians have effected, is, as Plato thought, an essential preliminary to the proper study of metaphysics and philosophy. It is to the mathematician ludicrous, and should be considered disgraceful in the present day, for a man of education to feel puzzled by the paradoxes of Zeno on the subject of motion and space and time; for Galileo, Descartes, and Newton have taught us the true relation between the three things—*i. e.*, modern dynamics, the science of forces and motions in relation to number, space, and time.

When we have scientifically applied number, space, and time to matter, we shall then be better able to reflect on and investigate the harmonies of mind; for matter is the type of mind, and I think *harmony* is to mind what *symmetry* is to matter, and order and *relation* are to number. There are laws of harmony in the human soul, just as there are laws of symmetry in external matter. But still the human Spirit soars free above the human soul, just as the soul feels that it possesses a freedom above the laws of the human body; yet all are closely connected, and act and react on each other.

The Spirit is at one end, and the Flesh at the other, and the Soul, or seat of intellect, emotion, and sentiments, hangs suspended between them.

We have anticipated many of the observations which we desire to make; but the question of the supposed contradiction or antithesis of the one and the many lying at the foundation of all thought and cognition is so fundamentally important that it will bear some further elucidation, which will illustrate the difficulty of framing language to explain itself—without being involved in

the confusion of things, thoughts, and words—the difficulty of making words to express the fact ; that words, and *words* alone, are the only thoughts and things about which we can reason with other men.

But the conclusion which I wish the reader to admit is simply this : that it is not true or accurate language to speak or reason concerning scientific *ideas*, but only concerning scientific *words*; and that the *axioms* of every science must always be self-evident *verbal* propositions arising out of and involved in the scientific meanings of the words themselves, when carefully and conscientiously attended, compared, and reflected on by the mind in thought. Of course we might call these judgments or *intuitions*, or some other internal name no better than *idea*, but that we have rejected all such words not founded upon *number* as being inaccurate, and beyond the true region of general human cognition. An *axiom*, therefore, is a necessary and self-evident *relation* between the scientific *words* employed in the axiom itself.

CHAPTER XIV.

THE ONE AND THE MANY.

THIS distinction of "the one and the many" has been by most philosophers considered a hopeless puzzle—a fundamental contradiction in philosophy; and since the time of Kant it has occupied, to very little useful purpose, three generations of German thinkers, and not a few of their English followers. To us the solution of the difficulty is simply *number*—*i. e.*, the analogy of *many* units forming *one* number, as applied by all men, without exception, to all abstract Language.

The general conclusion, for the most part, perhaps arrived at in England, so far as it can be said to be intelligible, is that of Dr Whewell, that there is, in fact, some fundamental difficulty or contradiction, which Dr Whewell softens into "an antithesis," in the human mind, or lying at the very foundation of human knowledge. "This distinction and opposition," said Dr Whewell, "is expressed in various forms—as necessary and experiential truths, ideas and senses, thoughts and things, theory and fact—and may be termed the fundamental antithesis of philosophy; for almost all the discussions of philosophers have been employed in asserting or denying, explaining or obscuring, this antithesis. It may be expressed in many ways; but it is not difficult, under all their different forms, to recognise

the same opposition." He also says, that "reasoning and observation," "reflection and sensation," "objective and subjective," are "other forms under which the same opposition or antithesis is discussed." The Germans, so far as I know them, generally make this antithesis into a hopeless contradiction, which to them seems to lie at the very root and foundation of all human knowledge, and to be applicable to every thought and every cognition; and they often consider it something altogether transcendental, "*a logical Monster*," which cannot be possibly explained in any manner whatever.

This "unity of the synthesis of the manifold," to use Kant's expression, does, however, no doubt lie at the root of all human knowledge—How it is, and why it is, that men agree in all nations and in all tongues to unite *many* things into *one* class, *many* powers into *one* subject, *many* qualities into *one* object, *many* objects or subjects into *one* more general object or subject of distinct contemplation, *many* thoughts into *one* more comprehensive thought, and so on and on for ever through all human science and all human knowledge? All these, and many more, serve to illustrate the "one-and-many" problem, and are supposed to exhibit a contradiction altogether hopeless in every department of knowledge! How can it be, that one should be deemed many, and that many should be deemed one? and this by all mankind, without any exception!

Dr Whewell, as I have said, softened this German "contradiction" into an antithesis—"a fundamental antithesis," as he called it, and which in his writings, and in all his *ideas*, became, as I conceive, merely the fundamental distinction between mind and matter, body and spirit, thoughts and things, senses and

ideas, mental theories and material facts! And having no clear conception of the place which *language* or number occupies in human knowledge, he left this antithesis without explanation, pointing it out with great precision, tracing it into many of its forms, and practically reducing it, in fact, to mind and matter! and there he left it.

But the Germans, for the most part, treat it as a hopeless contradiction. "This subject and object," says one of them, "can never be set forth as one and the same, without involving a contradiction which, with some, as Herbart, is the greatest and most inconceivable of all contradictions;" and we are told that this is "the fundamental problem of all metaphysics—viz., the contradiction which resides therein—that *one* essence is to separate into *manifold* differences, and yet with this remain one and the same—as when we say gold is heavy, yellow, fusible, and so on, all these different characteristics are one—*i. e.*, they are the thing we call gold. None of these characteristics by itself is gold; thus if one of the most essential be taken away, then the rest would not constitute gold; and let them all be taken away, then the gold would no longer remain as such, for nothing whatever would remain: thus the *many* characteristics are, and are together, only characteristics of *one*, the thing; and so this last is a unity which is a plurality—a thought this which contradicts itself!"*

But where, we have asked, is the contradiction in a *plurality* of units being a new unity called ten, or a *plurality* of tens being a new unity called *one* hundred, or a *plurality* of hundreds being a new unity called *one*

* Chalybatus's 'Survey of Phy.'

thousand or *one* million? There is no contradiction in this, the ordinary language of arithmetic; nor is there, we insist, any greater contradiction in all ordinary language, which calls all the units of a class by its class name, a plurality which is a new unity; *many* things *one* class; *many* classes *one* more general class; *many* qualities *one* (not quality but) object—*i. e.* bundle or number of qualities; and *many* objects *one class* of objects; and so on and on to the end of our verbal tether. All such methods of speaking and reasoning are merely the application of mind to matter, of thoughts to things, of theory to fact, of reflection to sensation, of reasoning to observation, of subjective considerations to objective phenomena, of questions to things, of predicables to categories, of possibilities to existences, of giving *one* name to the *many* like thoughts put together by mankind in general; in short, it is the possibility and application of LANGUAGE!—and involves the obvious fact that all human language is constructed like numbers in arithmetic.

This puzzle and difficulty, however, is certainly as old as Plato himself, and gave rise to his theory of ideas in the Divine mind, in order to represent that *general idea* of a *class*, or number of things which resemble each other, which, as Plato thought, the mind of the Creator must have had when He created a class of things, all having a certain *resemblance*—such as man, plant, animal, stone, &c. The same difficulty passed to the nominalists and realists of the middle ages, and they fought and killed one another on account of it under the name of heresy (the question always being, whether the general *meanings* or ideas of abstract general terms had or had not a *real* existence); and it is the funda-

mental question upon which the philosophers of the present day, and nearly all men, are still equally divided, and are only a little less infuriated; for it lies at the bottom of all religious symbols and all political forms. And the one party still generally thinks the other party *materialistic* infidels, and the other thinks the first *idealistic* superstitious fools; and, in fact, this real question underlies and is involved in all our controversies; for it is the question of *language* as applicable to Mind and Matter!

The framework of human language, therefore, lies at the bottom of this question, and abstract NUMBER, deduced from the triple distinction between mind, matter, and language, as we have shown, affords the true solution.

Plato went as near the solution as any one succeeding philosopher, except Berkeley, when he thought that the true meaning of the general name of a class was the Divine IDEA, or the idea in the Divine mind, when He created things like, but not the same, resembling each other so as to form a genus, a species, a general class—all having something alike to each other, so as to form a general class, like men, or fish, or trees. Berkeley, also, was very close to the solution, when he termed the phenomena of external nature the LANGUAGE of God. In fact, even now, though knowing the truth, it is difficult for the mind to escape from the trammels of its own language, and give in plain terms a solution of the question,—What is a race, a genus, a species, like man or plant or animal, in the abstract, except a Divine *idea*? or what is external nature or matter, and its phenomena, but the *language* of God the Creator speaking to us through His works, in each of which there

is or must be, as Plato thought, some original essence or likeness, some rational resemblance or image or general idea, which was the Divine idea when God made the race or enacted the law of nature producing the thing? Must not God have had some rational general idea when He made a race of like beings, organised alike, begetting their descendants like themselves, and yet all individually different, but all so much alike that no man can mistake them as members of the race? Is not this general *resemblance* a Divine idea or mental image, or an idea in the Divine mind, as Plato held? Was Plato right?

What, again, for example, is the distinction between organised and unorganised matter, between the things that live and grow, and the things that don't live and don't grow, if it be not God speaking His ideas to us through His works—God's *words*, God's *language*, as Berkeley held? Was Berkeley right?

There is so much show and appearance of pious good sense in the thoughts and language of Plato and Berkeley, that it is difficult—very difficult to a grown-up philosopher—to become once more a little child, and abandon *such* philosophy, and perceive in all this nothing but the illusion of the human language itself. Such words as “idea” and “race” and “law” and “organism” take hold of our minds, and we use them so often and so constantly that they become a part of ourselves; and we first confound our thought with the things, and then confound our general word with the thought, and then forget the word itself, and then, because we firmly believe it to be entirely true, attribute our own thought to God Himself, and so confound man's mind and language with God's mind and operations.

The habit of using them becomes so strong, that we deceive ourselves with our own words, just as Locke deceived himself with the word "idea" into thinking that he could form an abstract general idea or image of an impossible triangle, which triangle, said he, "must be neither oblique nor rectangular, neither equilateral equicrural, nor scalene, but all and none of them at once"!! a description of a triangular impossibility, which Berkeley, who was a better mathematician than Locke, justly declared to be "altogether incomprehensible," and made up of "staring contradictions;" for things cannot be at once equal and unequal.

The error of Plato was the error of Locke—viz., that there are such real *external* existing things as *general ideas*, which are only the human *meanings* of our general terms; and that men can speak of general things and general meanings apart or distinct from our general terms which are all classes, bundles, or *numbers*.

But there is, in fact, and can be, no such real existence as a general thing, or general idea *apart from the word*—the general term accepted by mankind in general.

The word—the general term—is both the general idea itself, and the general thing itself, and nothing else in all human cognition. But the general *idea* of man, plant, animal, organism, law, cause, force, &c., is a "stark-staring absurdity" apart from the word. It is only an illusion of language, which is all made up of these general terms.

And yet we all say we understand our general terms, and we know their meanings and how to use them, and insist that we have our general ideas on most subjects on which we have made up our minds; and most of us feel quite sure that we have such general ideas, as really

as we have particular ideas of John or Ponto, the individual man or dog which we know best in the world!

But even of John or Ponto we have *many* qualities, powers, and characteristics under *one* name; so that every word, whether general or particular, in every language raises this one-and-many question!

But we cannot reason about the individual names, but only about the general terms. We often think of the individual example, but we draw the general conclusion concerning the *class* to which we attribute, or, as I should say, the class in which we *number*, the individual—*i.e.*, concerning the general term of which the individual is a unit!—a unit of the class.

“Logic,” said Hobbes, “is the art of computation.”—“Logicians add together two names to make an affirmative, and two affirmations to make a syllogism, and many syllogisms to make a demonstration, and from the sum or conclusion of a syllogism they subtract one proposition to find another.—Reason is nothing but reckoning, that is, adding and subtracting of the consequences of general names agreed on for the marking and signifying of our thoughts.” This is not strictly accurate, but it leaves out of consideration the true nature of names or words themselves. Condillac was nearer the truth when he called “science only well-assorted language.” But neither saw that every word is both a *number* of Things and a *product* of Thoughts, according to the strictest laws of arithmetic.

Now, the true solution of this ancient question is, to every one who will think carefully, that *number* is the first possible predicable, the beginning and foundation of all human knowledge and certainty, and is

involved in every thought and thing and word of which we speak ; and names, words, or symbols are the only thoughts and things about which we can reason together. Every thing and every thought being many units united in one, as a number, under one name—the thing and the thought of the thing are both embodied in the *word*. It is very simple when it is pointed out and understood, that every conception begins with a threefold unity—a thing, a thought, and a word—an object, a subject, and a *traject*, united together in the mind as *one!* One what? you ask. Why, of course, what I first called it—one conception or cognition! But what is conception or cognition, but a first original *unit* of human language, thought, or knowledge? But what is language, thought, or knowledge, but a general name for all languages, all thoughts, and all knowledges—in short, a name, a *number*—*one* name for *many* units, *one* general WORD for *many* WORDS? And every word is, as we have shown and proved, a number of things and a product of thoughts, a class or bundle of units, a complication of thoughts or ideas ; and out of this symbolism man cannot possibly extricate himself.

But, of course, behind our words and language there is always the *question* of the nature and laws of mind and matter—that which Plato called the Divine idea, and Berkeley the Divine language. But that is a question of creation, of belief, of *Faith*; but not of *Reason*.

But the words “nature” and “law” do not in themselves differ from all other words ; they are merely general terms in every language, never-ceasingly beginning from mind, matter, or language, which are obvious to all men as things, thoughts, and words—all that we can, or do speak of—general terms—understood by all.

Every word in every language is equally applied and applicable to the individual, and to the whole class or number of individuals; and it not only means the whole number of the class or the whole class of things, but it also means the *product* of the resemblances, or the complication of *thoughts* which have been adopted by men's minds to form the class. And with these general terms, these human symbols, we must begin, and we must end.

In every case of every word, abstract or concrete, in every tongue, the one is many and the many are one! but there is no more antinomy, or antithesis, or contradiction in this than in all arithmetical *numeration*.

Many units form one class, many classes form a more general class, many thoughts go to make one more general thought, and many qualities go to make one thing, whether that thing be a rose or a virtue; and the simple cause is, because number is involved in every thought, thing, and word of which we speak. For we must always make a comparison of a *number* of units before we can frame a thought either of an external or internal thing believed to exist.

This may appear repetition; but consider the many folios of philosophy which this thought annihilates, and wholly abolishes, as worthless confusion — a German Ocean of ambiguity concerning “the one and the many.” But as Reid said, when discussing Locke's assertion concerning the secondary qualities of matter, so I say now, in Reid's language, “I think the fault of creating this puzzle is entirely that of the philosophers themselves.” “If philosophers choose to *mean* by colour not what all the rest of the world mean” — “If they mean by colour the sensation of colour, they should say the

sensation! which everybody knew, long before the days of Locke, is in the sensible mind, and not in the senseless thing"!

So I say, with all deference to an almost uncountable number of learned men, from Plato downwards, that the whole difficulty, the only apparent contradiction, the only supposed opposition or antithesis that exists in this one-and-many question, is created by the verbal ambiguities of the philosophers themselves. If the philosophers choose to mean that many are one in any sense different from the rest of the world, who mean only *one* name for *many* units, they should tell us their meaning, and not declare it an incomprehensible "logical monster"!

Nobody either says or thinks that many is one, except as many units go to form one number, or many numbers go to form and produce one larger number; and there is no contradiction or antithesis in this; for it is the very framework of all human language, and the framework of the most certain of all human sciences!

Nobody but the self-puzzled philosopher really thinks that there is any contradiction, opposition, or antithesis in the language of arithmetic, or between mind and matter, or between their bodies and their minds. All men accept them as known facts in themselves. Body and mind are distinct and different, but there is no inconsistency or opposition or antithesis between them, except what we choose to put between them by means of our own loose philosophical language. *Many* powers and qualities make *one* man; and *many* men make *one* regiment; and *many* regiments make *one* army; but it is only self-puzzled philosophers who ever see any sort of contradiction in these plain facts. There is no antith-

esis and no contradiction when we introduce accurate language and *number*.

Body and mind are no more opposed to each other than both are opposed to words and language, which is made by the body and understood by the mind, but different from both. Matter and mind, things and thoughts, are not contradictory or even opposed; on the contrary, external matter is the type of internal mind—dead, lively, solid, heavy, light, fruitful or barren! Instead of thoughts and things being contradictory, or opposed, or an antithesis, man's business and object in life is to make his internal thoughts agree with external things. The one is the type of the other, and language is the symbol of both.

Neither are things or ideas contradictory or opposed to words, but man's great object should be, and is, to make his words agree with his ideas of things; and if his ideas agree with things, and his words agree with his ideas, that is truth! But how are *ideas* to be made to agree with things?—by comparison, by reflection, by conception, by judgment, all founded on attention and *words!*

But in logic and in truth—*i. e.*, *general truth* known to all—the thing, the thought, and the word are all one! not one in fact to the individual, who can distinguish between the three in himself, but one in fact, and reason, and logic, and true philosophy, and all cognition, to mankind in general, who can only mutually discuss the word itself, but cannot by any means discuss what the man either thinks, of the word, or of the thought, or of the thing.

Each individual thinks of things, speaks of his thoughts, and can only, mutually with others, reason

about *words!* This is not contradiction or antithesis or opposition, but it is the true verbal and mental and material distinctions—the true relations of mind, matter, and language, which are axiomatically accepted and understood by all men, and their first state or relation is their *number!* and matter is the type of mind; and mind the image or pure idea of imponderable but active matter; and language the symbol of both.

But number as our first possible predicable—the one and the many—the many units that are one number, the one number that is composed of many units, exists in every thought. Number is granted to us in admitting our categories—mind, matter, and language—one, two, three units forming the universe cognisable by man; and all should be thence deduced merely by making accurate signs and symbols, by using and applying careful language for our thoughts of things.

Our predicables are merely the first application of number—states of things as unity, relations of things as pluralities. And the first state of the universe which we have assumed is a threefold unity—a never-ceasing or necessary deduction from our first conception, and from every conception; a trinity in unity, a unity in trinity; true words, signs, or symbols, and founded on a true *faith* in the universe, which we see, and think and speak of, and so divide to our understanding by the laws of logic. Nobody but an Eastern fakir, muttering [^]OM, and contemplating himself for months or years—or his European compeer, a Western philosopher, evolving the universe out of the depths of his own consciousness, can make an antithesis or contradiction out of the three things—mind, matter, and language!

But follow the example of the philosopher, or the fakir,

and omit language and logic and common-sense and reason, and you will find yourself, of course, involved in the mystery of God creating the universe out of nothing! But upon this mystery neither the Brahmins nor the Germans have thrown, nor are likely to throw, any light whatever! We still are in possession of our minds, our bodies, and our words, and no more worthless occupation can be imagined than to make our bodies sit down, and our minds write verbal contradictions, and then call it a system of philosophy! Men must use their senses, their reason, and their language, their bodies, their minds, and their words, and make their words agree with their thoughts of things! and believe in the *symbolism* of their language as *truth*—not in the *symbols* themselves, but in the real *things* and *thoughts*, which they *believe* them to symbolise.

But, again, Number is not only signs, symbols, *language*; but it is also a mental *sense*, and a material *fact*. We feel it within in every conception or first thought, and we see it with our minds in every sensible matter. Division and multiplication exist not only of verbal things or units, as signs and symbols, but also of mental thoughts and material things. But the Sense of number within the mind, is as clear to every man who is not born an idiot (of which an incapacity to number is justly thought the best sign)—as clear as the sense of sight! How do I know I can number? and how do I know I can see? are two equivalent questions equally stupid, and equally unanswerable. Number is an internal mental sense, and Sight an external bodily sense.

But we cannot prevent men contradicting or puzzling themselves or others with loose thinking and loose language!

But the whole ambiguity and confusion of this one-and-many puzzle, is that of the philosophers and their language—not of mankind. For when men call *many* things by *one* name, they do not mean or think that the many things are one thing of a like kind, but one thing of a somewhat different kind. We put many qualities into one object—many things or objects into one class—and many classes into one more general class, and so on. We combine many qualities into our thought not of one *quality*, but of one material or mental *object*; combining the whole in one. But there is in all this, neither confusion, nor contradiction, nor even antithesis, to the ordinary intellect of man.

This is only applying the obvious laws of language and of number—which is accurate human language—in order to speak and carefully record our thoughts either of mind, matter, or language. What we do record, under the name or general term, is the *whole number* of the individuals which seem to us to form a class by the joint *product* of their mutual resemblances!

It is the many resemblances which the mind perceives between the many individuals which induces mankind to make and form them into a class, and to give them a class name in a general term. But one single resemblance between many individuals is sufficient to induce man to class them all in ONE under a general term, as we class all things in the term thing, which an Anglo-Saxon peasant with great propriety pronounces a *think*; for everything must become a thought or *think* before man can speak of it.

But in all this there is no confusion or contradiction, or, in fact, antithesis, to the ordinary mortal, but only in theory to that philosopher who has not learnt to think

and speak accurately about human language and about number, which is the simplest and most accurate form of human language, and the foundation of all human certainty and truth.

No doubt the ordinary convention of language, as spoken by all nations and tongues, is false and unphilosophical, adopted in the earliest ages of mankind, when language was first framed, because the mutual agreement and convention of all mankind in all languages whatever, is certainly that *words* shall be taken as, and deemed to be, the signs or names of things—*i.e.*, for real external existences supposed to exist without and external to the man or men who use the words; and this is true both of external or physical existences, and of internal or mental existences. Words are always used in ordinary language as the general names of things or objects supposed to be external to the speaker's mind. And this is also entirely true when we speak of strictly internal things.

The thoughts, ideas, representations, impressions, intuitions, &c., when spoken of, are still, by this ordinary convention, always supposed to be the names, not of the internal individual thought in the mind of the speaker, but of all, *i.e.*, the whole number of units or things which can be called by those names whenever and wherever existing, and independent of the speaker's own mind, and existing without him in the minds of other men. In all language the conclusions drawn are thus *generalised*, although they may be the results only of solitary reflection on the individual's own private mental economy.

But this convention of language is founded on a fundamental mistake and falsehood—*viz.*, on the false sup-

position that man can truly *know* and speak of external things ; *i. e.*, can know them as they truly and really are in themselves, and not merely as we suppose and admit them to exist without us. And we ordinarily speak as if our minds can pass, as it were, out of our bodies, and behold the things that exist as they are in truth. Whereas the fact is, and is admitted by all philosophers who believe that man himself is a mind enclosed and shut up in a body—an intelligent mind imprisoned in a non-intelligent body, the fact is—perfectly clear, that the intellect of man only guesses at the truth through the veil of flesh by which he is always surrounded—*i. e.*, through the vibrations of our in-carrying nerves, having in them nothing whatever of intelligence ; and unless, therefore, we deny the fundamental distinction between mind and matter, the guesses of human intelligence must still ever remain mere ideal guesses till the medium or veil of man's body and his nervous system is altered or withdrawn.

Man's words, therefore, can only in truth be signs of these mental or ideal and individual guesses. Words can only, therefore, in truth be the signs of the private thoughts in the mind of each individual thinker. Words, then, can only be signs of ideas in the mind, and cannot represent *in truth* any real *external* things whatever, or any real *internal* things whatever, except the internal things (whatever they may be) which each man calls the workings of his own mind—*i. e.*, in strict truth, his own private idiosyncrasy only. It is this false convention of language which in speaking we are compelled to seem to agree to in order to be understood—it is this law of generalisation, and of appearing to speak and reason as if our words were the names of things themselves, and

not the names of each man's ideas of things—it is this materialistic form of language which helps, no doubt, to puzzle and obscure what otherwise would be as clear as noonday, that no man can possibly speak of what goes on in other men's minds, or beyond his own body, except only of those words which pass and repass from without inwards, and from within outwards, through his own nervous system. We cannot even speak of the Divine idea, or of the Divine language, or of the Divine Being, until we have mutually adopted, at the beginning, some word or words for our ideas of such things, and then we can only speak of such words which become, like all other words, *numbers* and *products*, or a Number and a Product.

The facts of human language are easy, simple, and indisputable. Let us stick to the facts and put them into clear language, and we shall then have a clear theory or thought about the facts. Instead of talking ambiguously and mysteriously about the one and the many with the philosophers, not knowing or saying what is the one and what the many, let us stick to the fact, and speak like all the world, and say, as all men of intelligence do say and must say, that every general term means, first the *whole number* of things called by the name which is the logical *extension* of the term, well known to all logicians; and also means the *product* of the thought or thoughts which are the resemblances between the things which produce or cause the class in our minds, which is its equally well known logical *comprehension*. This combination, in a word, we have demonstrated to be a *product*, the complication or addition of compound units—*things* with *thoughts* attached to them in the mind, added and classed together under one

word. The name of the class is a number produced by the abstract *resemblances* of the units combined in the mind.

If, then, every word is a *number* of things and a *product* of the thoughts of the things, and is itself *one word* signifying the *many* things which we have classed together in our thoughts by their *resemblances*, selected and perceived by the mind; these resemblances (which we must afterwards consider, and how they are to be measured by number, time, and space) are neither the divine ideas of Plato nor the divine language of Berkeley, but only human words; and there is no more contradiction or opposition in combining many things into one class under a general name, or many qualities in one object, to define the general name of the class of objects, than there is contradiction in ordinary numbers. We must not confound our words with God's creations.

It is, in fact, the very same operation that is applied to arithmetical units in ordering units, logically applied to thoughts and things in general, considered as orderly units of a class of material things, or of mental thoughts.

But the resemblance of arithmetical units is what we call *unity*, an abstract term signifying the likeness of arithmetical units; and it is quite as easy to consider one class of things possessing resemblances to each other as a new unit, and so to form a class of classes, as it is to consider ten units a new unit, and then to form a product with a number of tens. The mental and the logical operation is precisely the same! It is merely building up things and thoughts in bundles under distinct names and general terms—it is LANGUAGE.

If we think carefully and clearly about the matter,

all supposed contradiction, and even antithesis, must disappear; because there are not two but three things always involved and compared together—the thing, the thought, and the word; and there are accordingly three phases of this one-and-many puzzle—the logical, the mental, and the physical—according as we are talking and thinking of words, or of thoughts, or of material things.

But the whole cause of the supposed contradiction or antithesis is the verbal ambiguity, confusion, or ignorance of the philosophers themselves concerning number and *language*, of which number is the simplest and most accurate example. It is properly called a species of contradiction; for they persist in speaking with and about *words*, and then leave *words* out of their philosophy or speaking!

As soon as we form clear ideas of number—how each number is a new name for a new bundle or combination or class of units, *simple* units, and also of language—how each word is at once a *number* of things and a *product* of thoughts, *compound* units, all combined or classed together under the one name—then the supposed contradiction, antithesis, and real confusion and ambiguity of the philosophers about the “one” and the “many” disappear altogether, and the mind is relieved from “the logical monster”—the “one great puzzle of German philosophy,” and from a mass of inane and stupid undefined discussion, without sense or reason about the one! and the many! and about contradictory “unities,” growing into other contradictory “unities,” &c. &c., all evolved along with the universe of God out of the consciousness of German philosophers!

But let us examine carefully, in order, the three

phases of this "one and many" puzzle—the logical, the mental, the material, and show that our explanation applies to them all.

1st, There is the logical phase of this question when we are talking and thinking of *words* and their relations—there is the logical *extension* of the term, being merely *the whole number* of things which are comprised under the name or general term ; and there is the logical *comprehension* of the term, which is merely the thought or *product* of the thoughts which produce the class in the mind. Most writers on Aristotelian logic have made this tolerably clear to logicians, and how the extension and comprehension of words vary inversely, or, the greater the comprehension or number of thoughts, the less the extension or number of things ; and the less the comprehension or thought in the word, the greater the extension or number of individuals to whom it can be applied. This is made tolerably clear to any one with a tolerable head in any elementary book on logic.

But this involves the distinction between thoughts and things—the *extension* being the number of things, and the *comprehension* the number or product of thoughts. But this does not altogether suit materialistic or positive philosophers, who do not like to call mind or thought a *thing*, but fancy they can make it out to be a state of material things ; and they hide their confusion by trying to introduce grammar into logic—substantives and adjectives, as words *denotative* of things, and words *connotative* of thoughts. But every word to those who believe in *both* mind and matter is both the one and the other, and only *denotes* a thing by means of the thought it *connotes* ; or, in short, it marks out its *extension*, or the

number of things denoted, by means of its *comprehension*, or product of thoughts connoted. Such positive or materialistic logicians contradict themselves by denying either the *extension* or *comprehension* of their words, which they have previously admitted. However, every word in every language is *one* word for *many* things and for *many* thoughts, and also for *many* other words less general than itself, till we come to the individual things selected. This is the *logical* phase of the one and the many puzzle. Let us now pass to thoughts themselves.

2d, There is the mental phase of the question when we suppose ourselves talking and thinking about thoughts themselves and their relations. How and why we combine many thoughts into one more general thought; many attributes into one more general attribute; many likenesses into one more general likeness or resemblance. Here again the only and the true solution is, that we, by the laws of number and of language, which lie at the foundation of all thinking whatever, are compelled so to think and speak; because we cannot think or reason but in *words*, according to the laws of number, binding many thoughts into one thought, just as we bind many units into one number by a new or distinct word, sign, or symbol; and so we cannot speak our thoughts without language framed like *numbers*. But we can puzzle ourselves and others if we leave *language* out of consideration and still speak about words, or *language*.

3d, There is the material phase of this one-and-many question, when we are talking and thinking of material things and their relations.

How is it and why is it that we combine many things,

thoughts, or words about attributes, quantities, qualities, powers, resemblances of material things into one material object, and many material objects into one other general object; how the form, the colour, the smell, &c., go to form one rose; and many roses go to form one class of *Roseæ*; or how the sun and planets go to form a sidereal system; or how—many powers and qualities go to form a soldier, and many soldiers a regiment, and many regiments an army; or how—many feelings and acts of patience, benevolence, or justice, and their applications, go to form an example or act of virtue; and how—many virtues go to form the whole class of virtues or virtuous acts; and how—many virtuous acts and principles form the virtuous man? Here we are in the material and sensible phase of the problem—the constitution of material, external, and human active visible nature—the constitution or the laws of nature and of man, and of his laws and customs—the constitution of the external universe, or of morality amongst men.

Here again the true and only solution of the difficulty, if any is still felt by the reader, is, that all language for all things is a system of numbering, and we are compelled so to proceed by the laws of *language* and of number, which lie at the foundation of all science expressed in language, and all discussion expressed in words; and the laws of language are the laws of number, both in adding simple units as a class in *one*, and in multiplying or adding together many thoughts of material things, or compound units into one word.

We must and do so think, and we must and do so speak, because we think with *words* and speak with *words*, and can neither think nor speak without *words*. All men do so in every language under the sun, and

all form ONE *name* for MANY *things*, by the necessary laws of *language*. Numbering is a sense like Seeing.

Thus, Number explains and solves every possible phase of this one-and-many problem; and therefore number is properly selected as our first predicable—as the first self-evident relation—of the *many* parts of the *one universe*, which is composed of so *many* things, thoughts, and words, all reducible to matter, mind, and language. For the first question which we can ask concerning any object whatever is, whether we are to speak of it as *one* or as *many*—whether of its *state* in itself, or of its *relation* to something else.

Now things *in themselves*—*i. e.*, abstracted from all their relations to man's nervous system—are wholly unknowable. Man knows and can know nothing except by and through and in relation to his nervous system. The external world only reaches our minds as nervous vibrations—undulations or motions and forms—which we feel to be slow or quick, long, short, sharp, narrow, or full—intense and rapid, or extended and slow—weak, diffused, or penetrating, or strong—language and words which are all equally applicable to all our senses—sounds, sights, tastes, smells, or feelings—and to hunger and thirst; but all of which *words* are clearly modifications of our internal senses of TIME, SPACE, and NUMBER.

Thus the whole puzzle of “the one and the many” is merely the puzzle of the framework of human *language*. But philosophers continued to use and philosophise about language, and yet left it—language—out of their philosophy, and altogether forgot Number and its framework, which is the framework of language itself.

Of course, words are a great puzzle in themselves, and language is a great puzzle in itself; but there is no

longer a puzzle about such loose language as "the one" and "the many" when we perceive that "the one" is only "the many" units of things, thoughts, and words; because *one* word is used for a general *name* of *many* thoughts or many things—just as *one* number is used as the name for *many* units.

The puzzle of "the one and the many" disappears, therefore, as soon as *language* is clearly and positively introduced into *philosophy* as a coequal fundamental constituent with mind and matter; but the puzzle of language itself, its genesis or origin, &c., of course, remains. But the "one and the many" puzzle becomes only the stupid oversight or confusion of philosophers themselves in omitting and neglecting language in their philosophic conceptions of cognition; but human language itself remains one of the most interesting subjects of human contemplation.

We may well leave "the one and the many" mystery and the supposed contradiction, or fundamental antithesis of human knowledge, to the dust of that oblivion which must ultimately fall on all falsehood and all confusion, and seek how to establish the truth and certainty of human language. That, indeed, is a subject well worthy of philosophic contemplation.

It is not only a theory, however, but a fact recognised by all men and all philosophers, that all language is composed of general terms signifying the whole number of units which can be called by that name, which is called the logical *extension* of the term; and that the units or *things* are classed or numbered together by their *resemblances*, which are *thoughts* perceived and chosen by the mind to form the class which is called the logical *comprehension* of the term.

But as language is the first fundamental fact in every discussion of philosophy, so *number* is the fundamental fact in all scientific truth. It is the foundation of all scientific certainty, for all measures or make-sures are reducible to number, time, and space, and time and space are themselves measured by number.

The similar form of number and language has been noticed by many philosophers. And possibly the nominalists of the middle ages were not far from the truths; that all men individually generalise many qualities into one object or thing, but that they have no general *thing*—object—in common; that they generalise many objects into one subject or thought, but that they have no general subject or *thought* in common; and, lastly, that they generalise many things, by their thoughts of them, into one general word, and that they *have* that general *word* in common; and that this last generalisation or word, and its own subsequent generalisations into other words, are the only things in common about which mankind can speak, or reason, or acquire cognition, or philosophise. But they certainly failed to reconstruct the logic of Aristotle upon the true basis, of distinguishing the confusion and ambiguity of the word *ουσια*, or *substance*, and so left it to Berkeley and Hume to raise the question, and to Kant to distinguish properly, between Mind and Matter; and to show to mankind that things as they are *in themselves*—*i. e.*, out of all relation to man's nervous system—are wholly beyond human knowledge. However, the act of abstraction or generalisation is an act of numbering individuals into different classes, marking them by their likenesses, distinguishing them by their one, two, or more *resemblances* chosen to form the class, and complicating or multiplying the

whole of the individuals or units by their selected likenesses into one bundle by the general or class name, thereby making them, though *many*, into *one* class or bundle for the purposes of thinking and reasoning, and so to arrive at general judgments expressed in the general terms of the language. This is obvious fact and truth to all men who speak and think correctly with words.

Each man can perceive in himself, in the meanings of his words, the act of generalising his *thought* or idea of the individual into the thought or idea of the class, or whole indefinite number; which he combines and includes under the one *name* or general term when he speaks of the class. He may think of some of the examples he has examined, perhaps, but he includes under the same *word*, all the examples he has never seen or examined, and never possibly can see. He makes his general term *one name for all*.

This is precisely an act of numbering a large number like a million, which we never have in any way numbered except by inventing its name, as *one name for all* the units in that number. There is, in short, therefore, no antinomy, antithesis, or contradiction in this one-and-many puzzle, except what the philosophers have themselves introduced into it by their own loose language, and by their omission and forgetfulness of language itself as one necessary element in all philosophy and all cognition.

No man, either peasant or philosopher, ever thinks that *many* things or thoughts or words, are *one* thing or thought or word, exactly like; but they think that many qualities are one thing—many things are one class—many classes are one wider class—many thoughts

are one more general thought—many words are one more general word, and so on ; wherein all men clearly distinguish the *many* units from the *one* whole number which embraces and marks them out as being considered one thing, thought, or word. And the whole puzzle is removed by recognising and acknowledging the great and paramount importance of language itself as a *factor* in every cognition, and by introducing *number* as our first logical cognition, or first scientific *form* of language itself.

CHAPTER XV.

ORDER—MOTION—FORM.

MOST philosophers may be divided into three classes; and piety is not confined to any one class, for Plato taught us of the Divine *idea*—Berkeley of the Divine *language*—Spinoza and Hegel held pious thoughts about Divine *matter*, put into pious language (words for their ideas—of God and the universe confused together); and now we have (positive) piety in relation to the “*grand être de l’humanité!*” and the pious doctrine of “*vivre pour l’autrui*”—a worship of Humanity turned into a God! But we reduce them all to three classes—those who put matter above mind; those who put mind above matter; and those who in their language confuse the two more or less together—or we may call them, as we have said, the materialist and positive; the idealist or intuitive; and the conceptualist or confusionist. The latter wrangles with all, and prefers to talk of ideas, and conceptions, and concepts which we cannot know; instead of words and language which we can know. However, I do not know any philosopher who has clearly perceived and adhered to the truth, first—that language is a necessary factor in all human cognition; and second—that mind and matter only become proper objects of general human cognition as *words* or language.

But all words are Orderly Motions and Forms; and

we must consider these three words, Order—Motion—Form. We shall find that order is a state of number—form a state of space—and motion is a relation between time and space.

Order is not "Heaven's first law," but is the first law of number—order is a state or relation of numbers; and even in its more corrupt usage (of "rank" or "command") the word *order* possesses a numerical reference of one to another, or to many others. But the object of human science is to reduce all things to order—to some *numerical* state or relation on which the human mind can rest with certainty.

To ask for the evidence of an axiom, as we have said, is self-contradiction. By calling it an axiom we pronounce it a self-evident truth. But it is quite possible, and often quite reasonable, to deny the truth of a so-called axiom. But then the reasoner must always go back to something which is believed and admitted on both sides. He must go back to *words* admitted, and relations deemed possible, and axioms assumed—*i. e.*, the thinker must go back to *faith* in some things, and thoughts and axioms admitted or acknowledged in *language*, by which the process of reasoning and thinking is to be commenced and guided. We cannot build upon nothing, for that is self-contradiction or self-annihilation. But we can build on number and on order, which all understand and admit to be indisputable; for primarily *order* is numerical.

When the ancient materialist exclaimed, "I see a table; I don't see any idea of a table!" the proper way to refute him was not, as Plato attempted, by assuming the word *mind*, and saying that he "saw with his eyes, and not with his mind;" but by dissecting an eye, and de-

monstrating the εἶδον, or idea, or image formed on the retina. Then, by attention, comparison, and reflection, if the materialist's eyes are like those of other people, what he sees is not the table, but an image or material *idea* of the table. But Platonic idealism, which amounted to this, was still a *material* idealism. A little floating material image, a divine idea, was still supposed by Plato to penetrate the eye and all the senses, and to reach the *sensorium*, and to be there laid up in the microcosm or little universe within our heads. And I do not know but what the materialist and positive philosopher of to-day, if he condescends to think at all of what goes on in the head, and the conceptualist also, when he talks of his internal concepts, must both still have some such materialistic notions about our states of mind—our ideas—concerning the material universe. And for my own part, I think it quite possible that we have photographic or other *pictures* of all we see and feel stored in our brain-cells, for the soul to remember and compare.

In the same way, Locke's language of the mind being like white paper, or soft wax, or other impressible material capable of receiving, as Hume called them, *impressions*, or, as Kant called them, *representations* of external things, and all other language, is usually, and I think is necessarily, quite consistent with actual particles of matter passing some impression or picture into the mind; and such may still be the most usual image or idea of the relation between mind and matter, and such must be the idea of the materialist. But here we part company with him.

An action of matter, a passion of mind, an object impressing a subject, a non-ego representing itself in the

ego, and so forth—all this is logically consistent with materialism. In fact, *language* has been recognised only as a trouble and an embarrassment to the philosopher. But it has hardly entered into the heads of modern philosophers, any more than it entered into the heads of the ancient ones, who had no clear notion of *motion* at all, and none at all of the undulations or motions of light, and very little of the vibrations of the atmosphere or other aeriform matter, that language is the whole thing in dispute—that all is about words, and only words; and that these words are only Motions ending in Forms.

What reaches our sentient bodies, however, from the exterior material world is not matter, and *a fortiori* what reaches our *minds* cannot be matter! What reaches the retina and optic nerve is not matter—but *motion* of matter—undulations, vibrations—motions and forms in orderly sequence! making a wave-line and possibly forming a brain-cell.

But what are motion and form? not matter, I say, but states of matter, undulations, vibrations; shapes or forms, and waves or motions combined together; exactly the same, in reality and *truth*, as the very words we ourselves shape and utter with the mouth, or form with the pen! Waves of air and light reach our aural and optic nerves, and touch and taste and smell must have their own media—most probably vibrations of heat, gravity, electricity, or magnetism.

All these must, by analogy, be mere undulations or vibrations—not the air or light or other medium itself—but waves or pulses of different shapes and forms varying in number, in time, in space, few or many in the same time, occupying long, short, deep, or wide spaces

—following each other rapidly or slowly in time, and many or few in number in the spaces they travel, in passing through and along our tubular nerve-fibres into our brains.

What are these but words? what is this but a kind of language? It is certainly language, the language of external nature as Berkeley thought, and often, of course, language not yet understood—vibrations, for our minds to think about—nothing else! Matter does not reach our sentient body, much less our mind! Motions and forms reach our bodies. But even contact of matter is never perfect; and the undulations of light, heat, electricity, and magnetism, are infinitesimally small, and transmit their vibrations to the nerves. Form is not matter, but a *state* of matter. Motion is not matter, but a *state* of matter. What reaches our brains is not matter, but only the motions, and forms, vibrations of our own nerves agitated, made to undulate by divers undulations, created outside our bodies, and propagated through the pith of our tubular nervous fibrils.

The materialist who desires to get rid of cause and force, &c., and to abolish all abstract ideas, must tell us how to begin, and what matter there is in motion itself or in form itself! Of course, about this stage of the discussion, the positive or materialistic philosopher would like to shift his logical ground, and become an idealist or a conceptualist, and insist that motions and forms are quite as visible as tables and chairs! Of course they are, to the mind, equally visible, and so are forces, and spaces, and numbers, and times. If we speak of days and months and years, explosions and attractions, they are all visible to all men quite as easily as motion, or rest, or shapes, or forms; if we

only have each a *mind*, and sufficient capacity of mind, to understand and adopt, or invent these *words* and thoughts and things, not mind and matter, but their States and Relations!

It is a question of order! shall we begin with *motion*, or shall we begin with number? The distinction between one and many, or number, is, I say, simpler than motion; and the reason is, because we apply number to measure motion—not motion to measure number. Number is fixed and invariable, but motion is unfixd and very variable.

Zeno's original paradoxes about motion still puzzle the conceptualists, who have not studied dynamics, and possibly all those who believe with faith in the law of the Excluded Middle. But we have already shown that motion is not a *state* of *one*, but a *relation* of *two* at least. Motion is not predicable of one thing alone. We must have either a point from which to measure the motion, if external; or a space within which to measure it, if internal. Motion is a *state* or *relation* of matter measurable by number, space, and time. Motion is not matter, nor is it mind; motion is a predicable or state of things, but it is not predicable of *one* without relation to something else—*i. e.*, of two at least which involves number.

Motion varies numerically—directly as the space, and inversely as the time. That is, a double motion means the passing over a double space in the same time, or passing over the same space in half the time. But as motion complicates the ideas of number and space and time, we must measure the complex by the simple, not the simple by the complex. And we must, in order, therefore, properly begin with number and space and

time, and then afterwards proceed to motion and to form. But motion, although it is a *state* of matter, is not *itself*, in any wise, matter. There is no matter in the motion itself; and a mathematician compares the motions of mathematical points in empty space, and measures their relations to each other, as motions of points flying through space, in different curves and orbits; of which visible motions of material bodies are only symbols or signs helping the infant physicist to conceive abstract motion, just as the figures in Euclid help the infant geometrician to conceive pure mathematical figures. But one of the motions most difficult, yet most necessary to conceive, is that of a wave or undulation in an elastic fluid or jelly or gas, such as water, air, or light; and when we have realised the conception of an elastic vibration or undulation, we may then conceive the undulations or vibrations which go on as motions in the fluid pith of the minute nervous tubular fibrils of the human body. When the wave or motion reaches the brain and rests there, its form may possibly remain fixed in a brain-cell; but of that we know nothing. But we do know that sound and colour are vibrations.

Such form, however, is manifestly only motion arrived at rest; for when our eyes have perused the form of a wave, we can remember it; for when the motion of matter has ceased, it leaves its form behind in our minds, or perhaps in the dust! and when that is partly swept away, still the image of the form is existing in the mind. We can see a line of waves and their Forms.

Form is a relation of space without motion. Form only requires units of space and number to measure it; and every relation involves not one, but more than one — *i. e.*, number. We measure and make sure of form by

space and number, just as we measure and make sure of motion by number and space and time. A double form is a double space; and the numerical relations of space are our only accurate measures of all shapes and all forms! and the ultimate form of a nervous vibration is all that can remain in our brains or memory. And the mind can compare these Motions and Forms.

But as the ancient materialist was compelled to see with something within his body, and not with his eyes without; when he was shown the little image or *ειδη* on the retina, so the modern materialist is compelled to think with his mind and not with his body when the wonders of the nervous system are demonstrated before him! when he is shown that external matter never actually reaches or touches our minds at all, but only reaches our insensible nerves, and produces in them only infinitesimal somethings—motions, undulations, vibrations of our own nerves—passing through invisible insensible nerve filaments. The outer world, says the materialist now turned idealist, disappears into “a possibility,” and the inner world is reduced to “a series;” our mind becomes a “flux” or “series of feelings,” and our body is “a possibility of sensation!” But I say that a possibility is merely a question, a doubt, and that a series is a number! So that man’s body is with such reasoners a doubt, and man’s mind is a number! Happy conclusion, we might say, not intended by the sceptical and positive philosopher; for every mind is numbered, and no doubt is well known to the Creator by its number, and will have to answer for all the doubtful doings of its body, or the doings of its doubt, to use the dubious language of positive philosophy. This seems to me the very insanity of confusion and self-contradic-

tion; for it postulates a "flux" with nothing to flow! and a series of possibilities, which is nothing but a number of doubts!

Now it was said by my Master that it should be more tolerable for the land of Sodom and Gomorrah in the day of judgment than for certain people who should not receive certain persons nor hear certain words—WORDS! (Matt. x. 15). But whether this astonishing doctrine about words was true or not, I say that words, signs, symbols are the only things in this universe which men have either to accept or to reject, to hear or to understand! Motions and forms, not bodies and spirits, are all that men can possibly arrive at without *faith*; and they—the motions and forms—are nothing—neither matter nor mind, till they are understood and given life to or vivified by the mind and understanding of the man, and have become WORDS, signs, symbols. Matter and mind are words as well as thoughts and things; words to be accepted or rejected before we can understand the motions and forms which our nerves carry to our brains.

The phenomena of *matter* only reach man as Motions and Forms, empty words, signs, or symbols only, vibrations or undulations, which have no *meanings* whatever till we apply to them our internal senses of number and space and time, and postulate and have *faith* in the existence of both matter and mind, and attend and compare and reflect and register and record our judgments in *words*.

The phenomena of *mind* are known only to the individual, and they also are emotions or ideas—metaphorical motions or metaphorical forms; and they can have no existence with general meanings till we have

invented *words*, which are only metaphorical applications of the words first applied to the Motions and Forms of matter.

The language of metaphysics is only the metaphorical language of physics; and the language of physics is only the application of our internal senses of number, time, and space, to the forms and motions which alone reach us from the outer world, framed into ideas and notions, by using and exercising our mental powers of attention, comparison, reflection, conception, and judgment; by which their conversion into WORDS, signs, and symbols is often painfully effected, after many attempts and failures.

Thus Matter resolves itself, ere it reaches our mind, into mere forms and motions of our own nerves and nervous system; and the Mind converts those forms and motions into other forms and motions of its own—ideal and material forms—which we express and send forth, and then call words, signs, symbols—Language.

And when the mind afterwards proceeds to examine itself and its operations, it seizes on the language it first applied to matter, and applies the same words metaphorically to mind; and then sends these words, being metaphors, or changed from their primary or material to their secondary or metaphorical and mental meanings, forth into the outer world as descriptions of itself as mind, and of its own mental operations, in order to influence other minds like to itself.

Thus Matter is postulated and required to explain and account for the involuntary motions and forms which exist in our own bodies; and Mind is also required to explain and account for their conversion into new motions and forms which we ourselves make and create;

and then call our words signs or symbols—our language capable of influencing other minds.

We cannot speak of matter at all, except as the unknowable Cause of certain forms and motions which reach our unintelligent bodies, and, passing through our nerves, reach our intelligent minds, and are there, as we each of us know, embodied in words or language—*i. e.*, vibrations of our in-carrying nerves are converted by the mind into vibrations of our out-carrying nerves. And so, we cannot speak of our mind to another mind except in the metaphorical language of Matter, changed and idealised by the understanding, and metaphorically applied to *mind* as distinct from *matter*.

When we say that the sun rises, we know by reflection on divers phenomena before our telescopes that, in obedience to the conventional laws of language, we are disobeying the laws of truth ; so when we say, as we all do say, that we see and feel and hear the external universe, we also know, as I insist, by reflection on divers phenomena before our microscopes that, in obedience to the same conventional laws of language, we are also disobeying the laws of truth ! The external universe never reaches that which sees and feels and hears at all ; motions and forms in our nerves alone reach the mind—the soul of man. Our fixed or unfixed ideas of the external universe as being great and admirable and wonderful, are all the result of attention, comparison, reflection, conception, and judgment, mental powers, ending in the creation of human symbols, which must and ought to be chosen according to the laws of number, time, and space.

Imponderable Matter spiritualised is the type of mind or spirit ; and the human mind puts into lan-

guage, which is itself only motion and form, certain signs or symbols of the original action of matter itself on the human body, as metaphorical symbols of its own thoughts or mental actions—*i. e.*, both mind and matter are logically signs, symbols; and we must either put matter above mind, and become atheists, or mind above matter, and become pantheists, or make both ambiguous and confused, and adopt some illogical form of conceptualism, and talk of unknown *concepts* in the brain and mind, and thereby contradict ourselves as well as our first distinction of mind and matter; or else we must become SYMBOLISTS, and speak of words only; and admit the truth and all-importance to man of human WORDS, signs, and symbols, as being the only things within man's powers of discussion in all cognition, science, and philosophy.

When we speak of Matter, therefore, we are only speaking of motions and forms which reach our brains—*i. e.*, vibrations of our own nerves, symbols of the universe without, or only of a kind of natural *words* which we strive to interpret.

When we speak of Mind, we are also only speaking of motions and forms—emotions or symbols in our minds—*words* of which the actions of matter are the original types; and which we strive to interpret with a change or difference—*i. e.*, *metaphorically* of mind.

And when we speak of language, we are clearly speaking only of motions and forms which we have ourselves created or invented to express the original motions and forms, such as we have felt, or have supposed ourselves to feel, from time to time, concerning Mind, Matter, and Language.

But men in general, as mutual interpreters to each other, cannot possibly get beyond the last motions and form

which are their own *words*, common to all mankind ; for the motions and forms of matter and of mind have all to be generalised and converted into human language—*i.e.*, into the motions and forms passing current and adopted by mankind as words, before men can reason of them, or even speak of them at all !

Knowledge and truth is therefore necessarily the development of a *formula*, or a verbal expression of a sign or symbol ; not because we are to *believe* that words are all that exist, but because all that exists must be put into human words before it can become a cognition, either the subject of human knowledge, or the object of truth, or the language of philosophy ! We must *believe* that the word *mind* means some *thing* before we can arrive at any truth of mind, and then we are only developing *the word* mind. So we must believe that the word *matter* means some *thing* before we can arrive at any truth of matter, and then we are only developing *the word* matter. We must believe in some language before we can believe in any knowledge or in any truth ! All which three original words are only nothing, if language means nothing ; but if words mean anything, then our original words, mind, matter, and language, mean something—the cognisable universe.

In short, mind, matter, and language are three *words*, and are true words ; and human truth and human philosophy is the development of these three words into all their states and all their relations—their states when we consider them alone as individuals—*i.e.*, as words, thoughts, and things—Unities ; and their relations when considered as several things, thoughts, and words—*i.e.*, when thought and spoken of, as being, many things, thoughts, and words, affecting each other—pluralities.

But we must begin by assuming them as symbols, in the reality and *truth* of which we all have faith as real thoughts, as real things; for symbols or language or action without faith is dead! It is form without the spirit; it may be a form either of science or of godliness without the mental understanding or spirit thereof!

Matter is therefore the type of mind, and the more delicate motions of matter are the types of emotions of mind; and mind can be only spoken of by natural metaphors, or words first applied to matter and its states and relations, and then afterwards referred and applied to mind in a spiritual or mental meaning—by transference metaphorically.

To every man, the thought or *idea* is a spiritualised image or abstract *form* of the things embodied in the word—an unfixed form, yet still a form; and words represent the *whole number* of the things, and the complicated *product* of all those resemblances between the things which our minds have selected in order to form a class—*i. e.*, the logical extension of the term is the number of the *things*, and the logical comprehension is the product of the *thoughts* which go to form the class. But the typical individuals of the class have transmitted motions and forms to the brain, from which the mind frames a metaphorical *form*, or general idea, embracing all the likenesses, which produce the class.

But all the motions and operations and affections of matter may have their counterparts in the emotions and powers and affections of mind, and we embody them in metaphorical words, using the language justly appropriated to describe external matter, in order to illustrate and explain internal invisible mind.

Man can have no other possible method of explaining

his emotions and feelings within, except by metaphorically referring to the motions and actions of matter without, and by using his own body and the actions of matter; in order to illustrate his own mind and its mental actions and emotions, as being in a sense *metaphorically* something similar thereto.

Matter, therefore, comes to man in fact, only as motions and forms of his own nervous system; and Mind comes to other minds as only the *metaphorical* motions and forms of the soul or spirit—the emotions and ideas which they can mutually embody in *symbols* or words. And these last—the words or language, and all its applications and substitutions, which still are language—are the only thoughts and things which human beings are capable of discussing. But it is the duty of each individual to rise out of the symbols to the thoughts and things symbolised, and to fill his words with their sense, meaning, and harmony.

The Harmony of nature prevails throughout: The triple forms of matter, solid, fluid, aeriform, are types of the body, soul, and spirit of man—the Body ponderable and ever dragging us downward—the Soul liquid, impressionable, agitated, and stormy—and the Spirit, best typified by that ever-restless, imponderable, elastic, penetrating aeriform matter, of which light, heat, electricity, and magnetism are divers exhibitions of power. And analogy may well teach us that nature is not limited to organised solids, but that there may be spirits superior in power to man, whose bodies may be organised electricity or magnetism, capable of penetrating man's body, soul, and spirit, and of possessing those who are subject to their influence.

However, to man, aeriform Matter is the form or type

of mind or Spirit; and thoughts and emotions of mind are like the motions or actions of matter, exerted by mind and directed by mind; and language is the form and the motion of both matter and mind acting in unison together; it is therefore well fitted to represent them both. And the first Predicable, or form of language is number. Nor is this entirely arbitrary, because the first conception, as well as the first division of the universe, gives us, or presupposes number. Number necessarily becomes the one and the many reduced to orderly signs and names, the many in one, and the one which is also many. There is neither mystery nor contradiction, nor even antithesis here, to any one who believes in mind, matter, and language, as we have abundantly proved; for all three are one in himself, and man is all three at once, and he—his Spirit—is in his words and his words are in him; for his words are the forms and motions that embody his spiritual existence—*i. e.*, himself.

“By his words he shall be justified, and by his words he shall be condemned.” And the reason is evident; for man receives from the outer universe nothing but Motions and Forms; and Truth consists in making his own words which are Motions and Forms of his own creation, and for which he is himself justly responsible, agree with the Motions and Forms which his conscience tells him are right and true and merciful and just. And for this agreement or disagreement he alone is responsible. But faith without works is dead; and works without love and truth to guide them are evil! and false words operating on free-will are the origin of evil on earth. “Ye shall not surely die” was the first inducement to human evil. And so we taste and

slumber, and the taste is pleasant and the slumber is not disagreeable, till our eyes are opened, and we find ourselves as gods, knowing good and evil; and being altogether naked, and ashamed of the good, we strive to hide ourselves in a thicket of false words, either a creed or a philosophy, where we hope God will not see us, or find us out to be false. And the false words are the recognised shibboleth of our church, our sect, or our party, generally gabbled over and repeated till they have in our minds no meaning whatever! and then the mind is dead till it be awakened again.

But man cannot speak of matter, but only of his thoughts of matter; and he cannot speak of thoughts in general, but only of his own thoughts in particular, which no man can know but himself; and therefore he can only speak of words, or signs and symbols which are general signs and symbols mutually adopted and deduced and invented for general thoughts about mind, matter, and language, and their relations in general. Thus SYMBOLISM embodies all that can be known!

Mind, matter, and language, however, are self-evident to every one in his own individual self. Not even the peasant can confound the part of himself which thinks and wills, and attends and examines, and reflects and judges, with his hair or his nails, which are without sensation! The one he calls his mind or soul, the other his body. Both are distinct not only from each other, but from the words, signs, and symbols wherewith he strives to influence his fellow-men.

But reflection on physiology and the microscope can, I think, clearly and quickly convince any thoughtful observer that the soul or mind, which thinks and conceives and judges and directs the words and actions,

must be some unknown invisible spiritual existence which connects the inner ends of the in-carrying nerves of sensation with the inner ends of the out-carrying nerves of will and motion.

The two ends lie close together, but the Mind, which acts between them, might or may traverse the universe of matter and mind in search of further sensations by the one nerve, before it chooses to deliver the result of its own reflections to the other! Having received sensations by our in-carrying nerves, we attend, compare, reflect, and think and judge, and then invent a word, sign, or symbol to send forth our judgment along our out-carrying nerves to our fellow-men, which word is our own, and for which we are justly responsible.

The first accurate or scientific deductions from mind, matter, and language are those forms of language and thought called number, space, and time. 1. When *words* exist without particular meanings, they are units, symbols, or *numbers*. 2. Where material things might possibly exist without any particular powers or qualities perceptible to the human senses, our thought of their extension, as abstracted of matter, takes the form of empty *space*; just as where the *form* of the statue may be said to exist to the mind of the artist; and just as we say it does exist in the unhewn block of marble, as well as in the mind of the artist. 3. When mental things or thoughts exist without any particular result, *time* is passing. Thus abstracted language becomes number, abstracted matter, space, and abstracted mind becomes time. All men have senses of time, of space, and of number in their souls or minds. They are all three the ultimate abstractions of mind, matter, and language. But what is Form itself?

Form is primarily fixed, bounded, limited *space*. Every limited matter or body has a form ; but Form is a *state* of space measured by numerical relations, and is independent of matter. But space contains all forms, and yet has itself no form ; though we think of ourselves as in the centre of a Sphere of unlimited dimensions called space ; yet it is certainly wrong to say that space either has a form, or is a form. *Figure* is properly an outline or superficial form on a plane surface.

A statue, a cube, a sphere, in the abstract, are forms—*states* of space which we can accurately describe and explain only by the numerical relations of the limits or bounds of the form. In a secondary or metaphorical sense, we have mental Forms, which are ideas or thoughts ; and logical Forms, which are words, symbols, *formulae*, propositions.

But Form primarily is a *relation* of a part of space to the rest of space, or the *state* of the parts of a limited space. We can suppose the spatial contents of a statue or any other irregular form reduced to a cube of a fixed diameter, or to a cylinder of any diameter, or to a cone of any base. Every fixed solid form has a cubical content. It is fixed by its included space of cubical contents—yet an abstract Form is unfixed ; and may always vary less or greater, without change of Form.

The ancient Greeks were perfect masters of the science of *form*, more so than the moderns ; but it was reserved to the moderns to make *motion* scientific. Form is a purely mental thing or abstract thought—an idea of space which is fixed in form, but not in space, for it may be anywhere or of any size and still the same *Form*.

The *form* of the statue exists in the unhewn block, and its form exists in the mind even when the statue is

reduced to powder or burnt into lime, and converted into manure and into the crop of corn or grass it has aided in producing. The ideal *form* is not destroyed to the artist who remembers it. The form remains quite unaffected, to the mind of him who can mentally create or conceive the form, but the size and cubical or spatial contents of the form remain wholly unfixed, and may swell or diminish to infinity.

To the moderns there are two ways of measuring accurate Figures or forms, in a plane: either by two co-ordinates through a fixed point, or by a radius vector moving round a fixed point of space—methods which this is not the place to explain or enlarge upon; but they are both spatial, and we can measure them with numerical accuracy. But solid forms, like undulations, require three co-ordinates. *Form* in general is a limited *state* of space, and every limit may be deemed a *number* of units. And the ancients, as well as Descartes and Newton, taught us how to measure curves or curvilinear forms, and to arrive at limits, by making our units infinitely little by methods of exhaustion, &c. But the number of units of space would only give us the cubical contents of the space, not the form; and the units of linear extension would give only *figure* or the length or breadth in one plane, and not the form. And we must have three co-ordinates to measure solid forms.

Form involves not only number and space, but also involves the *state* of that space, or its relations to other space. Form is properly, therefore, a fixed *state* of space without reference to time, though form in general is unfixed. Form is the product of number, space, and order. Form involves number, because it always contains a *number* of parts.

Motion is not a state of space, but is a *relation* of space and time. It is the space divided by the time. Space is matter in the abstract—the possibility of matter—not matter, but the absence of matter. Space itself is a purely mental thing, an idea deduced by mind from matter, and as indestructible as the mind itself. No man can conceive space annihilated, for that is to suppose mind annihilated. When all is annihilated but ourselves, space remains—*i.e.*, there is room for a new creation. And our own annihilation leaves space, and number, and time, and order, and motion, and form, and all purely abstract ideas wholly unaffected.

We cannot in thought annihilate space or find its ultimate limit, or conceive ourselves at a point of space where we could go no farther. What, we always ask, is to prevent us putting forth our arm and using one part of the body as the fulcrum of the other to feel beyond, if we continued to exist? And to this there is no conceivable answer; for Mind is infinite.

The same or similar thoughts are true of time or duration. We can conceive time “*no more*” in the sense of the revolution of cycles of heavenly bodies having come to an end! But time in the abstract or continuous duration would and must to our mind still go on to immeasurable ages—for ever and for ever. Infinite space and infinite time and infinite number appear to me the ideas that best prove the immortality of the human soul. But all pure abstract ideas are also wholly indestructible; but they are only human words and thoughts, or mental things embodied in words.

The science of dynamics has shown us that motion is the product or relation—space divided by time. A uniform motion is an equal space in an equal time;

but the less the time the greater the motion, and the greater the time the less the motion. Motion is thus a *relation* of both space and time. Here was Kant's fundamental error. He forgot number, and thought that space and time were measured by motion, and not motion by space and time. But space and time are fixed and uniform, and motion is variable—it may be here and there, and fast and slow—and therefore, is most properly measured by the fixed and the uniform. But motion is first perceived as a relation or state of *matter*, not of mind, and becomes scientific through space and time.

It is only metaphorically that we can conceive mind moved, and the result is not motion, but *emotion*. Motion is originally to the mind a material phenomenon, a relation of matter, and accurate scientific notions of how it ought to be measured are due to the moderns. But just as space is abstracted matter, so motion is entirely abstract like space; and the motion of a mathematical point in pure space is the abstract mathematical conception of motion independently of matter! This is the ideal abstract, or the scientific idea of motion to the modern mathematician—the motion of a mathematical point in pure space! But we take the *mass* or weight of the body to bring it into measurable relations with the globe on which we live; and thus make the *truth* of our science *useful*.

But motion is not a material *thing per se*, or in itself, but is a mental state or relation of matter. It is not either mind or matter as a thing, but is a predicable or relation between two thoughts of things made abstract by the mind. It is not a necessary existence, but a variable possibility; and it involves both space and time—

varying directly as the space and inversely as the time—
 $M = \frac{S}{T}$; that is, the motion is the product of the space divided by the time. But when we introduce the mass or matter moved, we introduce the Newtonian idea of *force*, for though the motion remains the same, the greater the mass moved the greater the force required; and thence the Newtonian formula— $F = \frac{S}{T} M$. All this is tolerably clear to any one who has taken the trouble to study and understand modern mathematics, and the refined methods by which motions, however variable, have been brought within mathematical, *i. e.* accurate and numerical, language since the days of Galileo, Descartes, and Newton.

Both motion and form, therefore, are predicables about material things, not material things themselves. They are possible and variable states or relations of *material* things; and motion is distinguished from form, in that form may be predicated of *one* thing, but motion cannot: we must have some point of Space from which to measure the motion in Time, but the form is limited space, and may be measured from a point of itself.

We cannot think motion of one thing by itself, without dividing it. We must either refer the motion to space in general, or to some other thing from or towards which the motion proceeds; or when we think of internal motion, or the revolution of one thing, we divide the one into many, and we then refer to the *parts* or points of the form moving; *i. e.*, the points or parts in motion.

Motion, being a very obvious and easily visible relation, exhibits well, as we have already said, the absurdity

of the law of excluded middle; for at first sight we might say, a body must be either moving or not moving, and there is, by that law, no third possibility.

But there obviously is a third possibility, that of a body "beginning to move," but not yet *all* moving; and this beginning to move might last for ten thousand years! Thus, to use Dr Whewell's illustration, which we have already referred to;—suppose the thing or body in question to be a canal of water! Open then a tap or flow at one end, and the water begins to flow out, and the canal is beginning to move; but this motion might take ten thousand years to reach the other end of the canal, if it were long enough! And till then the canal is only partly moving or beginning to move. Thus the canal, as *one thing*, is neither in motion, nor is it at rest; it is neither moving, nor is it not moving; it is beginning to move! Any other conception is logically and scientifically false.

The outer universe, however, only reaches the human mind as motions and forms propagated through canals—the motions and forms of our own nervous undulations.

The forms of external things are painted on the retina, and vibrate in undulations to the brain. We compare and judge and discriminate, and so arrive at words for our ideas of external nature. But these motions and forms—this language of external nature—the inflowing undulations from without—are all different to each man; and till they are put into human words, signs, and symbols, we are wholly unable to think or reason about them intelligently, either to ourselves or to other men.

The only mutual motions and forms common to all men who choose to learn and understand them, are the words, signs, and symbols they mutually adopt. All

these are still motions and forms, and nothing else, passing along our nervous systems. Thus our minds have nothing to think of but motions and forms, in our own bodies, and man can only speak and reason with and about motions and forms mutually adopted as *words* and *symbols*.

But, for example, how does the motion and form of light which reaches our minds from the EXTERNAL TREE, differ from the motion and form which reaches our minds from the words EXTERNAL TREE? And why can we reason about the latter, and not about the first?

The simple fact is, as we have in so many forms repeated, that man is "cabined, cribbed, confined," altogether caged in words and symbols. The words "external tree" are still words; they represent an acknowledged fact or adopted theory; an idea of external nature; and if we attempt to reason about them, we are only reasoning about the *words* "external tree," and substituting other words and symbols in their place; we are thinking of external nature, but reasoning about our words; we cannot get out of this circuit of words—this cage of symbols. If we say we can, we are forgetting or denying the existence of either matter or mind, of either our body or our soul, or we are confusing the two into one, and allowing our philosophy or language to forget our physiology or knowledge of man's nervous bodily system.

Each individual is no doubt bound to believe the honest judgment of his senses, and of his mind and soul; that the real external tree really exists, as we all suppose it to exist; because he believes his words; but he must and is bound to carry along with that belief the facts which our microscopes teach us con-

cerning human physiology ; viz., that what we call the "external tree" has passed along our insensible nerves, which are less than the ten-thousandth of an inch in diameter, and can be only minute vibrations or undulations ! in our minute tubular nervous fibrils, filled with liquid pith.

And an educated man might as well insist that the sun really rises, and really sets, and moves round the world every twenty-four hours, as insist that his words "external tree" can mean anything more than the internal theory—thought, idea, reflection, judgment—which the individual has formed from these infinitesimal motions and forms, in his own nerves, concerning the existence of the matter forming the external tree. If the reader cannot see this, he is merely logically blind.

But when the individual thus perceives that his words "external tree" only express, and can possibly only express, an internal thought, an internal idea, he then equally perceives that the internal idea in his mind is not the same as the internal ideas in all men's minds ; and that the mutual word, "external-tree," and its substitutes, are the only things in common between the men who speak and reason together.

Taking, therefore, all the obvious facts as true, men reason, and can only reason, about the words, signs, symbols, "external tree." We believe in the external *thing* and in the internal *thought*, but we can only reason together about the (external and internal) words which pass to and fro from one man's mind to the other man's mind.

The word, the sign, the symbol, passes and repasses from mind to mind as motion and form ; and other words can modify and develop and explain or complete

the mutual symbol. But the symbol itself is the only motion and the only form which can be mutually discussed, or compared together by mankind in general.

Thus Order is a state of number, and Form is a state of space, and Motion is a relation of space and time. But order in number becomes *relation*; and order in form becomes *symmetry*; and order in motion becomes *harmony*; and analogy seems to be what we may call corresponding harmonies in different departments of external and internal nature. But words and symbols, which are all properly Motions and Forms combined together, sometimes become mere Forms, and the mental emotion no longer corresponds or vibrates to the material form and material motion.

Then comes the *letter* and the *spirit*! When men are logically driven into a cage of symbols from which they cannot escape—the symbols, which to the first generation seemed instinct with life and reality, and to express real thoughts and emotions, pass on to the second and third generations as inherited and undoubted truth! The race or generation which first established the symbols, as expressing undoubted and indubitable truth, pass away, and their successors inherit not the spirit but the *form* merely; the letter of the words, not their mental force and meanings.

But without their meanings the words become dead, and become mere material motions and forms which do not touch the mind. Then the reformer, or the heretic, sets to work to fill the old forms with life, or to invent new forms which may better express the old truth, or substitute a newer, worse, or better form for the older one, and thus attempts to remove what he thinks the *idola fori* or *idola tribus*, the dead and corrupted sym-

bols of former generations stagnating in the minds of men.

But the whole process is merely a change of symbols ! Of external nature, or of any internal nature other than our own individual nature, we know and can know nothing whatever—we know only the motions and forms they produce in our own nerves. Man must therefore begin and must end with signs, words, symbols—only motions and forms, and reduce them to order in number, time, and space—to *symmetrical* and *harmonious* Relations !

These symbols when accepted are the only motions and the only forms which are *mutually* common to mankind in general ; the *words* we create or adopt within us, and make our own by understanding them, and feeling them, and acting upon them : these are cognitions to all who adopt them, these are real thoughts and real things to the general human mind. But the scientific object of human life is to make them accord and harmonise with the motions and forms which we receive in our nerves from external and internal phenomena and noumena ! Our worldly object is to render *truth* useful.

These words, signs, and symbols, are all that is concerned in general human cognition. They are motions, they are forms, but are neither more nor less than words—*symbols*. And our only accurate measures of all motions and all forms, are order in number or Relation ; order in space or Symmetry ; and order in time or Harmony.

But some objector may still say that we are not sure that the human nerves do transmit vibrations, undulations—*i.e.*, motions and forms. We have never detected

either in our own nerves or the nerves of others any such vibrations. It may be a mere unfounded *theory*, after all, that the human nerves do transmit vibrations, waves, undulations, or motions, or forms, in any shape or way; and the theory of vibrations and undulations in the human nerves may hereafter disappear like the theory of animal spirits, or the theory of Leibnitzian monads.

But the theory of vibrations in our nerves is better founded than the theories of animal spirits or of monads. It is founded on analogy and fact. We have in our aural nerves and in our ears a mechanical apparatus which can leave no doubt on the mind of the observer, that the actual vibrations of the atmosphere are transmitted to the drum of the ear and to the Brain. We have the whole apparatus before us, such that none can doubt its construction, intention, and operation, in transmitting the actual vibrations of the atmosphere produced by the resonant body to the aural nerve. We can actually measure and show to the sight, written in dust or liquids, the motions and forms of those atmospherical undulations which produce in us the sensation of sound and the harmony of music.

And we find, moreover, that some vibrations of the atmosphere are too fast to be heard and some are too slow, while others are too sharp and others too full to be heard by human ears. None who examine the obvious facts before their eyes and ears, can doubt for a moment, but that the human ear and aural nerve is merely an apparatus for registering the numbers and times and extensions—the Motions and Forms of atmospheric vibrations or undulations, within certain limits; beyond which limits, either too fast or too slow, too

large or too little, no feeling of sound is produced in our heads.

Sound, therefore, beyond all doubt and question, consists of merely motions and forms of atmospheric waves, undulations, vibrations, measured by number, space, and time, according to the powers and capacities of the human aural nerve—*i. e.*, our sense of hearing.

The same is strictly true of light and the optic nerves. It is a more difficult and a more delicate experiment to detect the vibrations of light, and to show their coincidences and interferences, and how they may be made to counteract one another and produce by reaction darkness, just as two sounds may be made to counteract each other, and produce silence; but the undulations of the medium of light may now be considered as certain as the undulations of the atmosphere itself; and that our sense of light and colours is like our sense of hearing, a mere sensual method of registering the numbers, times, and spaces—the Motions and Forms of the vibrations or undulations of the elastic medium called light; and that the rays of heat are too slow, and the actinic or chemical rays are too fast for our optic nerves to perceive them as light, though we can show that they are *there*, in the solar spectrum, but beyond its visible limits.

Thus two of our senses, hearing and seeing, are undoubtedly produced by undulations—motions and forms—which reach our nerves; and our nerves are their conductors to the brain. And our nerves consist of minute canals of fluid pith, contained in tubular nervous fibrils or hollow fibres.

What takes place in our nerves we do not know; but we do know that they, the nerves themselves, are insensible, and that if the nerve is cut through, the com-

munication with the brain and sensation is cut off, and the part separated from the brain is insensible. The canal is divided, and communication has ceased.

Therefore the only possible conclusion is, that the vibrations or undulations—the Motions and Forms—which we detect not only producing physical effects on matter without us, but striking the outer ends of our nerves, are thereby conducted to the brain, and that the human mind is capable, as we know it is capable, of detecting the numbers and times and extensions of the several vibrations, undulations, or motions and forms so transmitted by the nerves. The sound, the light, the touch, do not enter our bodies, but send their thrills to the brain by our nervous canals.

The highest note the human ear can hear requires about three thousand vibrations in a second of time, the lowest about three hundred vibrations in a second. Between these limits we hear the vibrations of the atmosphere as sounds; beyond these limits, either faster or slower, we do not hear anything; and between these limits we detect all the varied sounds from the sharpest and most delicate tinkle, to the deepest and lowest hum.

And an ear for music also enables a man to register and mark their concords and discords, their coincidences and interferences in number, time, and space—*i.e.*, their motions and their forms. The ear detects not only the note, or number and time of the vibration, but also the pitch or *timbre*, which appears to depend partly or altogether on the space or extension of the vibration or undulation.*

* This is not the popular notion; but it is clear in stringed instruments that the pitch depends on the *length* of the string; for we can alter the pitch of a piano by moving the keys bodily to the right or

Marvellous as is our sense of hearing, that of sight is still more astonishing, for it is certain that our eyes and optic nerves easily detect the difference of colours; but, "according to the theory of undulations, when the rate of vibration of a ray is altered, a different sensation of colour is produced in the optic nerve."

"The analytical examination of the question is said to show that to produce a red colour a ray of light must have 37,640 undulations in an inch of space, and 458,000,000,000,000—say 458 billions, or million millions—in a second of time! Yellow light must have 44,000 in an inch, and 535 billions in a second of time! Whilst the effect of blue is produced by 51,110 undulations in an inch of space, and 622 billions of waves in a second of time!"* And no doubt the different shades of the same colour are produced by the different extensions, or sizes and shapes, and combined motions, of these minute waves which yet our optic nerves enable our minds so easily to detect! Just as a fuller tone or pitch is produced in music by an enlarged and fuller wave of air, so a fuller tone of colour is probably produced by an enlarged and fuller wave of light; which

left; and in an organ with *fixed* pipes we alter the *bulk* of the vibration when we alter the number and time; for we force a greater number into the same space in the same time. Therefore the bulk or shape or space—the *form* is the pitch or *timbre*.

* Mrs Somerville says, "the length of an undulation of the extreme violet ray of the solar spectrum is the $\frac{17}{1,000,000}$ of an inch, and the length of an undulation of the extreme red ray is the $\frac{26}{1,000,000}$ of an inch, and the length of the undulations of the intermediate rays can be computed by the undulatory theory of light."—*Molecular and Micro-Science*, p. 148. Our nerves can detect these differences, but we are still only conscious of the middle waves, and there are faster and slower, and greater and less waves, of which, by our own nerves, we know nothing.

fulness, or tone, our eyes enable us to detect at once, in spite of their inconceivable number and velocity, and infinitesimal or inconceivable minuteness; just as our ears detect pitch or *timbre* in music.

Analogy, however, or the ordinary Harmony of Nature, compels us to believe that our other senses are formed on the same principles as those of hearing and sight; viz., that all our senses are merely mental powers to detect the numbers, times, and spaces—the Motions and Forms of vibrations and undulations—the waves which strike our nerves, and are produced and prolonged into our nerves of touch, taste, and smell, just as light and sound are carried into our nerves of sight and hearing. Touch is possibly or probably the organ of gravity or heat, taste the organ of magnetism, and smell the organ of electricity.

These three Senses seem, therefore, by analogy, to be undulations and vibrations like light, and possibly or probably in the same universal fluid medium; but without measured facts, such ideas are only speculations—possibilities. But none can doubt but that our senses of Hearing and Sight are merely mental powers to detect and register in the soul or mind, the numbers and times and spaces, of the motions and forms of waves or undulations, propagated through the fluid pith of our nerves into the cellular matter of the brain.

If we beat with a hammer, a piece of iron till it is red-hot, we have produced in the iron both heat and light made out of our own nerves and muscular system, and by mere force of gravity, transferred by our muscles to the iron. If we then decompose water by means of the red-hot iron, we have probably, by means of *gravity*, converted our own muscular and nervous heat

and light into electricity or magnetism ; and we know that we can convert electricity into magnetism, and magnetism into electricity, by employing them at right angles to each other. Thus it seems most probable that all five—light, heat, gravity, electricity, and magnetism—are all merely modified vibrations of the same fluid medium—of that ether which is supposed to pervade the whole universe of matter—and are, in short, only vibrations, or motions and forms, which our senses are qualified by nature to estimate by number, time, and space, and weight ; which motions and forms actually exist in man's nervous fluid and muscular tissue and brain. Thus we begin with the human will to hammer a piece of iron, and end with the imponderable vibrations of light, heat, electricity, and magnetism, all produced by the force of gravity !

However, I say that it is clear and indisputable by any one tolerably acquainted with human physiology, that, if you admit and assume that our bodies are matter and our souls are mind, the external universe of matter never itself reaches our minds at all ; and that what does reach our minds are merely vibrations, undulations, waves, *motions*, and *forms*, less than we can easily conceive, waves of our own nervous system, mere motions and forms at the inner ends of our in-carrying nerves—*motions* and *forms* in our brains, which we can probably register and record in the cellular tissue of the brain, for the future use of the memory and intellect.

These motions and forms, received from the outer universe of matter, are not in any wise distinguishable (except mentally as sensations) from the motions and forms which, as human conceptions, constitute human words, signs, and symbols. They are all motions and

forms, and nothing else, whether received from without at the inner ends of our nerves, or transmitted from within to the outer ends of our larynx or pen!

But when we have thus reduced the external universe of matter, as felt by our bodies in the brain, to motion and form; and have reduced mind to the invisible interpreter of these infinitesimally small forms or motions; the individual is left alone with his God, or his demon or angel, and with the vibrations of his own nervous and muscular system; some of which he distinguishes as arising without him, and others as arising by his own will within himself; and he distinguishes the first as *matter*, and the second as *mind*, either alone or in communication with his God, or his demon or angel, but with no other mind whatever except by and through *language*, mutually agreed on for convenience in Society.

Thus it is only when man proceeds to attempt to communicate his cognitions to other mental Beings, which he conceives to exist without himself, and like himself in bodily and mental capacities—it is only then that he feels compelled to invent the third term, *language*, for the motions and forms, which his own mind creates in his own nervous and muscular system; in order, first, to explain fully his thoughts to himself, and next, in order to communicate his cognitions to others. Careful language enables man to fix and limit his own thoughts, as well as to communicate them to other men.

And as soon as man has thus obtained the recognition of his three terms, mind, matter, and language, he can then proceed, as we have done, to deduce strictly and by logical demonstration to insist on number, space, and time—on motion and on form; not the *letter* only, but the *spirit*; not the body without the mind, but the

motion of the body and its ultimate *form* combined with the emotion of the mind and its completed conception or metaphorical *form* and emotion, in the word, sign, or *symbol*; of which combination, the motion and form of the *symbol*, is the only part in human cognition mutually cognisable, or known by mankind in common.

The consequence of course necessarily follows, that in all cognition, and to mankind in general, the last or final generalisation into language leaves the motions and forms which we recognise and distinguish as *matter* and *mind*, only linguistic, logical, or symbolical, and thus resolves these things (matter and mind) not merely into *things* with the realist, but also into *ideas* with the idealist, and also into *words* or symbols with the truthful *symbolist*. Any thought beyond or inconsistent with this view of the foundations of cognition is not built on faith by reason, but is built by bad logic on faith without reason—faith in matter without mind, or in mind without matter, or in some ambiguity and confusion—conceptualism between the two. But true reason cannot exist or begin to be without true faith! Motion is mentally limited to matter fluctuating in space, and form is mentally limited to matter fixed in space. But each is capable of varying symmetrically or harmoniously from nothing to infinity.

But when matter or language transmits an undulation to the brain, the motion becomes a *wave-line* and the form a *cell*—that is, the wave-line of an undulation results in a cell, or the motions of a vibration tend to produce the form of a cell or succession of cells in the brain, so far as we can know or judge, from reflection on undulations.

Thus we may conceive the motions of the nervous

tissue ending in the cellular matter of the brain as the ultimate material product of nervous agitations.

Of course when we have reached the cellular matter of the brain we are as far off as ever from a thought, an idea, a mental thing. The mind and the *soul* must create or adopt its own words and furniture, the ideas it thinks good, beautiful, spiritual and true.

The outer world, whatever it is, has reached our nerves as motions, and fixed itself in our brains as *forms*. The mind, by attention, comparison, reflection, conception, and judgment—all its mental powers—arrives at an *idea*, and embodies the idea in a *word*—a new Form and a new Motion !

Both the idea and the word, which is its body, are the product or creation of Mind ; and they can be sent forth along the out-carrying nerves to excite and nerve or strengthen and influence other minds, in a manner at present wholly unknown, by means of the many “isms” —enthusiasm, fanaticism, patriotism, materialism, idealism, asceticism, rationalism—and all the other spiritual influences over mankind !

But all *matter*, so far as man can know it, consists of Motions and Forms of his own in-carrying nerves ; and all human *language* consists of Motions and Forms in his out-carrying nerves ; and the whole object and business of the human Mind is to reduce to Order, and to arrange, all these divers external and internal Motions and Forms so as to satisfy and harmonise with its own individual convictions, or the necessary and never-ceasing verbal first principles and *axioms*, which it has perceived and accepted in its inmost spirit, as being Good, Beautiful, and True.

CHAPTER XVI.

MATTER—SYMMETRY.

MATTER, or the external universe as known to man, is, in the strictest sense of the words, nothing but Motions and Forms—a mere species, or natural form of *language*; which man has gradually to interpret from infancy to old age. It is not, as Berkeley supposed, always or of necessity the *language of God*; for that would deny either the existence of intermediate or inferior spirits, or else their powers of influencing the phenomena of matter, as well as the powers of the human mind over the phenomena of matter.

But as the will and spirit of a man can exercise divers powers over matter, and can produce or refrain from producing, at will, certain phenomena of matter, many more than we at present believe possible; so we may well and reasonably suppose, that other and more powerful Spirits may possess the same or much greater powers, over matter, and over its phenomena. But man's right and his duty is, to turn aside and fearlessly investigate every material phenomenon, in the full confidence, that the laws of God are paramount above all matter and all spirits, and that all their powers, and all their phenomena and actions, are proper subjects for humble investigation and free examination by God-fearing men.

But by calling matter or sensation the language of God, we commit the error of leaving no room in the universe for the powers of intermediate or of inferior spirits. Man has certain powers over matter, and can within his limits suspend the laws and the language or action of matter. Are we to conclude that there are no spirits in the universe but God and man, or that they—those intermediate spirits—have no powers over our sensations?

This is a vast assumption, a most monstrous limitation of God's powers and actions, and quite contrary to the analogy of nature. Positive philosophers, the votaries of reason, or "Socratic men," do not like to hear of the "demon of Socrates"! but one cannot read the solemn serious words put into the mouth of Socrates on the subject by Plato, and doubt the opinion either of the master or of the disciple. The reality of that demon and of his voices, as well as the reality of that Delphic demon who pronounced Socrates "the wisest of mortals," was at least the creed, the faith, of the great Grecian master of reason. No one can read his language and disbelieve his faith both in the oracle and in his own demon as his spiritual guide. To call the sensations of our bodies or external nature the language of God, denies, therefore, the powers of the air and the powers of darkness, or confounds them with the powers of God Himself. Such language of Berkeley plays the game of pantheism, just as Locke's language played the game of atheism and materialism when he derived all ideas from experience, and so unintentionally denied mind or spirit, of which we have no experience. Yet both were pious and earnest Christians! But they both overlooked the true position and importance of human

language, while, in fact, both were writing treatises on words.

Neither man nor other spirits can set aside God's fundamental laws of matter, but they can work with and according to those laws, and can suspend the operation of one law by the application of a higher law—as man suspends the present operation of the law of gravity, by holding a stone in his hands from falling to the ground ; or suspends the law of cohesion, by applying the laws of chemical affinity ; or suspends the laws of chemical affinity, by applying the laws of heat and electricity—by methods well known to us all.

But all the phenomena of the external universe are motions and forms, to be duly and carefully interpreted into human words or language. Matter reaches the surface of our bodies, and there produces those undulations and vibrations of our nervous system, minute motions and forms, which pass into the brain ; and all our ideas of the external universe have been and must be framed by our mental powers, to explain and express these bodily sensations in human words, signs, and *symbols*.

Our bodies are the tentacula and testing instruments of our minds ; and the eagerness and delight of the infant when it clutches a new object not before known to it, are only the types of the pleasures of the philosopher who has discovered a new element, or a new phenomenon of an old element, or a new relation between old phenomena. The infant delightedly cools its burning gums with its new coral, and the philosopher delights his intellect by establishing a new bar in the solar spectrum, a new chemical effect of the actinic rays, or a new relation between the motions of the universe, and light, heat, gravity, electricity, or magnetism.

But in all such cases, man is merely interpreting, by the use of his mind, the so-called *language* of nature into human ideas and words—the undulations and vibrations of his nervous bodily system—for the gratification of his bodily feelings, or of the intellectual desires of his soul.

It is by comparing sensations of the body with other sensations of the body—it is by this repeated attention, comparison, and reflection—all mental operations—that all our judgments concerning the external universe of matter have been built up and established. It is not by experiencing ideas, but by framing comparisons, and forming judgments of the mind, that we acquire knowledge.

Our bodies experience bodily sensations; our minds frame mental perceptions or conceptions, thoughts or ideas by attention, comparison, reflection, ending in judgment and a word.

We must never forget the triple generalisation. Sensation is not thought or thinking. We must first generalise the many impressions, qualities, powers, or phenomena produced, into an object or thing, before we can *think* or have a thought about it. We must then generalise the many objects or possible objects into the general *idea* of the class; and we must, lastly, generalise the many ideas or thoughts of the class into the *word* or general term, which we and our fellow-men are willing to accept, or have adopted, in order to express our thoughts or general idea of the things as a class—which *word* we call the universal or general name of the class of things; and about this *word* alone, can men reason together.

In discussing *matter* we have four things to compare together, and to think about—the states of the supposed

particles of matter ; the supposed states of the nerves of the human body ; the mental *relations*, or proportions and likenesses, in number, time, and space, which we invent, or think we have discovered to exist, between the states of particles and their effects on our bodies ; and lastly, and fourthly, the *words* which embody the whole result of our mental comparison.

All our words relating to matter express its states and relations in reference to man's bodily and nervous system. Solidity expresses what will not yield readily to our bodily pressure, and fluidity that which will so yield ; and gaseity or aeriformity that which, like the air, we cannot easily feel with our sense of touch on passing our bodies slowly through it.

But Locke's distinction between the primary and secondary qualities of matter, as well as the Realism and Conceptualism founded on Reid's refutation of it—both appear to my mind utter verbal confusion. But the confusion still serves to puzzle men of clear heads and great reputation, and is still therefore deserving of a careful examination.* Now, according to Locke, the primary ideas or qualities of matter are "solidity, extension, figure, motion or rest, and number," which he thought are "constantly found by sense in every particle of matter of sufficient bulk, and inseparable from it." But the secondary are colours, sounds, tastes,

* Dr Whewell said : " I believe that the distinction of primary and secondary qualities is still right in the main. . . . We cannot measure secondary qualities in the same manner in which we measure primary qualities, by a mere addition of parts. The difference has given birth to the two words 'extended' and 'intense.' In the one case they are *units* of which the extension is made up ; in the other, they are *degrees* by which the intensity ascends."—Hist. Scien. Ideas, book iv. ; Ph. Ind. Scien., i. p. 268 *et seq.*

smells, &c., "which are in truth nothing in the objects themselves but powers to produce sensations in us by their primary qualities." Now the whole question turns, I think, on the ambiguous use of this word *sensation* to mean sometimes a thing in the body, and sometimes a thing in the mind! Which is it? Of course we must choose one; or else we are choosing to confound mind and matter. I think and say that sensation is a thing in the body, shared with man by the lower animals; and that attention, perception, comparison, and reflection, and all ideas, are things in the mind. But take the primary qualities, as they are called: in order—they are "number," "extension," "figure," "motion," or "rest," and solidity."

We have already out of these, defined and discussed our ideas of number and space or extension, and shown them to be in no respect qualities of Matter, but derivatives from matter and language. Numbers, we say, are verbal things, signs, symbols, arranged by the mind, and not in the things numbered at all! But all numbers, surely, are wholly independent of matter, and of our peculiar definitions of the numbered things. *Number*, in the abstract, is in the mind of the person who perceives and counts the number, not in the matters numbered! Number, independent of the signs or symbols, which I would define as being numbers of *words* common to all, is wholly ideal in the mind, and is not either in the matters numbered, or in their parts. If you annihilated the matter, surely its number, or the number you counted of its unities or constituent parts or qualities, would not be in the least affected. The things are gone, but their number remains—where?

—of course, in the mind, which counted it, an idea for ever.

Then *extension* is simply space, or the *thing* which the mind conceives when it abstracts matter altogether, and there is no matter. Matter fills space; but space is not an attribute or quality of matter, but only the mental idea, thought, or conception which never-ceasingly remains when we suppose matter wholly annihilated! Space or extension is matter abstracted—the mental conception of the possibility of no-matter being there! *Extension*, I say, is Space. The extension of a body is certainly not in the body, or a quality of the body, but is the quantity of space it fills or occupies. The space or extension would not be affected if the body were annihilated; it is an abstract mental conception—an idea. The space would remain—the measured or unmeasured extension would still be there, ready for a new creation of the matter! We cannot mentally annihilate space so long as a *mind* exists capable of creating matter and thinking space.

The like is true of *figure* or Form; which I divide with the mathematicians into plane figures, or mere outlines on a plane surface, and solid figures which include a certain bulk of space like a cube, or a sphere, or the form of a statue; but surely every figure or form is the mere relations of the parts of extension or space. We can all conceive an empty figure, which would remain if the matter or body were annihilated. The shape, figure, or form of a body is no part of the body, but consists of the relations of the space it occupies. Long, short, wide, thick, thin, square, round—every figure that can be conceived—is a mere relation of space, and quite inde-

pendent of the matter which may assume the form or figure, just as the form of a statue existed, or exists ideally, in the uncut block of marble, and really in the mind of the artist.

Then *motion* and rest are not in the body, or part of the body, and are not qualities of the body itself. Motion is not matter, as we have said, but a state or relation of matter. Rest is the negative, or absence of motion. But motion is a relation of *two*, not a quality or affection of *one*. As we have before said, Motion must be either from a point or to a point; from ourselves or towards ourselves. The body moves, but the motion itself is only the relation it bears to some other point of space by which the motion is observed and measured. A body may be in motion, but the motion itself is not in the body, but in the space; in the space out of the body, if the motion be external, or within the body if the motion be internal. But motion is not properly a quality in the body itself, or an attribute of matter, but is its relation in space to the space in which it moves. It is clearly absurd to say that motion is matter; and it is equally absurd to say that motion is a quality of matter *in itself*. Motion is a mental state or relation, a mental attribute or possibility, to which matter is liable and subject; but it is no part of or quality in the body itself, or in the matter itself.

Motion is a relation which body bears to space in general, just as figure is its relation to space in particular. It is mere confusion to confound the variable possibilities of motion and figure with the matter itself, or the body itself. When a solid becomes fluid, or a fluid becomes aeriform, what has become of its figure, its extension, or its motion or mobility. Rest is only the absence or

negative of motion, and is a mere mental perception of the relation which matter bears to space in general; and so motion is a mere relation, of which rest is the negative. None of these are qualities of matter in itself.

Lastly, *solidity!* Surely we must say of solidity, that it is in the body; or in the matter itself, or is a quality or attribute of matter itself, and not a mere perception of mind! I say, most certainly not; it is only a *relation* to the human senses—only a word invented to express a mental idea or reflection on our own sensations by our bodily senses.

It is merely thoughtlessness, as I think, that can in any way suppose solidity mainly, or peculiarly, or in any wise a quality of matter itself, or anything but a *word* to express a certain mental relation between what we call matter and our human bodily senses of touch. All unorganised matter seems to have three forms—the solid, the liquid, the aeriform or gaseous. If solidity be a primary quality of and in the matter itself, then, of course, fluidity and gaseity or aeriformness are also primary qualities of matter, and in the matter itself.

But let us take an example, and say we stand on a glacier. We find it a hard solid body of ice, 1000 feet thick, perhaps, and we chip it with our axe or alpenstock, and find it brittle and sharp-edged matter; and yet it flows—flows on and on slowly like a river, every particle moving (to our bare senses imperceptibly) over every other next it, faster in the middle, slower at the sides. What are we to call this phenomenon of this brittle matter? The word “Viscosity” is objected to, but it is as good as any other word. Well, then! viscosity, if that be the proper word, is also a primary quality of matter, and not in the mind or a mental idea, but in

matter itself! But surely this is most absurd; for we melt the ice and boil the water, and in a few minutes the viscid, solid, elastic, brittle, hard, impenetrable matter has passed through all its forms! Where is the solidity gone to? If you say, as the fact is, that *the state* of particles has been altered, then solidity is only a *state* of particles, like colour or sonorousness, capable of affecting our senses in a particular way, just like colour, smell, or taste, or any of the secondary qualities which are admitted to be states of particles. If solidity is in the matter itself, so is the sound and smell. Both are merely states of the particles of matter capable of affecting our nerves in particular ways. Solidity affects our nerves of touch, and smell affects our olfactory nerves, and sound affects our aural nerves.

Locke's *distinction* is, therefore, utterly unsound. If we are to say that solidity is in the matter, then so is colour, and so is sound. If we are to say that colour and sound are merely certain states of particles of matter capable of producing vibrations of light or vibrations of air so as to affect our nerves, then so is solidity and extension and figure and motion, only certain states of particles capable of producing vibrations of our nervous fluid, or some medium, heat or gravity, and so affecting our nerves of touch ending in the brain—nothing more and nothing less!

Shall we then conclude with Dr Reid and the philosophy of common sense that, "If natural philosophy is not a dream, there is *something* in bodies which we call colour, and heat, and sound;" and say also with the same Dr Reid that "Bishop Berkeley gave new light to the subject by showing that the qualities of an inanimate thing, such as matter is conceived to be, cannot resem-

ble any *sensation*; that it is impossible to conceive any thing like the *sensations* of our minds, but the *sensations* of other minds?" Which leg of realism or conceptualism or of the philosophy of common sense shall we logically limp upon? Shall we say that the things that we are talking of are in the bodies themselves, or out of the bodies themselves; in our minds themselves, or not in our minds themselves? Are we to speak of things themselves out of our mind, or of conceptions in the mind, or of concepts? And if of concepts, is the concept a thing in the body to suit the materialist, or a thing in the mind to suit the idealist, or each by turns and neither long with the English positivist, who thinks his body "a possibility" and his mind "a flux"?

Now the truth is, that the whole confusion arises from such words as sensation, conception, concept, which are altogether logically ambiguous between mind and body. Fix your *words*, and the difficulty will vanish. Solidity, colour, sound, &c.—all the qualities of matter—are material *things*, something or another, states of parts or particles in external matter. They are things, *i. e.*, *sensations*, also material things, in the human body; and they are things, mental things, conceptions, concepts, or *words* in the human mind and logical understanding. In short, all are at the same time things, thoughts, and words—things in *matter*—thoughts in *mind*—and words in *Truth*.

Take the case of sound. The resonant body vibrates, communicates those vibrations to the atmosphere, and the atmosphere to the 10,000 nerves or some of them which constitute the aural nerve. The *sound* in the external body produces a vibration of the atmosphere, and this produces the *sound*, a sensation in the nerves

of the body, hearing; just as one undulation produces a succeeding undulation, which follows or is the effect of the one that went before it. But the *sound* in the mind is not yet reached. The dog and the man both hear or feel the sound in their bodies, the vibrations of their nerves; but the man reduces them to number and time, and space, and feels and hears concords and discords, and pitch, and *timbre*, and fulness, and sharpness, and makes what was at first the sensual, into the intellectual. There is a *quality* in the resonant body—sonorousness; a *sensation* in the sensitive body; and a harmonious *perception* in the sentient human mind. And if we do not distinguish between these three distinct things, we, of course, fall into confusion. But fix and adopt distinct *words*—the material state of the thing, the bodily vibration, or state of the human nerve, and the mental state of the human mind, which we call sound—discord or concord, and the confusion will disappear in correct *language*.

But which is to be called, and what is *sound* in the mind? There is motion in the sonorous matter, and motion in the sensitive nerve; but if the motion in the matter is either too fast or too slow, the nerve does not vibrate, or the soul does not perceive. The soul, therefore, only perceives as sound certain *relations*, in number and time and space, between the matter of the sonorous body and the matter of the sensitive nerve—only certain of their mutual motions! The soul therefore only perceives certain motions and forms of vibrations, and not others too fast or too slow, too large or too small, for the soul's capacity to distinguish; and it can count and mark their numbers and concords and discords and harmonies—the combinations in time and space and

number of those undulations within the limits of the soul's capacity. The same musical tone may penetrate both souls, but they can only reason about the name or *sign* they mutually agree to give to it. But we know that our senses can be improved by attention and exercise of the soul's powers and capacities. But till we adopt correct *words* we cannot reason of any of these things, and then only of the words we have chosen.

Most writers do not distinguish or mark when they mean *sensations* of the body or *perceptions* of the mind ; or consciousness of the body, or consciousness of the mind ; and the materialist denies the whole difference, and sets out by saying that, to say, "I feel that I feel," is tautological ; whereas I say and set out by saying the contrary, in assuming the existence and distinction of mind and matter ; and say, I feel with my mind that I feel with my body ; I am conscious in my mind that my body is sentient. In short, I feel that I know, and I know that I feel, and I am mentally or spiritually conscious both of my bodily and of my mental consciousness. I can reflect on one or both. But you don't know that I feel, or feel that I know ; and I don't know that you feel, or feel that you know. The sensations of your body and the perceptions of your mind are wholly different and distinct from, and quite incomparable with, the sensations of my body and the perceptions of my mind, except as *words* mutually adopted and agreed on.

But our *words* are in both our bodies, and in both our minds, and our words we can and do compare ; so men forthwith seize on their common words,—sound and solidity—and dispute whether the sound and the solidity are in the man or in the bell ! One declares that they are both in the bell, another that they are both in the

man; Locke halves the difference, and says that the sound is in the man and the solidity in the bell! and a man with all the talents and erudition and universal knowledge of the late Dr Whewell, pronounces, after nearly two hundred years of verbal disputation, that "Locke's distinction is still right in the main"! What an exhibition of human philosophy, and the confusion of human words!

And then comes the illogical English positivist or materialist, who believes both or neither at his own logical pleasure, and can scoff at all; and invites us to pronounce that philosophy "has proved its incapacity by centuries of failure," and to stick to our steam-engines and telegraphs, to our observations and experience of matter only, and neglect our minds and morality and theology; yet finds himself somehow under the absolute necessity of theorising about metaphysical entities, called statics and dynamics, laws and causes, and forces and affinities; and at last exclaims, "we are forced to theorise! a theory is necessary to observation, and a correct theory to correct observation"!* And so we flounder on with the positivist into abstract and concrete science; and he attempts to show the theological entity (mind) swallowed by the metaphysical entity (language), and the two now, or hereafter, to be swallowed by the *positive* entity (matter), and we behold a new philosophy and a new set of confused words; and thoughts to correspond, added to all those that have preceded them, equally *sounding* and equally *solid*, equally ambiguous, and if possible, even more false!

Returning to our group of the qualities of matter, of which solidity and sound are the two examples we have

* Lewes, Biog. Hist. Phil., p. 657.

chosen, it cannot be denied, 1st, that they are *words*; 2d, that they are *thoughts*; and 3d, that they are something or another which come from without us, and are, therefore, *material* things—things, thoughts, and words! But the thing vibrates or operates, and passes into the body and dies in the thought; the thought passes out of the body and dies in the word; and the *word* is what we are disputing about. We think of the things, and speak of our individual thoughts, and reason and dispute about our words, and if men will not settle, and arrange, and reduce to order their *words* and symbols, then they can never settle their ambiguous questions; for the *word* is the only thought or thing we can discuss or reason about.

Every word involves a thought or a theory, and is a thing. And we cannot, in truth, distinguish the thing from the thought, or the thought from the words that express it, except by inventing or adopting new and clearer words—still *words* and nothing else. Solidity is, 1st, a material thing, a *state* of the particles of matter; but it is, 2d, a *relation* between certain material things and their actions on our nerves of touch, a motion of our bodies, and an emotion of our minds. When our bodies cannot easily penetrate matter we call it solid. But sound also is a material thing, and a state of the particles of matter, and also a relation between certain material things and their actions on our nerves of hearing. Solidity and sonorousness are the words or *names* which the mind invents to express these supposed particular *states* of the particles of matter, and also these *relations* of certain states of matter to our bodily nerves. They are both the same kind of phenomena; and Locke's distinction that the one, *solidity*,

is in external matter itself, and that the other, *sound*, not in matter itself, is certainly unfounded, and mere confusion of mind and matter; and as it appears to me, the confusion arose from his confused use of the word sensation, and from sonorousness not being so common a word as solidity. Locke did not distinguish properly between sensations of body—which are not ideas till the mind has attended to and *reflected* on them and embodied them as perceptions in words—and so-called sensations of mind, which are all from attention and reflection of the mind upon itself.

Solidity and sound, or sonorousness, are concrete words to express sensations of the body produced by some *external* objects vibrating or acting on our nerves. But we must not confound the sensations of the body—which animals and men equally share in—and the perceptions of mind, which are expressed in our *words*. A dog hears sounds and feels solids, but he knows nothing about the solidity or sonorousness of the bodies themselves, which are words for mere *ideas* invented by man's mind, by means of attention and reflection. One body is more or less solid, and another more or less sonorous than another, and men invent ways of comparing external matters, and then confound their mental ideas of the things—relations to our bodies—with the thing itself; and then invent such concrete words as solidity and sonorousness, which they then call qualities of matter itself, forgetting and overlooking the internal mind which first perceived the relations, in the eager rush to apply the relations to the pleasure or utility of ourselves or of mankind.

But the concrete *words* solidity and sonorousness are mere ideas in the mind, and express the perceived rela-

tions of certain bodies to our body, and then we proceed to investigate the causes or states of the particles in the external bodies. But ideas of matter are, to our minds, material *things*, and so we begin to talk of the things, of which we have invented ideas, as being in the matter itself, and not in the mind which holds the idea. And the convention of language permits and allows us so to do. For every word is supposed, by that false convention, to mean an external thing which all men can see with their eyes or mind, either mentally or physically, as well as his neighbour—and so both are in the bodies, and both are in every mind, but both are wholly unknown either to science or to cognition, except as *words*.

But though ordinary language justifies the philosophy of common-sense, and the modern realist, in speaking of solidity and sonorousness and all other relations between matter and our nervous system as being qualities in the matter itself, yet that is no sufficient reason for philosophers confounding mind and matter, and confusing the mere *thoughts* of men's minds, with any essential quality of matter *in itself*; and still less does it justify Locke's confusion in saying that *one relation* of matter to our nerves is in the matter itself and not in us, and that another like *relation* of matter to our nerves is in us and not in the matter. That is mental and logical confusion, even though accepted by Dr Whewell as "right in the main"!

Both solidity and sonorousness are mental relations between certain states of matter and certain states of our bodies; and are, strictly speaking, neither in the one nor in the other, but are merely *words* for relations between them. They are *words* in reasoning, *ideas* in thinking, and bodily and mental relations *in Logical reality*; hav-

ing no reality, however, except in the mind (capable, through its body, of framing the ideas and using the *words*. The thing is not distinguishable from the thought, and the thought is not distinguishable from the word. Solidity and sonorousness are not distinguishable except in words, from our thoughts of these things, nor are our thoughts distinguishable from the words we have invented. The words express, like all concrete words, what we call a *fact*, or experience, and involve the thought, or *theory*, or idea, which gives rise to the word. They are both facts in matter, theories in mind, and symbols in language, and all three at once, but we can only reason about our symbols.

But then it is said that we use the word "extended" in reference to the primary qualities, and the word "intense" in reference to the secondary qualities; and measure the first by *units* and the second by *degrees*! This is not strictly true; for we measure the numerical proportionate lengths and numbers of musical sounds; and have now discovered the numerical proportions in length of red light and violet light; and an *intense* solidity is quite as intelligible as an *intense* sonorousness! But, in fact, "intensity" and "degrees" are not science, but pseudo-science; which it is our business, as men of science, to reduce to Extension and Time and Number. We call solidity specific *gravity*, and make it numerical by taking as a *unit* the weight of distilled water; and as science improves, we shall no doubt improve our numerical measurements of sound, colours, &c.; for before the days of Newton, Forces also were intense, and possessed degrees; but he taught us how to measure force numerically.

But Reid did not himself properly distinguish between

sensations in the human body and *perceptions* in the human mind, which are as distinct and different as body and mind, because he did not see clearly, or adhere to his partial glimpse of the truth, that *perceptions* in all cognition and philosophy are only words.* Nor have any philosophers, as I conceive, properly distinguished between these two words sensation and perception, and the *words* or symbols which from time to time are invented by the mind to express its perceptions or ideas, both about the sensations of the body and the powers and perceptions or ideas of the mind. For the *words* which men generalise into general terms, in order to express all the sensations of all human bodies and all the perceptions of all human minds, are not the names of things, according to the false convention of ordinary language, but are all the result of, and produced by, the process of triple generalisation—a final process which leaves us all, of course, speaking only about *words*, as the only things we jointly know.

But by assuming at first the obvious existences mind, matter, and language, we can deduce therefrom, as I submit, very clear ideas of time and space and number, which are our accurate measures of all material things; and we cannot be said to have true or accurate science of any matter, or any of the departments of matter, till we have reduced its phenomena to these great measures by measuring it *numerically* in space and time! How much space, and what length of time, the Form of matter in question fills up and occupies; and with what *symmetry*, and with what *harmonies*, and all its changes or phenomena in spaces and times, and the symmetries and harmonies, which occur during that

* *Ante*, p. 179.

existence—this, *i.e.*, matter all and its changes, is the true field of positive material philosophy! and a very ample field it is.

We confine, therefore, our word *sensation* to the body, to that nervous system which man shares in a greater or less degree with the lower animals. Then Matter and all its qualities and phenomena are neither more nor less than the words, which the Mind of man is, from time to time, able to *invent* in order to explain to itself the sensations of its own Body. But we must believe our words if true. Matter is entirely our own faith in our own bodily sensations—not a permanent possibility, but a self-existing fact. Doubt does not enter the head of a child, and we acquire in childhood a faith in external matter which never leaves us. But even the greatest sceptic never doubts his own bodily sensations, which are often repeated, and which he can repeat at pleasure—they are not possibilities, but actualities. The possibility relates not to Matter or material things, but to the changes and variations between them, or to their states and relations.

Berkeley called our sensations “the *language* of God,” and Reid called them “the *signs* of external objects;” but neither name is strictly correct, and such language tends to confuse matter with language. Our sensations are matter, or material; our bodily sensations are all that we can know of matter; and we can properly say that all our knowledge of matter is verbal or Language; and that matter is only the concrete term invented by man to express his *abstract thought* of what affects his body. The thing that affects our body, and produces bodily sensations, is matter. The body itself is matter, and language is the vibration of matter. But the mind

immediately distinguishes between the bodily sensation and the thought of it—the memory of it, the consciousness before and after—*i. e.*, in time or second thoughts, which is abstract mind. And the *word* fixes and establishes the triple distinction both to ourselves and to others.

Thus sensations are motions and forms of *matter*, and reflections are emotions of *mind*. But both are distinct from *language*, which is mutual to more persons than one. But both matter and mind become *words* or language in the very act of naming them to ourselves, and to other men.

When Berkeley wrote,—“I do not argue against the existence of any one thing that we can apprehend either by sense or reflection—that the *things* I see with my eyes and touch with my hands really exist I make not the least question. The only thing whose existence I deny is that which philosophers call matter or material substance,”*—he evidently agreed with the common opinion of the mass of mankind as to the real existence of the material world as an external sensible world, though he disputed the propriety of calling it substance or *matter*!—a mere question of *words*. So again, when Berkeley wrote, “To say that a die is hard, extended, and square, is not to attribute those qualities to a subject distinct from and supporting them, but only an explanation of the *meaning* of the word *die*,” † he was for the moment what I profess to be, a nominalist or symbolist; but one cannot be both a Berkeleyian and a symbolist at the same time without self-contradiction. We cannot in philosophic truth reason about general *ideas* of either matter or mind, but only about our *words* for them.

* Princip. H. K., xxxv.

† Ibid., xlix.

For the error of Berkeley consisted in saying that thing or Being, the most general name of all, "is reducible to two kinds"—to wit, "*spirits* and *ideas*"—omitting language, and concluding that material substance does not exist, because our spirits have only an idea of matter; and Berkeley was deceived by that ancient Aristotelic word *substance*, which is ambiguous, and was equally applied by the schoolmen to spiritual and to material substances, confusing the two together.* But he was also partly deceived by Locke's ambiguous use of the word sensation—by his ideas of sensation and ideas of reflection, which really mean ideas of matter and ideas of mind, all equally ideas, as Berkeley well showed; and partly by his forgetting the *matter* of his own body. Berkeley thought only of his own mind as a spirit, and so adopted the division "ideas and spirits," which Hume seized upon to show that spirit also could be annihilated by the very same arguments which annihilate matter! And, to the horror of the religious world, the wholly unanswerable arguments of a pious bishop to abolish the ambiguous use of the word "substance" were by Hume used to discredit the possible existence of God and religion and miracles, and all ideas on such subjects; just as in the present day we find the arguments of conceptualists and theological professors on "the absolute" used by the positivist to show that theology must be impossible and

* The Greeks also used the word *ουσια* in the same way ambiguously; and thence arose the Homocousian and Homoiousian controversy; just as the Latin word *substance* is equally ambiguous and confused, and so produced the controversy of Transubstantiation. But behind the question of *words* and Reason, there is, of course, always the question of faith. And the Calvinist and Zuinglian play with the English word *understanding*, just as the medieval controversialists used *substance*—ambiguously!

absurd ! But, nevertheless, Body is self-evident to everybody, and Mind is self-evident to every mind, and Language is self-evident to every reasoner.

But the whole question is a question of the truth of words and of proper logical division—of finding and making and inventing a logical division of what is self-evident to every thinker and reasoner—viz., of “Being—the one most general name of all”—“the universe.” Faith does not depend on or begin with reason, but reason does depend on and begin with faith in what is *self-evident*. The greatest sceptic cannot reason about *nothing*, but must begin with something, which to him is *everything*; and we cannot reason about the all or the many, or the everything or the something, till we logically divide it into all those distinct and self-evident parts which we propose to examine and consider, and verbally conclude upon. We thus divide the All, into things, thoughts, and words; or, more properly, according to correct logical Division, into mind, matter, and language.

Reason, therefore, cannot overturn its own foundation, which is faith. But bad and false reasoning may shake and puzzle weak faith. And if our first distinction is in any way ambiguous, all our reasoning is liable to the same ambiguity; and the omission of *language*, which includes in the abstract *action* (the action and reaction and influence of mind and matter), from our division of the universe, leaves our universe imperfect, or, humanly speaking, dead, for human ideas without words are born dead! Thoughts, words, and things, as we have said, overlap each other in parts; and *mind*, *matter*, and *language*, therefore, is the true logical division of which philosophers have been in search.

We each of us have a mind; we each of us have a

body ; and we each of us have our actions of that body directed by that mind, which are our words and symbols of the thought within. To other men those actions are language or words. To God our words are actions. We are, as Hegel told us, what we do ! Our deeds are words, and our words are deeds, in the sight of Him who sees the internal moving power, the active will within, which produces every word and every deed. For a deed without intention is a word without meaning, a mere idle unmeaning deed or word. But for every idle word that men do speak they shall give account in the day of judgment ; for by their words they shall be justified, and by their words they shall be condemned. God sees and judges by that course of reasoning in our hearts which has been not only the proximate, but also the original, though often remote and distant, cause of every word and every action !

Matter, then, is only our mutually adopted *word* for the source, origin, or assumed external Cause, of bodily sensation ; mind is only our mutually adopted *word* for the source, origin, or assumed internal Cause of our mental reflection ; and language is action—the action of the mind through the body.

Thus the words sensation and reflection present to my mind no other difference than matter and mind. Sensations are the passions of the body, and reflections are the actions of the mind. To say that we get some ideas from sensation, and some from reflection, seems to me only confounding body and mind—we get all ideas from attention, comparison, &c., and reflection.

But, nevertheless, if the reader *wishes* to be a true disciple of positive philosophy, and of experience, and of reason without faith, we might say, that he must in such

case cling with philosophic tenacity to the indefinite use of this word sensation, or to the like use of the words conception or perception, or of some other words, which are conveniently applicable, indefinitely and ambiguously, to either a thing in the brain or a thing in the mind, to a thing in the body or a thing in the soul; and he will then probably find the undulations of the body, easily reflected back by his mind, into his confused and ambiguous words; and a pleasant or unpleasant flux or current will be established to the confusion of his reason; which current will carry him, if he pleases to rise so high, to the loftiest pinnacles of positive philosophy; and he can then, by and with ambiguous words, establish necessity as a law of mental nature; utility as the only criterion of good and evil; induction as the only source of truth; and the *grand être de l'humanité*, and the greatest happiness of the greatest number, as the latest and greatest revelations by man to man!—all being only conclusions from ambiguous words perseveringly used by men whose first principles are false, and whose logic is worthless.

Man, however, must believe his sensations, the actual vibrations of his body, until he is better informed; and until he is better advised by attention to further sensations, and by the exercise of his powers of comparison, reflection, and judgment, he must admit them to be what he first supposes them to be.

But man's whole intellectual life is spent in correcting one sensation by reflection on another sensation, one supposition by another supposition—in short, by the exercise of comparison, reflection, and judgment, and the careful recording of the result in words and language.

For example, a man sits in his chamber absorbed in

thought, and a clock strikes ! If he is sufficiently absorbed, he does not hear it at all ! If he hears it, but not in time to count the strokes, he takes out his watch and learns the time of day. If he did not hear it at all, yet the drum of his ear was certainly struck all the same ; for others did, and his nerves vibrated all the same ; for they are matter ; yet are we to say that there was no sensation ? Certainly, if you choose to call attention and what follows in the *mind* sensation, then you and I differ about the word sensation, which you are taking to mean something in *the mind* while I defined it to mean something in *the body* ; so we are at issue on a question of words ! And you must turn idealist and deny the existence of matter altogether, or you confuse body and mind together by applying the word *sensation* ambiguously. But I would say that there was sensation, but that the mind did not attend to it.

But the example shows the independent existence of *mind*, and also the necessity of settling whether by the word "sensation" we mean the reflex bodily action of the matter of the nervous system of an animal—which is my meaning for the word sensation—or whether it is to be applied to attention, comparison, reflection, conception, judgment, whose results are words and rational or human actions.

Of course language is necessarily conventional in *form* in order to be understood ; but we are bound to use unambiguous forms, and not to confound or hide the distinction between mind and matter by relying without distinction, upon a word like sensation or perception, which may be made either material or mental at pleasure.

Without doubt, when a child first opens its eyes, it

feels, as Cheselden's patient said he felt, as if everything touched it. When it puts out its hand and finds that some things can be grasped and others not, then by means of its touch and mental reflection it corrects to some extent its eyesight—*i. e.*, by reflection on touch, it corrects sight. By means of other sensations of the body duly reflected on by the mind, what we call its knowledge of the external universe gradually increases. But none of its ideas—its mental *knowledge*—is, properly speaking, from sensation or from experience, but from the first and throughout it is from the internal exercise of its mental powers judging between sensations—*i. e.*, from attention, from comparison, from reflection, from conception, and judgment (ending in the invention, or adoption of a word); but all mental powers, acts, and conclusions are not in the least bodily or sensational or experiential, but all are mental and reflectional and imperiential, otherwise we are confounding and confusing mind and matter.

There is nothing more to be said ; but that, if a man denies this, he denies the fundamental distinction between mind and matter, and so contradicts himself, and may think that his mind is “ a flux ” and his body “ a possibility ” ! Of course that is his concern, not ours ! and we can do nothing more with our logic but exhort him to fix his mind into something more than a flux, and to realise his body into something more than a possibility, and to find the clear distinction between the two respectively and language. We cannot argue about unknown fluxes or possibilities, all belonging to other men ! That is impossible !

The acts of the mind in obtaining knowledge of external matter are five—attention, comparison, reflection,

conception, and judgment—and the judgment is completed in what we call a thought, and is embodied in a word, sign, or symbol of many like thoughts combined in one name. Reflection seems the central portion of this whole process, and the word reflection generally stands for the general action of the pure mind or spirit connected with consciousness and the brain.

Of course the materialist would wish to turn the word reflection into reflex-action, which may be deemed the action of a nervous system conscious of external nature, but unconscious of itself. There are many such ganglions of nerves, or little unconscious brains, in the human body, where a rational action for the protection of the part, is unconsciously performed by the reflex action of the nerves, proceeding to and from the ganglion.

The convulsive movement for the protection of our lungs, when, as it is called, a drop or a crumb goes the wrong way, is a familiar example of the reflex action of nerves unconnected with the brain, but producing an apparently rational action unconsciously. For it is certainly a rational action to prevent the food intended for the stomach from going into the lungs, which might be, in all probability, death!

But every morsel we eat passes over the entrance to the lungs, and a little unconscious brain is provided by nature which guards the orifice by its sensation and reflex action on the necessary muscles, just as an animal shrinks from pain, or perhaps a sensitive plant from a touch. The reflex action of the nerves will not explain *self*-consciousness, or mental action, or reflection on one's self, which is the central action of the mind in the production of a thought, or the choice of a *word*.

We are not able to distinguish when or where the

sensation of the body ends, without mental attention ; though sometimes afterwards, as in the case of the clock striking while we are absorbed in thought, and on looking up perceive that the clock has struck without our attending to it—minutes before ; or when we perceive that a person has come into the room whose entrance we must have seen without taking notice of it, and in many other phenomena of the absent man, we are assured of the fact ; but it is to contradict our first assumption of the actual distinction between mind and matter, to refuse to distinguish the sensation of the body from what is often improperly termed the sensation or perception of the mind, of which the first step is attention, and the last a thought and word.

Although we have all forgotten the early exercise in infancy of our reflective powers, which have taught us all our general knowledge of the world of matter, and have induced us to believe that external things are as we generally all suppose them to be, and speak of them as being—as solid, fluid, gaseous, in form ; placed at various distances from ourselves in space, and variously affecting us and each other in time—yet the whole of it has all been learnt by our reflective powers. And it is as much the produce of reflection that we believe the sky and trees are at a distance from our eyes, or that bodies are solid or otherwise, as it is that we believe in the rotation of the earth and the courses of the planets round the sun. And as it is surely improper to say that we have learnt, not by reflection and mental calculation, but by experience, that a man at the equator is travelling round at the rate of 1000 miles an hour, or that the whole world is found by experience to be flying through space at the rate of 1100 miles in a minute ; so

all and every truth we know of external nature, is likewise learnt, not by experience, but by reflection and judgment.

For many years the infant and the child are wholly engaged in correcting their judgments about the world of matter, and in teaching themselves the relative distances and importance of external things, and their relations to their own bodies and to one another, and their past, present, and future states; and these judgments, repeatedly recorded in the mind, become so fixed by habit that it is difficult in later life to surprise the mind with a new sensation of the body, and compel it to go through the whole original process of learning, in ordinary things of matter, by attention and comparison and reflection.

We are compelled to surprise, or put, our nerves in some very unusual position, in order to entrap the mind into the act of judgment on ordinary things. For example, when one limb or part of the body becomes so partially cold that the other parts do not know it by touch at first touch—a phenomenon which occurs to many persons, and which has several times occurred to myself—and we start at touching ourselves in bed, as if we had touched another person; or when we cross two of our fingers, and touch a pea, or crumb, or sharp corner or angle, with the distant and opposite, in place of the adjoining, sides of our fingers; and we then feel two peas or crumbs or angles in place of one; or when we hold a pencil perpendicular to the forehead, and exactly between the eyes, and see double; and in other such cases, we can often still, by such unusual acts, detect the gradual process by which the mind has, out of an infinite number of separate sensations by each nerve-filament

made up and arranged the general knowledge, which we all possess of the outer world, into habitual judgments, which have become almost instinctive.

Every nerve-fibre to the child, must, I think, carry originally a distinct impression to the brain; and it is only by repeated judgments that we unite many feelings into one continuous surface, which we call a body or matter when we feel it.

So the remarkable phenomena of the stereoscope, and the fact of our seeing solidity, or solid Form, by means of our two eyes, but not seeing double, afford also a very satisfactory proof that all our knowledge of external nature is the result of mental reflection and judgment, and that we get no ideas from sensation alone, but that our bodily sensation only affords us, not ideas, but only the bodily materials out of which our ideas are *invented* by mental reflection and judgment, by attention and repeated comparisons, and the exertion of our powers of conception, till our judgment is made up; and it then gradually becomes habitual.

All of this process, in respect of most things around us, is lost in the mists of infancy; but it explains the earnest gaze and steady grasp of an intelligent infant, to which every new sensation in every nerve is a new miracle, rousing its curiosity and inviting its faith by its permanence, and its attention and reflection by its variety.

But though every child may be *said* to acquire knowledge and possess cognition before it can speak, yet such language is improper; for this knowledge and this cognition is only private, individual, inchoate, and imperfect; and forms no part of that *general* knowledge or general cognition to which men refer when we use those gene-

ral terms. Cognition means general cognition—mutual and general to mankind, not individual and peculiar to one; and to become a cognition about which we can speak, it must be expressed or recorded in *words*, signs, or symbols, mutually intelligible; and these only form a part of that *general* human cognition about which we can speak and reason. Till words, therefore, are adopted or invented, cognitions are only private peculiar idiosyncratic reflections, like the indescribable thrills of a nervous individual, or the unspeakable words of St Paul, about which it is absurd to reason, and impossible to have any question or discussion.

The whole external universe is, in fact, to the thoughtful, one great continuous miracle; everything is a miracle to the thoughtful man, reflecting on life, and light, and growth, and chemistry, and electricity, and geology, and astronomy. The whole external and internal universe becomes more and more miraculous to the thoughtful observer, every year that he lives; and the delight and thankfulness of an infant to its parent for a new toy is but a humble type of the reverence and pleasure produced by a new phenomenon to the humble searcher after physical or psychical truth.

All nature is a miracle of sensation, and of wonderful relations, which the mind of man discovers, from age to age, amongst the things which we see, and hear, and feel, and smell, and taste; and instead of abolishing and superseding the religious and metaphysical side of human nature, thoughtful observation and experience rather intensify and extend it; for the more we know, the more inexplicable and miraculous it all becomes; and the more wonderful becomes man's own mind and intelligence itself, which has invented and created the

thoughts and words, which express the discovered mental relations, which his mind perceives between external things operating on his senses.

If, therefore, we admit the fundamental distinction of body and soul, or of mind and matter, we must equally distinguish between the actions of the mind and the passions of the body. Sensations are the passions of the body, and wholly distinct from reflections of the mind. Sensations are the phenomena of the sensitive plants and the nervous organisation of the lower animals and of man. That may be, by an abuse of language, if you please, called human consciousness; but it is in no respect *self-consciousness*, or the internal reflection or action of mind or spirit on itself or its own Soul and Body.

Man seems wholly incapable of investigating any mind but his own. We can know no more of the process in a dog's mind, if he can be said to have a mind, than we can know of attraction or chemical affinity; but we do each of us know and feel the active operations of our own mental organisation, and we describe it, as well as we can, by the metaphorical use of words originally invented to describe material phenomena, now used metaphorically as symbols of mental operations.

But we must not confound the passions of the body, which are sensations, with the actions of the mind, which are reflections in general. The lowest act of the mind is attention, but it is an action, not a passion. We all feel at times that attention is an effort, an act, an original internal act of mind. Sensation begins without, and is bodily; attention begins within, and is mental. We are *self-conscious* of our attention, and

can originate and increase, and to some extent control it, and can refuse our attention and turn to something else. But there are passions of the Soul, as well as, passions of the Body.

For the mind of man is not pure spirit. He has a mind composed of soul and spirit, and his soul becomes dull, as well as his senses become blunted. He is not always able to control his attention, when his soul is dull, or sleeping, or dead! And living men may often have dead souls!—souls dead to everything spiritual.

But it is sufficient to insist that, whoever admits the existence and distinction of mind and matter—who is not an idealist or a materialist—must equally admit that, sensations are the passions of the body, and wholly distinct from all the actions of the mind, which we call reflection, or else he contradicts himself; and also that attention, comparison, reflection, conception, and judgment are wholly reflective actions of the mind, and purely mental. All ideas, then, are from reflection; and what Locke called ideas of sensation are ideas of matter, and his ideas of reflection are generally ideas of mind.

The Language and doctrines of materialism help to drown the soul in sensible things; but yet all sensible things are only known and judged by super-sensible things; and things visible can only be seen by things invisible. The first realisation of the truth that “we do not see with our eyes, but with our reason,” is in fact a revelation of intellect; and though it has been known ever since the days of Plato, yet it has to be newly learnt individually by each man in succession as he begins to grow in knowledge.

It is the chief object of positive philosophy to ignore and obscure this truth, and to abolish the human mind

and all abstract ideas, and especially cause; and so to obscure all intermediate causes, and ignore the first Cause!

And all those who use the words sensation, perception or conception, concept, impression, representation, &c., ambiguously, either for things in the brain or for things in the mind, play into the hands of the positive materialist, and give him logical weapons against the existence and truth of the metaphysical and the theological, which involve or require the *mind* alone!

Hume's argument from and abuse of the word *impression*, and his conclusion that no amount of testimony can never justify our belief in a miracle—*i. e.*, our belief in any violation of what *we suppose* to be the ordinary course of nature—is best answered, in my opinion, by the assertion, that the original and absolute course of nature never can be known to us; and therefore that the faith, which we have in what we are all accustomed to call the course of nature, is merely blind credulity in some system of *words* and *phrases* in which we have educated ourselves, and which, if we are eager and desirous after physical knowledge, we are every day ourselves rectifying and altering!

The course of nature is to the infant the daily supply of food put into its mouth whenever it cries, and the being shielded from every terror in its mother's arms!

From this we pass on by degrees until perhaps we arrive at the contemptuous maxim, "*Aide toi et le ciel t'aidera*"! But when we have grown in true wisdom, we shall and must return to a faith like to that of our infancy; and combine a faith in God the Father with a conviction that all the knowledge of man concerning matter and its laws, is as nothing compared with the

powers of spirit—that “all things are possible to him that believes,” and that man’s own powers are only limited by his want of faith—his want of that true faith, which is the image and reflection of the Divine Spirit and the direct gift of God Himself—a Divine faith which is made perfect in love.

But, in fact, the man who admits the distinction between matter and mind, and then uses the ordinary words idea, impression, representation, conception, thought, or sensation ambiguously, either to mean things in the body or the brain, and also to mean things in the mind or spirit, actually confounds and confuses his admitted distinction between mind and matter; and so he contradicts himself, and violates the laws and limits of his own logical division. But the mere animal sensation and consciousness of the body, is wholly distinct from the SELF-consciousness and internal reflection of the man, as a spirit or mind, distinct from matter.

The examination of a man’s internal self-consciousness in his attention, comparison, reflection, conception, and judgment about the bodily phenomena which external matter produces in him, gives to every individual a new internal universe of thoughts, ideas, and words, more real to himself, in the case of every one who thinks carefully, than the external universe of matter in which he believes from his infancy. For our own mental existence, when once perceived, is more certain, and more real, than any bodily nervous sensation whatever.

As soon as a man clearly knows and sees with his mind, that the external universe of matter is not and cannot be known to him directly by his mind, but only by and through certain sensations of his body; when they happen to be sufficiently attended to by his mind; and

that these sensations of his own body are only known to him by repeated attention, comparison, reflection, and by their mental results in ideas, conceptions, and judgments,—all voluntary acts of his own mind ; and that these, again, which are the thoughts of his heart and his dearest convictions, are only known to himself and to God, or readers of the heart ; and that to enable other men to share or participate in his thoughts, whether they be thoughts of the matter without us, or thoughts of the mind within us, the whole must be translated from the invisible region of his individual mind, into the sensible *language* of reason and of logic ; —he must then see and perceive, and be convinced in his own mind, that the visible can only be known by the invisible ; and that the invisible and visible are equally matters of faith, and not of reason ; and that we can only speak or reason about either, when they have been both reduced into mutually-adopted human WORDS—not that words are all that exist in the eyes of faith, or the eyes of reason founded on faith, but that they are all that is in any wise subject to the proper domain of human argument and of human reason—they are all that can exist in human cognition !

The universe of *matter*, for the purpose of reason and for argument, exists only in and through the world of mind, and the world of mind is an individual world peculiar to each man, and exists to other men or to mankind—*i.e.*, becomes general only—as a world of WORDS, received and accepted or invented by man in general as a family, and not merely by man as an individual ; of whose individual peculiarities we cannot reason at all to other men, except as mere ideal suppositions, without any self-evidence whatever.

Words, therefore, contain and embody all our reflections, and our reflections contain and embody all our sensations ; and when we have proceeded to generalise our words for common use, we are no longer talking about our sensations or our reflections, but only about our mutual WORDS for possible and hypothetical sensation and reflection in general. With words we must begin every argument and every discussion, and with words only can we conclude ! Every sensation can only become an object of cognition when it has passed into our reflection, and our reflection can only become an object of cognition when our reflection has been embodied in a word, or *words*. Then the word becomes, if mutually adopted, the general *name* of the whole number of things assumed as causing the sensation, and the product of all the thoughts which our judgment and reflection have invented and adopted on the subject of the thing or class of things ; and we are reasoning, and can only reason, about the word. We can develop the word as a *formula* into other words, signs, and symbols, and we can do no more.

But each man may individually return to his observation and experiment, and may vary and verify or correct the former sensations of his body, or the former reflections of his mind, and thereupon, by Comparison and Reflection, may invent new and better words, signs, and symbols, in order to enable his fellow-men to share and participate in such improved sensations and reflections ; but he is still only substituting one set of phrases for another set of phrases, and is no nearer penetrating the actual realities of creation. All we can say of such an inventor or observer is, that his thoughts of things *seem* to us to be more accurate and distinct. But we

may positively assert and prove that such *words* are more logically consistent and clear; and more correctly represent our own true thoughts of matter or of mind. And we may also, starting from the reasoner's own principles, show and prove that, his alleged words, for his supposed thoughts of matter or of mind, are logically absurd, and he himself logically ambiguous or self-contradictory; but out of this logical cage of *symbolism* there is no possible escape. Thus the man who undervalues words, signs, symbols, logic, undervalues the only intellectual foundation of *all* human truth.

All words are the bodies of ideas, but all words are firstly, only sensible images, or images of sensible things—of matter. Like the word "reflection" itself—a bending back—all words for our mental operations are only metaphors of sensible or *material* things. Man has no means of telling other men what he feels in his mind, but only, by using a sensible image metaphorically.

Thus all words are at first bodily *sensations* named, and all ideas are from mental *reflection* metaphored. But all ideas are independent of, but should be made to accord with, experience, not inexperience; but all words are originally invented as images of bodily experience, and are used only as metaphors when applied to mental operations or ideas. But Locke's distinction of primary and secondary qualities of matter, falsely pretends to reason of some things in matter itself, out of all relation to the nerves of the human body; and is therefore a distinction manifestly false and unfounded in experience. Solidity and Sound are equally material things, mental things, and verbal or scientific things.

As we have said, however; Locke was probably the first to observe this fact,—that all words for the mind,

and all its operations and its ideas, are at first metaphorical;—and it is of necessity that such is the case; for as mind is invisible and impalpable, and man has no means of comparing mind with mind, or of communicating what passes in his own mind to another, except by language and words; and sensible facts are the only facts which men can suppose they have in common, this use of metaphor is manifestly quite unavoidable. Man can only take some common sensible image and *spiritualise* it into a metaphor—just as *spirit* itself is breath, and *angel* is messenger, and idea, reflection, conception, perception, &c., are all different physical facts adopted to express metaphysical phenomena. So every physical operation may be used as a metaphor of Mind.

The nature of man, and of man's mind shut up in his body, necessarily prevents any other course. Thus all metaphysical language is of necessity metaphors of physical facts, and the spiritual and immaterial can only be taught, as it were, in the language of materialism; and the inner life, of necessity, can be understood, only by the images of external life, and the life of the mind is only a spiritual conception framed from the life of the body. "The flesh lusteth against the spirit;" matter contends with mind, and mind with matter, in the human person; and all words are of necessity originally material images, and all ideas are mental things, merely metaphors of visible *matter*, or of visible material things.

The condition and limit of the human mind, is the necessity of using material methods of action. But Force can only act on the body, and Language is the only instrument which can operate on mind! Men's bodies may be ruled by material force, but men's spirits can only be ruled by force of language, and the man who

is thoroughly master of words will ultimately rule the minds of men. Thus our senses give us all the materials for framing our ideas of body; but all our ideas, both of body and of mind, are framed by the mind alone, and are independent of experience; but are intended by the mind, to explain or theorise our sensible experience, and to show why we have, or can have, such and such bodily experiences.

But all our words are of necessity material images adopted to express our ideas both of body and mind. All our ideas are from mental attention and reflection, and are by judgment embodied in words, which are of necessity these bodily images; and the emotions of mind are but faintly imaged by the motions of body. Thus the body is the type of the soul, and the soul itself is again spiritualised by metaphors of metaphors into the never-resting and imperious Spirit, which treats both soul and body as its own slaves or subjects. But the phenomena of external, visible, and sensible matter must be used as the types of invisible mind.

The mystery of Language is the mystery of man, and the source of all philosophical disputes; but it is, however, well worth while dwelling on this confusion of sensation and reflection—this error of supposing that all ideas are founded on experience—because this notion is the efficient cause of most of the materialistic scepticism which exists in the world. Once grant that all ideas are founded on experience; and the ideas of mind, spirit, angel, devil, God, must give place altogether, or trust to loose arguments concerning the trustworthiness of prophets and apostles, and concerning the authenticity of the works and words attributed to them, thousands of years since, as compared with the *non*-experience of

subsequent ages and of ourselves. But assuming, as we must *a priori*, as given and assumed, in the very *meanings* of every word we use,—the existence of mind and spirit wholly distinct from matter, and that each man shares in such a spirit or mind ; then the necessity or possibility of mental communion with the One Eternal, and his spiritual friends or enemies, becomes no longer a doubtful question, but an absolute certainty to the thoughtful human being, who contemplates the nature of man and the universe, and sees with the clearness of demonstration and conviction, that any other thought is absurd and self-contradictory ; that minds, spirits, and God do and must exist, and that their actions are and must ever be miracles to us, who are wholly and necessarily ignorant of their powers over the material universe. And our *non*-experience does not affect the question.

We thus only experience bodily *sensations* of matter, and we invent all our *ideas* ; but we can either adopt, or invent *words*, which we can make the symbols of our ideas of things. Any other language than this denies the existence either of mind or matter, or confounds and confuses matter and mind together. We cannot tell where the *sensation* of the body ends ; or where the perception or *attention* of the mind begins ; the *limits* of matter and mind in our own persons are not clearly revealed to us by nature ; but that fact affords no reason to any accurate or truthful mind to deny the existence of either of them ; or to confuse and confound the two together ; for the distinction is self-evident and admitted, in every word we use.

Matter is very obviously divisible into Living and Dead—into organised and unorganised. All unorganised

or dead matter appears from induction and analogy to be capable of assuming three states or *forms*—the solid, fluid, and gaseous or aeriform state—all which I have shown to be nothing in themselves but states of matter in relation to man's living body.

Solidity, fluidity, *gaseity* or *aeriformness*, are not things in the matter itself, but only supposed states of its supposed ultimate particles or atoms in relation to the human body and its nerves. And these atoms and their states and relations are wholly imaginary and invisible forces and causes.

If the human body cannot penetrate without destroying the cohesion of the matter—that is, permanently dividing or separating *one* into *two*, it is solid; if the body can penetrate the matter without destroying the unity or cohesion, it is fluid, like a drop of quicksilver on a table, or a drop of water in dust; and if it seems to the human body indefinitely expansible, and to present little or no resistance to human motion, and yet retains weight, it is gaseous, its particles no longer seem to attract, they repel each other.

But all these states may be also referred to the force of gravity. Solid is where cohesion resists the force of gravity to alter its outward form, and fluid where the cohesion is not sufficient to resist gravity in altering the outward form, and vapour is where there is no form given by gravity—or where the repulsion of the particles is greater than the attraction of gravity. All these three forms are states of matter in relation to man's bodily nerves, and to the globe itself. But there is a fourth form of matter—viz., the imponderable matter or matters of light, heat, electricity, and magnetism.

Thus we have gravity and levity in matter, or, as we

must say in relation to the globe, ponderable and imponderable matters; and all the ponderable matter, so far as we can judge from induction, appears to be able to take on itself each of these three states or forms of solid, fluid, and gas or vapour. But the most powerful, quick, and influential matter known to man in the universe is not ponderable, but matter imponderable—that is, out of all measurable relation, to the earth's attraction or gravity. Of this imponderable matter light seems to possess the central position, and its motion seems to be an undulation or elastic wave. At the violet or quick end of the solar spectrum we find invisible rays quicker than light—waves too quick for our nerves of sight; these are the actinic or chemical rays, which are chemical or electrical, but we cannot see them: and at the red or slower end of the spectrum we find the heat-rays, which we can feel but not see, which are, again, too slow for our nerves of sight; and possibly, if we could, by spreading or polarisation, convert the vibration of light into a vibration entirely at right angles to its original course as light, we might find that it produced gravity and magnetism. This we may possibly guess from finding that the attraction of a magnet is increased in power by the action of a current of electricity through an enveloping helix at right angles to the magnet itself, and that the action of gravity can be applied to produce heat and light.

But wonderful as are the powers of these imponderable matters, light, heat, electricity, and magnetism, they are phenomena of a matter at present wholly imponderable by man, or, out of all measurable relations, with the earth on which he lives—that is, at present we have not discovered that this matter has any *weight* whatever

in relation to the globe itself—their gravity, in fact, is nothing, but their powers seem unlimited, and, in short, we find that the less the matter the greater its power.

But still, of course, light, heat, electricity, and magnetism are only words for bundles of phenomena; and gravity, both on the authority of Newton himself, and according to the principles of symbolism, is a mere human thought and *word* to express a bundle of appearances, and not anything really existing in external nature. “I do not take gravity,” said Newton, “for an essential property of bodies;” and the time, I venture to think, is probably fast approaching when we shall have to give it up altogether, except as an action or vibration, like magnetism, at right angles to light, heat, and electricity—a slow vibration, in fact, of which we can see and feel only a part; and this, I think, will appear as soon as we can bring the internal heat of the globe into measurable relations, by means of number, space, and time, with the lengths of our day and year, and the laws of light, heat, electricity, and magnetism. But speculation must go hand in hand with observation and experiment; and we must justify comparison and analogy by showing that they accord with all the known facts or observations on the subject; that is, we must show that our words are accurate and just deductive explanations of external Motions and internal Forms.

Matter, as we have said, cannot be mind, because it affords us no meaning or interpretation for the words or language we use; and in relation to our globe, matter is ponderable and imponderable; and ponderable matters are either dead or living; and life is a state of matter which constitutes an organism or living being, which has been called “a constant form of circulating matter.” The

Form is constant—the matter is in *Motion*; but I would add to this *organisation* and other powers; in which we must search for correlation, symmetry, and harmony.

But if we now turn our attention to ponderable organised matter; we find that the human body itself is an organised solid; but that all its nourishment must become fluid, and be converted into chyle, before the body can assimilate and take it into its organised system; and also that all this fluid must pass to the lungs, and there partake of the *breath* of human bodily life, the air or atmosphere, possessing in its due proportion the gas called oxygen, before it can be converted into living blood fit to nourish the tissues of the body. Now this wonderful organisation of the human body appears to have no other object than to keep up during life the internal specific heat of the vital organs of the human body; and if proper food, solid and liquid, in proper quantities, be not given to the body, or if it be deprived of air with a proper proportion of oxygen in it, the body decays or dies; but still, up to the time of its death, it keeps up its own internal specific or blood heat at the proper temperature, and this even by the consumption of its own bodily tissue. If the circulation or motion fails to keep up the organic heat, the organism dies, and the matter becomes a dead form of organised matter.

The body, as it were, destroys itself, and commits organic suicide, if we may so speak, in order to keep up its own internal organic blood-heat, without which the motion ceases and the form is dead.

But what heat is we do not know, except that we believe it now to be some modification of the material medium, or matter called light—a vibration or motion, an undulation of some matter, too slow for our eyes to

see, but not too slow or too fast for our nerves of touch to feel. Heat seems the imponderable matter of organic bodily life. But heat itself seems only a vibration, wave, or undulation of some imponderable jelly or fluid.

Now the human body is the type of the human soul, and the food of the soul, as I conceive, consists of symbols, and its breath is faith, and the human soul is possibly organised light, electricity, or magnetism. But what I wish to point out here is this—viz., the practical bearing of some of these speculations, upon that species or form of material beauty which we call *symmetry*.

All the food of the human solid body has first to be converted into fluid in order that it may nourish the body; and as these fluids pass along and through the human body in every direction, no doubt partly by endosmose through membranes, and partly by capillary attraction; the attraction and circulation of fluids in the minute tubular, capillary, ducts and fibrils of the human body seems one of the fundamental facts in the building up of the whole human frame, including, of course, its cranio-nervous system, and even the brain itself. But hydrostatics teach us that, as fluids press equally in every direction, the hyperbola is the curve which the surface of fluids must assume in the capillary tubes of organised bodies; and therefore that curve must actually exist in the human nerves and brain, from the capillary attraction of the tubular ducts or fibrils, on their central fluid pith, in the course of its being used, or wasted, and reformed.

The hyperbola is a curve with its centre, if we may so express it, outside, which requires to be balanced with a similar curve on the opposite side of the centre; a curve which approaches indefinitely near, but never

attains true contact with, two right lines called the asymptotes, that pass through its centre. The hyperbola possesses many resemblances to the course of the human mind and reason towards *truth* and beauty. For example, I say that all symmetry is to be traced to, and can be only truly founded on, the hyperbola! Every form of true physical symmetry must, I say, take the hyperbola for its basis! This, I think, is a very remarkable fact, and I am not aware whether it has been before promulgated, but it can be made very easily clear and self-evident.

A very interesting portion of Dr Whewell's 'Hist. Sc. Ideas' is devoted to the idea of symmetry, illustrated by much more varied learning than I can pretend to offer. He there says: "It may be said, perhaps, that the idea of symmetry is a modification or derivative of the idea of space and number—that a symmetrical shape is one which consists of parts, exactly similar, repeated a certain number of times, *and placed so as to correspond with each other*. But on further reflection it will be seen that this repetition and correspondence of parts in symmetrical figures are something peculiar; for it is not any repetition or any correspondence of parts to which we should give the name of symmetry in the manner in which we are now using the term. Symmetrical arrangements may, no doubt, be concerned with space and position, time and number; but there appears to be implied in them a *fundamental idea* of regularity, of completeness, of complex simplicity, which is not a mere modification of other ideas." He also says that the axiom or principle of symmetry is, "that all the symmetrical members of a natural product are, under like circumstances, alike affected by the natural formative

power. The parts which we have termed symmetrical resemble each other not only in form and position, but also in the manner in which they are produced and modified by natural causes." * He applies this to botanical symmetry and to crystallography; but the fact will be self-evident on a little inspection, that all simple symmetrical figures and forms must arrange themselves according to the four curves of an hyperbola and round its centre.

You will find that in every kind of symmetry there are certain points that cling, as it were, to the right lines, the asymptotes and co-ordinates. But of course the angle of the asymptotes may or must be varied to suit the symmetry required, where we wish to introduce a symmetry not perpendicular and square.

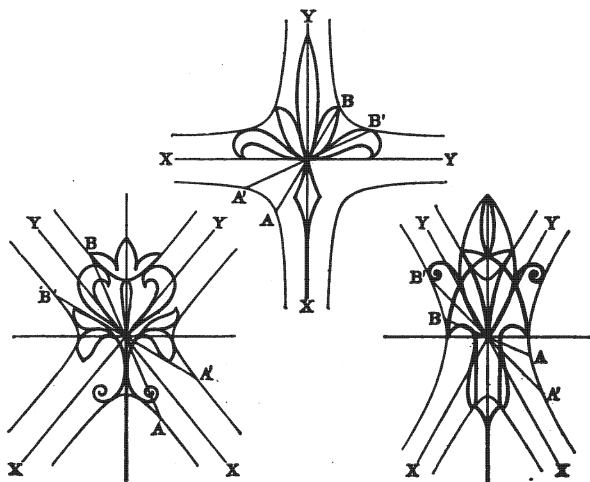
Of course for complicated symmetry we may require more hyperbolas than one, but no arrangement can be truly symmetrical which cannot be inscribed in one or a number of hyperbolas! Let us illustrate what we mean by a figure. The principle of the hyperbola is that every right line drawn through the centre is bisected, so that it is, as it were, the converse of a circle, in which the same principle is true; but in a circle all the right lines are *equal* to one another, but in an hyperbola every adjoining pair are unequal. If all right lines drawn through the centre are all bisected and *all equal*, the curve is a circle; but if they are all still bisected, but all the adjoining ones are *unequal*, then the curve is an hyperbola, of which, we give three examples.

Take the right-angled, or any angled hyperbola, where the lines X Y are the asymptotes; then wherever the

* Hist. Sc. Ideas, lib. vii. cap. i. art. v. vol. ii. p. 72-76; and Phil. Ind. Sci., vol. i. p. 428.

right line AB is drawn through the centre it is always bisected. And this is true of every angled hyperbola.

Now it is evident that, with this curve whatever *like* figure we draw, meeting the hyperbola in *like* points, it has symmetry; or make any number of like branches or curves cutting or touching the hyperbola, in like points, and springing from the centre, and the result is symmetrical.



Of course we are not bound in all symmetries, if we draw one line, to draw all the eight equal lines; for though symmetry means "regularity and completeness" —or, as Dr Whewell expressed it, "complex simplicity," —*i.e.*, it must be at once "complex" and "simple," at once "regular" and "complete." A complex figure may sometimes be best seen with a few lines symmetrically omitted. They must be, as Dr W. says, "symmetrically suppressed," and they are always so found in nature.

Nothing but the hyperbola, or a number of hyperbolas, will satisfy this desire, which, I humbly think, is the natural desire of the mind of man for symmetry; and it is founded on the natural constitution of the human body, and of all living organisms possessing capillary tubes.

Symmetry always requires that every point be in some way balanced by another equal and opposite, unless it be itself a central point or clinging to the axis or to the asymptotes; and in symmetry the central points must all cling to the axis or asymptotes. Let any person of artistic taste try this and he will find it so!

There is, as it were, a sense in man's mind which rejects as unsymmetrical, all points that will not fall into some balanced complexity round some assumed point, of which the hyperbola furnishes the true and proper solution.

The hyperbola, in short, is the *locus* or line containing all the symmetrical points round its centre. And this explains the reason of the fact, obvious to all artists, that if symmetry be destroyed by shortening or elongating any arm or branch of a symmetrical figure, it cannot be restored by merely equalising the corresponding and opposite arms or branches; but the whole figure has generally to be recast, and the angles at which the branches are arranged must generally be entirely altered. The reason is, that there is only *one angle* in the symmetrical hyperbola, for *each particular length* of branch or arm, and if you elongate or shorten any one branch, you must at the same time increase or diminish the angle at which that branch cuts the axis of the figure passing through the centre.

Now this may have a very useful and practical artis-

tic application; for if we have a centre and a certain number of points given us to be introduced, we can find all the other points which can be in symmetry with those given points, either in one or more hyperbolas, by drawing the hyperbola, or the least number of hyperbolas, which will take in all the required points. Again, if we have any number of points to bring into symmetry, we have only to assume a centre, and hyperbolas made with that centre through the given points, will do all the rest for us, and show us where all our symmetrical points *must* be placed in order to symmetrically balance all the given points.

The hyperbola can always be so assumed as to make three or four points of any figure regular, and the curve will then afford an infinite number of points all in symmetry with each of them. And also, if an artist has to alter a line in a figure already symmetrical, the hyperbola will at once tell him the angle at which each length of line must be put, so as to be in symmetry with the rest of the figure, and without having to recast the whole design.

But, on the whole, I think it is sufficiently clear that the true laws of symmetry must be founded on the hyperbola; but of course there is also circular symmetry where the branches and angles must be all equal, as in pentacrinites.

By varying the angle of its asymptotes, the hyperbola also affords infinite variety of shapes and forms. By taking them at right angles, it allows of the most regular figures. In short, it is, from its very nature, compounded of contrast and similarity, of simplicity and complexity, of variety and regularity. It possesses in itself all those qualities which go to form man's idea

of general *symmetry*, under the utmost variety of length and position ; and if ever the laws of organised beings are to be reduced to mathematical order and precision, it must, I think, be done in a great measure by means, and by the use of the hyperbola and its properties.

Man's body only partakes of symmetry as does all other organised matter in the world. All or most organised matter, possessing life and growth, appears to have in it a circulation of fluids in capillary tubes ; and each organism appears to possess a symmetry of its own, and a modification of some higher or lower symmetry, which pervades organisms, higher or lower than itself.

In studying, therefore, due and proper classification of natural organisms, I commend to natural philosophers, the reduction by measurement in number, space, and time, of their observations of the symmetrical branches of an organism, to an hyperbola of a fixed angle, and thus to endeavour to ascertain the limits to which its variations tend to proceed.

But it is most certain that, all organisms possessing a circulation of fluids through capillary tubes must possess a symmetry of growth closely connected with some fixed hyperbola which must be the law of its life and growth.

The normal size of its capillary tubes and the normal density of its fluid sap, combined with its specific heat, will probably afford grounds more certain than any we have hitherto discovered for the classification of organisms, by establishing some fixed law of hyperbolic symmetry and some fixed law of organic growth, the *form* and the *motion*, which constitute the creature, and make it to be what it is.

All plants appear to have a tendency towards a spiral growth, in the points, which appear to be symmetrical. The symmetrical points are never directly over one another ; and the same is true of shells and many of the lower classes of animal life, which have what we call a symmetry repeated in their mode of growth.

Now a certain *spiral* may be conceived to arise in this way : Suppose an hyperbola to revolve slowly on its axis, and to form a solid hyperbola, such as must exist in every capillary tube. Now the motion of a particle of organised matter in growing up the hyperbola follows this spiral ! It is moving upwards in an hyperbola, but the hyperbola itself has a twist or twirl at the same time. In fact, just as the earth moves in an ellipse with its nodes revolving ; and just as all the planets move in ellipses, but their nodes move round ; and thus, as Sir John Herschel tells us, their actual motion in space, so far as we at present know, is "*a complicated spiral* ;"—so I say that the motion of every particle of an organised plant, is motion in an hyperbola, which hyperbola has itself, as it were, a slight tortuous motion ; and the *vital force* acts in an hyperbola with such a twist. This, one may say, is matter of demonstration ! That is to say, the two discoveries of the "rise of liquids in capillary tubes," and the "force of endosmose," or absorption, or *vis a tergo*, or whatever primary principles are assumed as causes of the growth of organisms, then certainly by mathematical necessity they lead our minds to this hyperbolic spiral ! The particles rise in hyperbolas ; and the absorption, circulation, and other forces must result in a twist or spiral.

Thus, to put what I mean in an intelligible form by a figure.

Suppose A a fluid rising in a capillary tube, forming the curve B C D in its upper surface. Then the curve B C D is an hyperbola, because the fluid pressing equally in every direction, the rise to B and D above the level, is due to the *constant* force of capillary attraction; the product xy and $x'y'$, &c., wherever taken will be constant; and the consequence is, that its shape is a *constant* hyperbola, for the same sap and like tubular vessels due to the deviation from the ordinary laws of fluids produced by capillary attraction—the curve on the surface of the rising liquid is always an hyperbola indefinitely approaching the side of the capillary tube.



Now it is a well-known matter of observation that all plants acquire a twist as they grow. There is in many, a very distinct approach to symmetry, but the symmetry gradually acquires a twist. This is, no doubt, the resultant of all the other forces—light, heat, gravity, absorption, endosmose, the revolution of the earth on its axis, &c.—which affect the growing particle, besides capillary attraction, in its ascent from the earth; and the general resultant motion or course of every growing particle in every organism is onward spirally. But in every plant that exists, it is as certainly true that the *growing* particles perform their ascent and move in hyperbolas, with complicated spirals thereon dependent on the light of the sun, its heat, and the gravity and rotation of the earth, &c., as that the planets move in ellipses, and in complicated spirals in those ellipses.

It is, in short, mathematically demonstrable that if we assume capillary attraction, or the attraction up-

wards of fluids in *minute tubes* of matter of greater density than themselves—a fact which may be made visible to the senses, and a motion the result of other forces upwards—then it is mathematically certain that, their combined force must form a spiral on the surface of the curve, which may be called the solid hyperbola, having the centre of the capillary tube for an axis. The rise continues, and if any *regular* disturbance whatever occurs, the particles must rise in a spiral, at the same time that they rise in an hyperbola. The particles are gradually absorbed into the growing *plant*, but their course is clear and manifest, as an hyperbolic spiral, or a spiral traced on a solid hyperbola. And the *symmetry* of the plant is the result.

Such, then, is the course of the planets—an ellipse converted by disturbances into an undulating *spiral*! Such, also, is the course of growth in every plant, and of any particle of that plant which grows in capillary tubes! Its course is in an hyperbola converted by disturbances into a spiral or slightly contorted wave; but still an *hyperbola* in form, becoming a spiral by motion. Such, then, is the course of the vital fluids in the human nerves, and in every animal and in every plant—in every organism that possesses liquids moving and growing in capillary tubes. As the planets move in *ellipses*, so, I think, the particles of all organised bodies move in *hyperbolas*. In both cases, to our minds, the effect of the disturbance from forces not connected with their supposed primeval force, or their vital force, is simply to alter the motion slightly into a spiral, without in the least affecting the original elliptical or hyperbolic motion.

Plants grow in hyperbolic spirals. Planets move in

elliptical spirals! And the one is quite as certain as the other, to any one who admits both *capillary attraction*—the attraction of imponderable atoms; and the *attraction of gravity*—the attraction of ponderables.

But some timid believer will exclaim: Why, this is materialism! If your theory can be true, the positivists and Spinosists and Hegelians must be right; and all organic nature, including man himself, is only one great machine of material undulations in elliptic and hyperbolic spirals, vibrating, like the disturbances of the planetary system, in secular ages of thousands of millions of years! But this is again confounding mind and matter, and confusing the laws of the human body with the laws of the human soul and spirit.

If, then, we divide external matter into organised and unorganised; we find that unorganised matter is subject to *form* and Symmetry in space; but organised matter is subject to both *motion* and *form* combined, that is, to Symmetry in space, and also to Harmony in time.

As chemists or philosophers investigating *unorganised* matter, we must search for *forms*—the angles and symmetry of crystallisation—the relation of each kind of unorganised matter to heat, light, electricity, and magnetism, and must strive to measure by number, time, and space the angles and forms of crystallisation, the temperature of its three forms of solid, liquid, and gaseous states; in short, we must search for its freezing and its boiling points; and all its allotropic forms under the influences of light, electricity, and magnetism, and for its expansive and other *forces*, when brought into relations with other matter, either organised or unorganised; but always reducing all our observations, as far as pos-

sible, to number, space, and time, and to weight, or its relation or attraction to the globe we live on. Thus we have to search for symmetrical *forms*, and for measurable *forces* or correlations in unorganised matter.

But, as natural philosophers investigating *organised* matter, we have to search not only for *form* and symmetry in the organism, but also for its *motion* or law of growth; and the constant motion and form combined will give us a *curve*. We have therefore to search for the curve which fulfils both its form of symmetry and its motion of growth—in short, as I conceive, the angle and amount of its torsion or twist, in proportion to, or in harmony with, its symmetrical parts. If I am right in supposing that the symmetry of every plant and some or most animals may be always included in some hyperbola, then we must strive and measure the angle of that hyperbola as being a fixed angle for each distinct genus or species, and also its spiral torsion, which must depend on its law of motion or growth. But we have also that difficult subject of temperature in plants and animals, for the measurement of which, as well as of angles and torsions, we have very inefficient instruments for investigating such minute variations and changes. But all must be reduced to number, space, and time, if we seek for accurate science, and if heat be motion, there must be some correlation between its temperature and the law of growth in every organism.

But we cannot observe till we have a theory, nor observe truly without a true theory. We must begin with a theory, and then must measure by number, space, and time to test our theory. But observations and experiments concerning matter, not accurately reduced to number, space, and time—to order, correlation, symmetry

and harmony—are useless. We must have accurate *language* before we can have true *science*.

The thoughts or words which define and limit the class, and become thereby the definition of the word, are, as we have shown, the recognised likenesses or *resemblances* which each unit of the class must have to every other unit, or is supposed and admitted to have, in the discussion—their acknowledged states and relations, in which they all resemble, or are supposed to resemble each other. But nature is not bound by our definitions, and in nature perhaps there are very few absolute lines to be drawn, or perhaps none. An infant newly born, or an idiot, is not less than a man because they are devoid of reason; but that is no sufficient reason for refusing to call man a rational animal. Nor could we very easily find the limit at which a planet becomes so small as to be treated and thought of merely as an aerolite, nor what amount of density would make a comet turn into a planet.

But still the thoughts or words which define any assumed word, are the perceived or assumed resemblances of the individuals. Not one, but all the individuals must possess all the likenesses assumed or discovered; and the difficulty in science always is, to fix upon those resemblances which are most essential—that is, which are such, that without them, the mind refuses to number the individual with the class. Some men's minds seize on one, and some on another resemblance, and each thinks his own idea essential, and the other non-essential.

But that, must ever remain very loose and inaccurate science, which is contented with *types* and loose notions wholly unfixed, founded on some individual assumed as the type of the class. Man, or the man of science, in natural objects, should not be contented with a type, but

is bound to search for the likenesses, or resemblances, in *number*, *time*, and *space*—such, for example, as *one-lobed* and *two-lobed* seeds, which in natural botany give us plants whose growth is quite distinct; the one, or monocotyledons, growing within, like palm-trees and onions; the other, or dicotyledons, growing and increasing without, like oak-trees and beans—endogens and exogens; to which we must add those with no seeds or unknown seeds, acrogens and cryptogens and, perhaps, dictogens, as science improves her means of observation.

But any sort of *numerical* classification, however, such as the Linnæan system, is better than loose *type* classification, and affords greater convenience to the memory; though it affords little information to the mind, unless we happen to have seized on some true natural analogy which brings together into the same class individuals with many resemblances, such as the number and position and form of the teeth in vertebrate animals, and one and two lobed seeds in plants. Then we find that though, in general, nature does not work by jumps or leaps, yet that there are some remarkable analogies attached to such numbers in nature, such as, for example, the jump from plants which grow in the middle to plants which grow on the exterior. One cannot be two, nor two one, nor outside inside; but there may be plants which grow every way, or from points, buds, and generation; but such examples as Cuvier's remarkable prediction of a marsupial animal from examining a single jawbone, teach us that our business as men of science is to search for and to measure numerical, symmetrical, and harmonious correlations between the parts of every organism.

But the great source from which classification may

properly proceed is, I think, *symmetry* for organised bodies, and the accurate measurement in space for unorganised matter—the exact angles which certain crystals tend to adopt, and the temperature at crystallisation and vaporisation; the exact angles and proportions—in short, the hyperbolic spirals—which plants tend to adopt, and the specific temperature, if possible, as well as the numerical relations of the branches and leaves and parts of leaves, and fruit and flowers, phyllotaxis, &c., and, if possible, the measured proportions of its growth in time and space, in length and breadth and height—these alone, give certain ground for true *classification*.

Until we can find and measure fully, some accurate relations in number, time, and space in the individual unit, we have not yet read Nature's language properly and scientifically, and we have not yet reached a *natural* class; for the great Architect does not work at random, but with definite numbers, spaces, and times, symmetrical forms and harmonious motions. And number, space, and time, are our only sources of scientific Truth and Certainty. But nothing can be more false or illogical than to suppose this inconsistent with the powers of mind over matter. For all Minds must work in accord with *some* laws of the Creator.

All nature is full of numerical and symmetrical marvels yet to be discovered, and harmonies and analogies which, when found out, will astonish by their beauty and simplicity; and men hereafter will wonder at our blindness, as we wonder that the distinction between endogens and exogens, between aqueous and igneous rocks, &c., should have lain hid so long from men's eyes and understandings. Therefore I say to observers,

measure, measure, observe, observe, by number, time, and space, as did Kepler and as did Newton, as have done all great discoverers in natural science—measure, measure, calculate, calculate; for the great Mechanic of the universe does not make mistakes in number, time, and space, but follows the laws of accurate mathematics.

But observations and measurements, without thought and comparison and reflection and judgment, are of little use. It is the thought and reflection and judgment which form the science, not the observation or the experiment. We neither know how to observe, nor how to experiment, till we have got some rational idea or theory. But in all cases we must go back to mind, matter, and language, and to number, time and space—to states or unities, to relations or pluralities. We must ask ourselves, are we speaking of a spirit, a body, or a mere word? are we considering it in itself, as one and complete, or are we considering merely its relation to some other, and what, thing? and on what fixed measurements or resemblances in number, time, and space, of the several individuals of the class, have we formed our classification—*i.e.*, our definitions.

Consider, for example, the relations between the *sound* of a cod-fish and the *sound* of a musical instrument. The resemblance is a trumpery accident of *language*, and merely a verbal question, though both things are material phenomena. But consider the relations between the *law* of Moses and the *law* of gravity. Here the resemblance is not merely verbal, for both are verbal *rules* or orderly words laid down by a Lawgiver. But the subject of the one is *mind*, and human conduct or action; the subject of the other, *matter*, and material action or attraction. The question whether the one was

revealed to Newton, just as the other was revealed to Moses, is affected by the totally different natures of the subjects, *mind* and *matter*. 1, Neither may have been revealed. 2, Both may have been revealed; or, 3, One may have been so, and the other not. But it is manifestly idle for three men to discuss such a question till they agree to argue either as materialists, or as idealists, or as symbolists; for they are all three using mind and matter in different meanings; the first thinking mind a state of matter, the second thinking matter a state of mind, the third holding both mind and matter to be distinct as things, distinct as thoughts, as well as distinct words.

But any definition of *sound* at once puts a stop to any possible discussion of the relations, between the sound of a cod-fish, and the sound of an organ. But a definition of the word *law* by no means puts an end to all relations between the laws of the Decalogue and the law of gravity, for both are laws in the same sense—viz., as verbal *rules* (or words \times order); and there may be many more reasons for admitting the probability of the Supreme *Mind* revealing *mental* rules of human conduct, than of His revealing *material* laws of visible planets. But the sanction or punishment for violating the law of gravity with our bodies is generally immediate—a broken bone, perhaps, or only pain; but the punishment for violating the laws of the Decalogue—theft, murder, adultery—is not immediate, but only prospective, and is often escaped, so far as we can externally judge, in this world altogether. Thus, the future *life* of the soul comes directly in question in discussing the revelation of mental rules of virtue, but not in discussing the revelation of the laws of the material universe.

We must therefore always first ask, Is the thing in question a mental thing, a material thing, or only a verbal thing? We must then search for material symmetry or mental symmetry or verbal symmetry, for it is some resemblance, or some symmetry, which constitutes every class of objects.

The source of all spatial symmetry, as I have said, is the curve hyperbola, which is also the curve that liquids assume in capillary tubes. The solids deposited or fixed in our nerves and brains, therefore, probably follow the laws of the *hyperbola*, affording to man that dim sense of symmetry which he perceives in nature. The hyperbola for space, and the harmonic scale for time, and divers numerical relations to man's senses, will probably afford many correlations, much more accurate, than any we have at present, amongst natural objects of growth, whether animal or vegetable. But the chief source of the knowledge and science of nature is, no doubt, the laws of undulations or vibrations, or of *motion* without progress, and *form* without fixity!

If it be asked what is meant by such language, I point to all the motions and forms of the universe before our eyes. For tens of thousands, or perhaps millions of ages, this planet of ours, has moved round and round the sun, but, so far as we at present know, has made no progress. Every particle of every wave or undulation of the air, of light, of the ocean, makes its circuit, and returns to its original position of rest, it moves but does not progress. Yet the wave or undulation, which is itself a *form*, progresses through the ocean of air, or light, or water; for each particle of the wave, though it has moved without progressing, has moved some other particle to take a similar course,

and return again to its first position. All the particles of a wave are in this state of motion without progress ; and the undulation itself is a form without fixity.

The wave or undulation is never the same at two consecutive instants of time, yet we can, if we please, measure the rate or rapidity of the motion of the wave through space ; and we can also, if we know the orbits of its particles, determine the depth, and height, and length, and breadth, and thickness of the undulation, and its maxima and minima, its greatest and least form or condition. Between these two limits it vibrates, never at two moments the same, a form without fixity in space, and in the abstract, a motion without progress in time ; for each particle of the undulation performs its circuit, and returns to a state of rest. But yet, when the wave or undulation has passed on in space and time to other scenes and regions new, we can measure the progress of the waves through space, though every particle of the medium has again returned to rest, and the undulation may have passed away for ever.

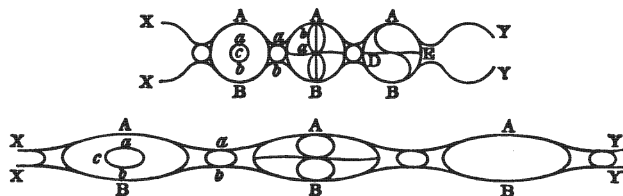
Newton died ignorant of this law and its planetary applications, and believing that the variations or perturbations of the universe, whose principal law he had himself discovered, must ultimately destroy the vast machine which he had developed ; but we now know, as far as we can know any such thing, that all these perturbations have their secular limits in Time and Space, and then slowly return to their primeval state ; again, perhaps, with or without modifications, of which we can know nothing, to renew their course, extending over millions of millions of ages, without tending to destroy the machinery, so far as we can see, and understand its movements. All the motions of this great

universe, so far as we know them, are, in fact, mere vibrations, pulsations, undulations, motions without progress, ultimately destined, so far as we can judge, to return to their original states, ready to commence a new vibration or undulation at the command of their Maker, either the same or different, effected by pulsations, of which now we can know nothing, except only, our thoughts of their possibility, in the will of their Creator.

But the stability of the universe is merely a mathematical idea, formed from our equations, or verbal mathematical expressions for the laws we have discovered. It is not a conclusion from *induction*; for what can we know of the creation, or continuance of *many* such planetary systems, in order to draw such a conclusion about our *one* system? But we deduce it from the very nature of the equations, the formulæ, the general verbal expressions which we have been compelled to frame, in order, in words, signs, and symbols, to express the intuitively supposed relations of the few observations we have made; and so have made our symbols reason for us.

This is the true triumph of abstract symbols, when the pulsation of a planet, is not revealed to us by a telescope, but by a *formula*, by a few verbal symbols worked out by a mathematician in his closet, and then verified in the heavens above. Or when the fringed colours, dancing forms, in a minute ray of light passing through a crystal, are not discovered by the microscope, but by a meditative philosopher scanning a few *x*'s or *y*'s upon a piece of paper in his closet; that is the triumph of language, of a formula, of symbolism carefully developed, from assumed self-evident axioms concerning Motions and Forms!

Definition is the very soul of reasoning ; but until we have a theory we cannot make a definition. With it, well performed, we may scan the heavens, and sitting in our closets, predict the future of the universe. Without it, we can do nothing ; and if ill performed, we shall only flounder in confusion, and ambiguity or falsehood. He who neglects definition is as a mariner upon a dark ocean, without either compass or hope of observation ; for till we can symbolically define what we seek for, even our best observations are utterly useless and misunderstood ! Some fundamental error in one definition confuses and confounds all our mental reasoning and physical observation. The observer and experimentalist are utterly blind, until the mental intuition has given them the thought, the idea, which is the true clue, to some part of the meaning of what their eyes have looked upon, but which their inward eye has not beheld.* Let us explain a wave or undulation by a figure.



If we suppose A B an undulation producing the wave-lines X Y produced by a centre of force, c , whose maxi-

* "Great masses of knowledge are daily perishing before our eyes without possibility of recovery, because our eyes are not open to them. On this account a theory is of so much more consequence in these sciences of observation than in those conducted by way of experiment.

. . In sciences of observation it is perhaps not using too strong an expression to assert that the Theory is the science."—Sir J. Herschel's

mum form is the sphere, or ellipsoid $A B$, and its minimum form the sphere, or ellipsoid $a b$, the motion without progress of the particles passing from a to A and b to B may evidently be any circular, elliptical, or other curve, returning into itself, and may vary from the perpendicular right lines, which would form the polar wave at rest; or from an elastic ball as a minimum, to a horizontal right line, which would represent the maximum rapidity of a vibration in the horizontal line; and we must conceive this centre of elastic force expanding in all directions, and collapsing in all directions, from the minimum $a b$ to the maximum $A B$, with the progress onward of the curve, varying with, and producing, the forms of the wave-lines $X Y$. Then the particles of an elastic fluid have all motion without progress, and the elastic wave $A B$ has form without fixity in space or size; for the wave itself, $A B$, may have any spherical, or even circular or elliptical and spiral form, continually vibrating in thousands and millions of ways, as at D and E . But the resulting wave-line becomes a constant and fixed form for each variety of elastic motion; so that we have, as it were, a positive and fixed form of two wave-lines produced by motion without progress, and form without fixity, forming by the solid wave, or undulation, a series of spherical or ellipsoidal or other cells, of which a section in any plane are the wave-lines $X Y$.

And on the one hand, being given the fixed forms, and times of the wave-lines, we might, as it were, possibly re-integrate and deduce therefrom, the vibrating motions

'Essays on Terrestrial Magnetism,' p. 66. Within the period of recorded observation the magnetic needle has passed from 11° east of the true meridian to 24° west in London and Paris. But we have not half investigated the magnetic effects of rotation, before a centre of magnetic force, either with solids, or with fluids enclosed in solids.

and forms which were adapted to produce such fixed wave-lines; and on the other hand, being given the orbits or motions without progress of the particles, and the undulations or forms without fixity, which they produce, we might deduce the wave-lines and the alternate form of cell produced thereby in plastic matter.

It is evident, also, that a variation in the orbits of the particles might produce an undulation spherical in its general appearance, yet covered with spiral or other network of infinite variety; and the resulting cell or wave-lines would be like the impress from a die of infinitely varied forms, and the cell itself just like a mould from which an elastic gutta-percha ball is cast, covered with spiral or other lines in relief upon the surface of the sphere, producing infinite and various symmetry in the ultimate memorial cells, produced in the brain; and the laws of light show that our minds are so constituted as to be able to weigh, measure, and appreciate forms and motions inconceivably small—for numbers of millions give us no actual conception of size. And the time may possibly come when astronomers will have to think of the earth and planets not only as mere particles of matter, performing complicated spirals in immense undulations, between their ecliptic limits of variation; but the law of gravity itself as consisting of both attraction and repulsion, and as only a particular instance of the laws of light, heat, electricity, and magnetism. But without measured facts such thoughts are idle speculations.

But the moon, also, considered in reference to the earth and sun, and without regarding the variations and irregularities which only complicate without altering the principle, illustrates the doctrine of undulations; and, in

reference to earth and sun, she may be said to move in a spiral wave-line. The moon moves round the earth in an ellipse, but just as if she was attached to the earth, by an elastic spoke of a wheel, which wheel may be considered as her orbit, in form an ellipse, but so nearly a circle that, upon the scale of this page, the difference is inappreciable.

Now, if the sun (*vide Frontispiece, upper figure*) be the centre, and the outer circle be the line which joins all the positions of full moons, and the inner circle the line which joins all the positions of new moons; the orbit of the moon may be conceived as a wheel or small cycle, as shown at *f*, rolling round between these two curves thirteen times in every year, but pulled after, or pushed before, the earth alternately in every month as the earth pursues its annual course at the rate of 1100 miles in a minute—*i. e.*, while the earth pursues its own orbit once round the sun between the curves, dragging the wheel with it, the moon goes round like the spoke of such a wheel about thirteen times. Now, if we suppose the wheel to roll from left to right, on the inside of the outer curve, the path would be retrograde, like the moons of Uranus, and would form a sort of cycloidal curve,* with sharp points or cusps at the full moons; but if we suppose the wheel to roll from left to right on the outside of the inner curve, the path would be direct like our moon, and the cycloidal curve would be reversed, and the sharp points, or cusps, would be at new moons, as

* A cycloid is the curve which a point in the circumference of a wheel takes through the air as the wheel rolls along the ground, and has many curious qualities; but the breadth of the moon's orbit is only the 400th part of the breadth of the earth's orbit; so that on the scale of the curves in the frontispiece, the space between the outer and inner curves of new and full moons would be scarcely visible, or less than the 150th of an inch.

both are shown in the upper figure; and the real path of the moon is a wave-line, always concave to the sun, produced by this cycloidal motion from new moon to full moon, and from full moon to new moon, all round, combined with its much faster motion round the sun, following the earth in its orbit, but varying according to many other inequalities. Of course, as the earth moves onward in its annual orbit round the sun, the moon is sometimes ahead and sometimes behind the earth in its course, and is dragged behind or pushed forward accordingly. But its course through space may be represented as a cycloidal wave produced by an epicycle rolling on a cycle flying round the sun; and this illustrates how the facts and experiences on which the Ptolemaic system of cycles and epicycles, was built up, are embraced by the system of Copernicus.

For it is evident that as the earth *E* moves in its orbit round the sun from left to right, the moon has to move from *n* to *f*, and back again from *f* to *n*—from new moon to full moon, and from full moon to new moon, backwards and forwards, all round the annual cycle, in some kind of wave-line always contained within the breadth of its own orbit; but more like the concave undulations of elongated cycloids pulled out nearly straight, than like the bell-shaped waves which the smallness of the scale has compelled our artist to draw in the *lower figure*. And if, as is probable, the sun moves round some unknown centre, the earth also must move in some other wave-line, of which the breadth of the earth's orbit is the latitudinal limits—just as the breadth of the moon's orbit is the latitudinal limits of the wave-line above described, between the positions of new and full moons respectively.

But then it is also evident that the moon's orbit does not come to a sharp cusp or full stop either at new or full moon; for the moon's orbit is so small, that if rolled round thirteen times like a wheel, it would only roll about one-thirtieth part of its course round the sun; and accordingly the spoke, by which we suppose the moon attached to the earth, is pulled behind the earth, and pushed before the earth alternately, every fourteen days, by some force unknown to the astronomers, for all the other twenty-nine parts of its annual orbit. Therefore at full and new moon the moon's own proper motion, produced by this unknown force, operates at right angles to the attractions of both the earth and the sun. But the inclination of the plane of the moon's orbit, and the retrograde motion of its nodes, and divers inequalities in the moon's motion, make the undulation into a waving spiral; and its motion becomes a flat spiral *wave-line*, forming a wave about 480,000 miles high, the breadth of the moon's orbit; and a spiral some 40,000 miles wide, double its inclination to the ecliptic, and passing, twice every month, through the plane of the earth's centre of gravity.

Now human words, though the scale be less, are in all respects, undulations or vibrations of particles in fluid or æriform mediums, such as we have attempted to describe; and fixed resulting wave-line cells may be supposed to be formed in the plastic cellular matter of the brain, and may be laid up in the human memory as in a storehouse, for future use and employment; and thus may the winged words of folly or of wisdom be stereotyped upon the human brain—as signs and symbols, the *meanings* of which the Spirit has stored up in the Soul, either for its own instruction and edification, or to its own destruction and ruin.

But observe also, that the undulations received from without into the nervous medium, whether they be like an electric wire or like a fluid conduit pipe, may be, and must be, in fact, more or less affected in their passage through that bodily medium and by its plastic forces; and the resulting wave-lines or brain-cells will be hyperbolically modified by that nervous medium, just as that nervous medium itself may have been modified by the actions and words of the spirit which governs it. And thus the wave-line of truth, which nature's harmony would impress, may be corrupted and defiled in the soul and body itself, by the wilful actions of the body; and the spirit is not instructed in the truth, by reason of the approaches to the soul, having been obliterated, obstructed, or defiled by the bodily actions, words, signs, and symbols, directed by the spirit itself, which may have been invented, or knowingly adopted by the individual against truth and good conscience.

Thus true words, which move and impress the righteous and conscientious, and lead them to the truth, fall unheeded, or perverted by the wilful self-corruption of the wicked, and are recorded by his own words refusing to accept or acknowledge, what he might have known to be the truth, when duly offered for acceptance; and his words of refusal go forth from the human spirit into the outer universe, and are there recorded till the Day of Judgment, wherein the truth shall be made manifest; and his Spirit may be then convicted, by his own words, of that self-inflicted mental obliquity, which he has exhibited in and by his own wilful choice of symbols in order to confuse and confound the truth.

We must ever remember that there is no greatness or littleness with God, or in Nature as known to Him. Light is an admirable and most wonderful instrument,

and, as we now know, can detect the ten millionth part of a grain of any substance, if it exist in a given solution ; but what is physical light itself in comparison with the infinite knowledge of the Searcher of Hearts ? We are lost in astonishment at the miracles of spectrum analysis ; but what are they, to the weighing of the human soul, the reading of every cloud that has passed across the mind, and has been weighed in unequal scales by the wicked spirit of a man ? But God knows all, and the self-chosen balances, with which our spirits have weighed each idea, and each suggestion, and each motive, will be fully exhibited and brought to light in the *words*, which we have wilfully chosen for ourselves, in order to confuse the truth, and to satisfy our own souls, in refusing to admit it as Truth, or to follow it out, though we knew and felt it to be the Truth.

But when we have reached the furthest limits and most delicate vibrations of *matter* ; although they may help us to conceive and comprehend the subtle laws to which the human soul may be subject ; we are yet, as far off as ever, from an abstract thought, an idea, or the secret and mental meanings of our words ; all of which are dependent on the free will and arbitrariness of man's never-dying Spirit, treating both his Soul and his Body as his slaves and instruments, either in order to attain some object which he chooses to say shall be his own ; or to worship some idol that he sets before his mind, as an object of passion, prejudice, or desire ; or of beauty, goodness, or Truth.

CHAPTER XVII.

THE HUMAN MIND—HARMONY.

PURE mind is Spirit—God alone—incomprehensible, eternal, immortal, invisible, the blessed and only Potentate, above the highest heavens, and beyond the farthest star, and yet not far from any of us; for in Him we live, and move, and have our being; and without doubt He is to be found by us, if we seek Him diligently, as the one only true God, the Creator of all matter, and of all inferior minds, who is no respecter of persons, in any place or nation. But of Him we are not here, in discussing Symbolism, called on to speak or write at all—for of Him no true symbol can or should be made; and yet every thought and word and deed, every sign and symbol, should be in devoted and happy submission to his Almighty Power.

But until we have formed some distinct notion or conception of *man's mind*, and have framed words to express it, we cannot rationally discuss either man's state here—*i. e.*, his *politics*, or relations to other men; nor his relations with God, and possible state hereafter—*i. e.*, his *religion*. The materialist, of course, starts with the assumption that man has nothing properly called mind, and is only organised matter—*i. e.*, he assumes that his *mind* is a *state of matter*, a "flux," "series," or "current," depending only on the action of beef or

rice, potatoes or maize, the foggy and depressing effects of delta or bog, the elevated imaginations or superstitious fears of high hills and mountains, of storms and sunshine, of earthquakes and rocks ; or else on the effects of opium and whisky, of tea or tobacco, &c., all acting materially as the prime agents in producing his state here—*i. e.*, his science, civilisation, and politics ! But as to any imaginary hopes of hereafter—*i. e.*, as to his religion, or personal relation with God—on these principles, it were as reasonable to speak of the religion of a cultivated sensitive plant, or of an improved and civilised race of pigs !

With such men—the rationalist and positive philosophers of the day—the believers in universal Law, and deniers of all miracles as being impossibilities—it is logically absurd to reason from the Jewish or Christian assumption that man is a spirit—a *person* with spiritual relations to a *personal* God ; or that he is a being who can love the Lord his God with all his *heart*, and *soul*, and *mind*, and *strength* (Matt. xii. 30) ; or (which is starting with St Paul's assumption) that each man is compounded, not of matter only, but of *body*, *soul*, and *spirit*, as three distinct parts of every man who breathes (1 Thess. v. 23).* *They* practically deny *a priori* the existence of mind or spirit, distinct from matter.

* I do not think that St Paul differed from Jesus. A man's "*strength*" is no part of the man, but rather that predisposition and Power which he can choose, and seek and find for himself, and out of himself, if he pleases—that which is poured in or upon, or which he has had given to him within, from without, *ισχυς* ; and the "*heart*" and "*soul*" and "*mind*" of Jesus are the same as the "*body*," "*soul*," and "*spirit*" of Paul, but considered in their several relations to God and man ; for God can read the heart and soul and mind, all secret and within, but man must guess at both the internal soul and invisible spirit through the visible sensible *body*, by its actions and words.

But we must assume some self-evident conception, or *axiom* about mind before we can possibly reason about it (*ante*, p. 192). Mind is self-evident; but what is mind, and what is self-evident about it? I say that it is self-evident that man's mind is invisible; but consists of two parts—a *soul*, subjective—*i. e.*, subject to laws and powers and influences; and a *spirit*, free from and above all laws and powers and influences whatever, made in the image of God its Creator, and only limited by the passions and weaknesses of the body and soul to which it is tied, and over which it can rule absolutely, according to their capacities. I say that the distinction of body, soul, and spirit in each man is self-evident.

Now it seems to me impossible to understand the most ordinary phenomena of a man's own mind, unless we adopt and acknowledge this division of his mind into soul and spirit. There is a part of a man's mind which is emotional and subjective—subject to some laws like the body, and not wholly free like the Spirit, which last can either yield or resist, even to the death.

The soul stands between the body and the spirit. It possesses intellectual perceptions, emotional desires, and spiritual sentiments, subject nevertheless to certain laws or rules from which it cannot escape, any more than the body can escape from hunger, thirst, growth, decay, and organised action, while life remains. So there are in the soul analogous or corresponding desires and necessary impressions and actions, over which man's Spirit has not absolute control. His soul and spirit are both imprisoned in a subject body, but his spirit is also imprisoned in a subjective soul. The phenomena of logic and rhetoric, of inference and persuasion, of patriotism, enthusiasm, fanaticism, &c., are wholly unintelligible to

my mind, without I assume this division of the human mind into soul and spirit. Just as I divide man himself into body and mind, so I find myself necessarily compelled to divide mind—the human mind—into soul and spirit.

But it is simply absurd, and a waste of time, to reason with any opponent, from a fundamental assumption which he denies and contradicts. You must first prove to such a man that there is such a thing in man as *mind* or soul or spirit—that there is a thing distinct from the organised, ponderable, gravitating, chemically-acting, or life-possessing body—a thing consisting of something more than a “flux,” or a “series,” or a “current,”—something more than a mere state of the gravitating or chemical particles of the human body, obeying the laws of vital chemistry, or of electro-biology, or the influence of the Sun! But we have from the beginning assumed the distinction of body and mind as clearly self-evident; and now we must assume the like distinction of soul and spirit; for we think these also self-evident.

But I have already observed that the materialist, who denies the independence or distinction of mind, is best answered logically by an appeal to the meanings of his own words! What are his words?—say motions and forms in his brain. Well, then, what are the meanings of his words? Are the meanings of his words also motions and forms, or, as the symbolist must say, other words? The *meanings* of his words cannot be material, but must be mental—not a current, but the *forms* of a current—and man must necessarily possess a mind distinct from his body, to apprehend and comprehend these forms, or else his words have no meanings!

What then, however, is the *spirit* which directs and

animates and gives force to both the words and their meanings within the man's brain, and within reach of his spiritual influence ; and what occasions the ordinary phenomena of earnest reason, or powerful eloquence ? Is not this *Spirit* ? These mental meanings, which we all perceive and acknowledge, are a thing quite distinct from matter, and from all its forms and motions, mechanical and chemical and vital ; they are states and relations of these forms and motions ; but they have a *Spirit* of their own. To deny that this spirit of our words—this life or animation of the mind—is a thing distinct, animating our words and meanings, our intelligence, emotions, and sentiments, appears to me a clear denial of the most obvious fundamental facts of human nature, considered as distinct from animal nature.

We thus arrive at an ultimate fact, the existence in the human mind of an animating *Spirit*, quite superior to the mere subjective or intelligent and emotional soul ; to deny the existence of which must appear to every rational man, as I think, a self-contradiction. Thus having reached the distinction of body and mind as distinct things, by considering the meanings of our words ; so we reach the distinction of soul and spirit, so as to divide man into the three distinct parts—body, soul, and spirit, by considering the animating spirit with which those meanings, as emotions and sentiments in the soul, are received and dealt with.

It seems to me, I repeat, quite impossible to explain either the actions of ourselves and others, or the most obvious facts of human history, relating to enthusiasm, fanaticism, mysticism, patriotism, &c., without this distinction of soul and spirit as two distinct parts of the invisible mind of man. There are not only men of one

idea, as it has been humorously called, but there are classes, professions, sects, tribes, nations, peoples, and tongues, who have adopted some certain thoughts, ideas, *words*, phrases, principles, the true understanding of which is of the very essence of human history. But it remains all unintelligible until we assume in man a subjective *soul* and a free and governing spirit; and all historians practically assume this.

None of us, perhaps, are altogether free from these idols of the soul, which seem to adhere to and pollute the human mind—these fixed ideas, conceptions, thoughts, axioms, principles, as they are usually termed—the shibboleths of all parties, professions, sects, peoples, and nations—which yet are only *words*; but yet they adhere to, and either corrupt, or invigorate, or influence the human mind, and all human action. But surely it is not the spirit made in the image of God that is affected by them—it is not the Spirit that is affected by false principles and axioms; but it must be—that physical organism—that part of the human mind itself, to which we give the name of *soul*, as distinct from *spirit*.

It is not the body of man, or the spirit made in the image of God, but it is that intermediate spiritual organism, the soul, which is affected and influenced by these enthusiastic, or fanatical, or mystical, or patriotic, or false idols of party, or sect, or tribe, or nation. The fact exists, and is admitted by all, and no rational explanation of the fact can, I think, be given, without postulating an organism—a distinct existence—part of and within man; neither his body nor his spirit, but his *Soul*—a mental organism within the man—called soul both by Paul and by Jesus Christ; and which

must be admitted by all men who desire to speak or reason rationally and intelligibly concerning man's Mind.

Let us illustrate this by an example, which is unfortunately too common, and too easily found in all classes of society; and we will adopt the description given by an able physician. But we must try and keep, if possible, in our minds, distinct thoughts of the *brain*,—which is vibrating, undulating, ponderable matter—the *soul*,—which I conceive to be an emotional and intellectual and sentimental organism of imponderable matter, subject to mental perceptions and impulses, and not always vibrating in accord with the pulses, either of the brain or the body, but still subject to mental laws little understood; and third, the governing, or what should be the governing, *spirit*,—wholly incomprehensible, and made in the image of its Maker, but ever ready to speak of *my Soul* and *my Body*.

“The higher class of animals have, like man, a special apparatus for harmoniously combining all the machinery of the body—a central telegraph-office—the seat of the will and of consciousness. This is the brain and nervous system. It is in the brain that those changes take place which are coincident with desire and aversion, and of all other changes in the consciousness. If the brain is sufficiently injured, the man becomes unconscious; but for all that the soul may not cease to act—it certainly does not cease to exist. But we know nothing of it except as it is manifested through the body, so that we have to investigate the conditions of the brain if we would know the state of the *soul*. Now under ordinary circumstances we know nothing of the working of each particular organ [of the body], nor even their existence. It is only physiological science that teaches us the existence and structure and functions of these organs. Without this, man knows nothing of his heart, or lungs, or stomach, or brain; nor need he, so long as all goes on harmoniously. So soon, however, as disease or disorder takes place, the play of the organs is revealed; he must eat the bitter fruit of the tree of

knowledge, and he now not only knows that he has organs, but he also finds out that he must seek and obtain a knowledge of the method, by which the divine Artificer has constructed them, and the duties he has allotted to each, if he would get relief from pain. This is medical knowledge. Medicine is therefore one of the blessings which God has given to fallen man to alleviate the consequences of the primal curse."

"No systems of speculative philosophy which leave the functions of the brain out of consideration ever have been or can be truly practical—that is, available to the moral and spiritual elevation of man, or to the relief of his infirmity and diseases of body and mind. Yet the whole question, thus evaded, rests for its solution upon one simple intelligible principle. When the brain works as the organ of the mind *in accordance with the will of God*—that is, either intellectually or morally, a pleasant state of the consciousness is felt. That is the state of a good conscience—[love], hope, joy. Under the contrary circumstances, an unpleasant or painful state occurs—that is, an evil conscience—[horror or hatred], anxiety, sorrow. But these changes in the corporeal organs may also occur from mere material causes. It may work feebly, languidly, imperfectly, and as a consequence pain is felt. But it is still mental pain—the only kind of pain the brain itself can feel.

"Headaches are not in the brain, it is believed, but in the membranes covering it. Now the commonest, of this *bodily mental* pain, is the so-called *depression of spirits*; the more diseased and the more permanent, is shown in the various forms of insanity called *melancholia*. It was from such a bodily mental pain, dependent on a morbid state of brain, that the late lamented Hugh Miller perished [by his own hand]. He experienced misery so intolerable that he could endure existence no longer. Strange fact in the history of human nature, that the organ which is exempt from the acute pain of the ordinary kind [the man does not feel his brain cut and sliced] should, when thus diseased, be the source of inexpressible anguish! Such a state is common to all over-stimulation, and the consequent debility. It constitutes the '*horrors*' of the drunkard—a state of agony so overwhelming that *language* fails to describe it; but drunkards have said that fear of no consequences, however terrible, would avail to turn them from seeking an immediate relief from it by WINE."*

* Professor Thos. Laycock's Lect., p. 11-13.

I am incompetent to improve on this description of the connection between brain and mind, or of a very unhappy but notoriously true state of body and mind. But here we have the body and the soul in actual contact, or mutual action and reaction—the soul overcome by the body, yet the spirit spiritually free, knowing and feeling at the very moment of the last plunge—into eternity or into drunkenness—its own freedom and responsibility, yet, as was falsely said of Job, “ready” to curse God to His face; or to take the last plunge, even into eternity—the slave of some evil spirit!

It is utterly impossible to explain or even understand such struggles of the conscience, of which many other examples will occur to every reader, without assuming the distinction between soul and spirit—a subjective impressionable soul, conscious of its own existence and mental powers, but distinct and separate, both from the body and from the spirit, which often loses its control of both body and soul. The brain, as *matter*, cannot look into itself as the soul, the intellect, emotion, and conscience can do; and the soul is not the *spirit*, which finds its control gone and lost over its own soul! The distinction, therefore, of body, soul, spirit, as three distinct parts of man, is, I think, clear and self-evident. But it may be asked, Is in such case the will free? The materialist answers, “Certainly not! it never was!” The idealist can only say, “God knows!” The symbolist answers, “*Certainly!* the *spirit* was free, but the *soul* was enslaved!” But how enslaved? I answer, to a false material spirit—the spirit of wine, of ether, of opium, of tobacco, for example, possessing powers over the body. The living body becomes so penetrated that the soul becomes entirely enslaved to the material spirit.

Now observe that alcohol, ether, and the fumes of opium and tobacco, &c., are such that they do not undergo bodily digestion, and so far, are free from the ordinary laws of the human body and its life. Brandy or ether introduced into the specific heat of the human organisation evaporates at once or gradually, and at once penetrates the tissues of the whole human body; and so the fumes of opium or tobacco more or less penetrate the bodily tissue, and produce effects on the human organisation—effects (if I may so speak) independent of the ordinary laws of animal nourishment. For example, alcohol introduced into the stomach is instantly or so quickly evaporated that in a few seconds it is more or less found penetrating the whole body, and evaporating from the lungs and from the skin! The gas of alcohol and the gas of ether, and, no doubt, also the fumes of opium, tobacco, and other stimulating drugs, obey laws superior to the laws of human bodily life; they approach nearer to the nature of pure Spirit, and help metaphorically to teach us, by their operation on the human body, the possible operation of good or evil spirits upon the human soul—perhaps pleasant at first, and possibly even useful, if good; but if evil, dangerous demons!—if the spirit and the soul, or if the soul alone, surrenders to them its superiority, its power over the Body; or its own individuality, its freedom, its will.

To deny the existence of spirits superior in their powers to man is both to contradict the whole analogy of nature, and to curtail the omnipotence and powers of the Creator; and it is also in direct opposition to the whole history of mankind. We may well smile at and despise superstitious terrors, without violating reason and curtailing the powers of the Creator. But we are

not here discussing so wide a question, but only establishing the distinct parts of a man's mind—his subjective Soul—his free and governing Spirit.

All that we know of human nature—of our bodies and our minds—therefore, requires that we should distinguish the two parts of the human mind—a *soul*—as I conceive, an organism of imponderable matter, such as light, heat, electricity, and magnetism exhibit to our senses,—and some higher principle, a *spirit*, made in the image of God Himself, incomprehensible, but for ever and ever combined and connected with matter, or some of its forms, as body and soul combined.

The mind of man, therefore, to me appears, as it did to St Paul, to be composed of soul and spirit, of which the most reasonable and probable explanation seems to be, that the *soul* is an organism composed of some imponderable matter; and that the *spirit* is made in the image of God the Creator, and wholly incomprehensible. The spirit of a man knoweth the internal and individual and unknown things of the spirit of man within him—as St Paul says, “no man knoweth the things of a man save the spirit of man that is in him.” But our spirits are to our souls, as our souls are to our bodies; and our souls are certainly organisms, and subject to certain laws. Just as our living bodies are subject to some only, of the laws of ponderable matter; so our living souls may be subject to some of the laws of imponderable matter.

To understand, therefore, the history of man, his past, present, and future career, we must assume, postulate, and demand his three parts as “body,” “soul,” and “spirit,” or “heart,” “soul,” and “mind.” In relation to the great invisible God, who can read the heart and

thoughts and intention, they are all three *invisible* and secret—they are “heart,” “soul,” and “mind;” but in relation to other men, one is visible and two invisible; and thus we must speak of our body, soul, and spirit. We must worship God, therefore, with all the strength of our heart and soul and mind; but we may act on our fellow-men with all the strength of our body, soul, and spirit, subject to the physical circumstances and mental influences by which we are surrounded, and by which the whole man and his relations may be and are more or less affected. Without this distinction, man’s history on earth is a chaos of confusion.

The positive rationalist and materialist are, therefore, fundamentally wrong and self-contradictory on this subject in denying spirit altogether; they are refuted by the meanings of their own words; and the idealist and the conceptualist are ambiguous and confused, either in denying the body, and confounding the letter and the spirit, or in confusing together the body, soul, and spirit.

The triple distinctions of mind, matter, and language—of spirits, bodies, and words—as the true parts or division of the *universe*; and the like distinction of body, soul, and spirit, as the true parts or division of *man*; alone afford, as we think, a safe and sound foundation for our reasoning, either concerning the universe of matter without us, or concerning the history of mankind, or concerning the universe of mind within ourselves.

Man’s mind, therefore, consists of a soul and a spirit—a spirit incomprehensible and wholly non-material—a free will or free mind—made in the image of God; and a soul or organised being, which dwells in our cranio-nervous system, possessing certain powers and capacities and feelings and sympathies, subject to some laws,

and possibly composed, of that imponderable matter of which light, heat, and electricity and magnetism, are varied phenomena. But our souls are certainly, I think, organised beings, and subject to certain subjective laws, affected by other spiritual beings, and, as I conceive, nourished or fed by signs, symbols, words, and similitudes, influenced by sympathies, and possibly, corrupted and injured by excesses in wilful sympathy, with some one or more of the many "isms"—spiritualism, fanaticism, patriotism, &c. &c. And it is not in the least unreasonable, to attribute such powers and influences, which we see and feel to be incapable of material measurements, as being caused by Spirits, either worse or better than mankind. We "know not what spirit we are of," and we must "try the spirits whether they be of God." But our bodies may be overcome and controlled by material spirits or gases, as well as our souls may be overcome by false words and false symbols and false Spirits, if our spirit wilfully yields its independence!

The soul is itself, moreover, a trinity in unity of emotion, intellect, and will combined in one, and still always presided over, and governed by its immortal spirit! Almost all metaphysical writers have perceived and acknowledged the triple distinction of sense, understanding, reason—feelings, perceptions, and sentiments; or, as I call them, emotion, intellect, and will—the three departments, or constituents, of the human soul.

Unless, therefore, we separate the *soul* firstly from the grosser gravitating and chemically-acting matter, the *body*, in which it is lodged, and secondly, from the superior presiding and governing Spirit, absolutely free, which rules the whole body and the whole mental spirit, but which, in itself, is subject to no laws, we cannot ra-

tionally understand, or explain intelligibly, many of the most obvious of the phenomena of man's mind.

Take, for another example, the triple generalisation, which is chiefly intellectual, and neither sentimental nor religious—1st, The generalisation of *many* qualities and powers into one object, like the colour, form, smell, &c., of a rose into *one* rose—that is, mere *emotion* or perceptivity in the mind or soul; 2d, there is the second generalisation of *many* different colours, many different forms, and divers smells of many divers roses, into the *one* class of roses—that is, the intellectual *thought* or internal activity, the perception, by the *will*, to perceive and think all these many resemblances, and to classify all these emotions into *one* thought. But, 3d, there is lastly the *general* intellectual combination or generalisation of all the emotions and thoughts of all men, past, present, and future, concerning all the roses that ever did, or ever can, exist, which are all embodied in the logical and intellectual meaning of the word *rose* as a general term—that is, the third generalisation, which is wholly and completely intellectual or conceptual, and logical, but which is also *wilful*, though subject to the laws of the soul in its receptivity, activity, and conscious discharge of its conscious actions, but which is, in fact, the assumed scientific force and meaning of the word *rose*, according to our honest conscience—can any one suppose that in all this mental and intellectual process there is not a governing spirit more or less guiding and influencing our final conclusion?

Now, we cannot fully comprehend the action of the human mind, without perceiving this triple action of the soul as emotional in its receptivity, wilful in its judgment, and intellectual in its action; but there is still a

spirit, conscientious or unconscientious, governing and guiding the whole operation. Every word in science and philosophy has this triple meaning or generalisation—the objective, the subjective, and the trajective, which last is the logical and intellectual or scientific meaning. Every word is a thing, a thought, and a word which we adopt honestly or otherwise—that is, which our Spirit adopts. But observe, as I have so often said, that it is only this third generalisation—the word—which is common to all mankind, and for this the spirit, not the soul, is ultimately responsible!

No one man can possibly know either the objective or the subjective meanings of another man's words. Even when two men look at and smell the same rose, the objects and subjects are entirely different in each man, though, from the likeness of mankind, we assume them to be *the same*, and say they see and smell the same rose. What the soul of each sees and smells are different undulations, different motions and forms, at the inner ends of each one's distinct in-carrying nerves in the brain, or sensorium in the head, and we have no means of comparing one with the other. *The objects* of each one's mind are different, the emotions are different—then the subjects, impressions, or subjective thoughts of those emotions in each one's mind are also different; and it is not till we arrive at the third and final or complete intellectual generalisation into a *word* that we reach any common, mutual, or intermediate action of the two souls, which can be mutually compared together by the two men, or by mankind.

Now, in all this process there is surely a spirit (be it true or false—yet a spirit) engaged, quite independent of the *mind* or Soul, subject to the process ending in

the word. The *word* mutually adopted to express their thoughts about the emotions produced by a *rose*—the word or general term *rose*—does pass and repass from mind to mind intellectually ; but with what spirit is it received and examined? The very vibrations or motions and forms made by A's words pass into B's nervous system as the *word*, and of that *word* alone can the two men reason together ; but in what a different spirit may each receive it, even according to their botanical, personal, or other prejudices, which one man yields to and the other resists.

Men cannot reason about their objective emotions, or subjective thoughts, till they have adopted, by their spirits' own choice, new and different words, for the different subjective emotions and perceptions (other than what the mere word *rose* will express) of those parts of the mental process in which they differ.

And without we distinguish the soul from the body, and the soul from the spirit which directs the soul and body, and also without we distinguish the soul itself into its triple parts—the emotional—the wilful or active judgment—and the intellectual tact, or intellect, we shall fall into error and confusion, and cannot truly comprehend even the simplest action, the emotion or thought or conception, of the human psychical organ, in its most ordinary state of activity, even in perceiving and thinking and speaking of a rose.

It seems to me, therefore, utterly useless and absurd for men to attempt to reason of mental phenomena, whether as consciousness, or emotions, or impressions, or representations, or thoughts, until they perceive and acknowledge these fundamental truths—viz., 1st, that we are by our natures incapable of reasoning of things

themselves, either as objects or as subjects themselves, but only as *words*, signs, and symbols mutually received and adopted (we may believe, of course, what we please about them, but we cannot reason about our idiosyncratic beliefs, but only about our mutual symbols or words); and 2d, that we cannot reason correctly about man or man's mind, or about our mental phenomena of any kind, unless we assume and admit the triple distinction of body, soul, and spirit—as composing each intelligent, and sentient, and active-minded man.

Nothing, therefore, seems to me more false in fact and truth, than the fundamental assertion of the materialist, that "to say I feel that I feel" is tautological, and only means "I feel;" or to say that "I am conscious of my consciousness" can only mean, "I am conscious." This denies, *a priori*, the existence of the human soul or mind altogether. It denies that which distinguishes a man from the brute—that which feels, and observes, and reflects, and judges its own secret actions and feelings. The brute feels and is conscious, and shows by the clearest evidence, by his outward acts, that he feels and is conscious; but this is the private individual feeling and consciousness of the body and mind of a brute. Until there is an internal self-reflection which feels the feeling, and is conscious of the consciousness, and judges the will or conclusion—the inner part of man—he has not begun to act, or will, or think as a man.

It is only this internal personal *self*-consciousness, or consciousness in the second degree—that power which observes and generalises the feeling of the body, into a thought or consciousness in the mind, and the thought in the mind, into the general word—that is properly mental or psychical. The first feeling is bodily; the

feeling that we feel is emotional, or in the soul or mind ; the expression of that feeling in a word, is intellectual, the three generalisations of the emotion, and of the thought of it, and the word for it, are all still in the soul ; and then the third generalisation of the thought, which becomes the word for it, and is still in the soul, is under the full control of the Spirit. But then the *spirit* animates and directs the word to go forth for evil or for good, with false intentions or with true intentions—and by that word and by those intentions that spirit shall be judged !

But we must not forget that, though man is a trinity, of body, soul, and spirit, he is also a unity within, of heart, and soul, and mind,—all equally invisible to every one but God. When, for another example, by way of illustration, we read in a certain story, that certain scribes reasoned thus in their hearts: “Why doth this man speak blasphemies? Who can forgive sins but God alone?”—their thought was an action of heart, and soul, and mind all in one, though no word was uttered by them; but the words and symbolical action, which are said to have followed: “Why reason ye these things in your hearts? whether is it easier to say, ‘Thy sins be forgiven thee,’ or to say, ‘Arise, and take up thy bed, and walk’?”—we cannot understand the story without this triple distinction of body, soul, and spirit.

For, if we consider these *words* attributed to Jesus, and the miraculous action that is said to have followed (and my argument is *quite* independent of the truth of the story), I ask, did the words and symbols adhere to the *body* or to the *spirit*, or were they not adapted to adhere to and remain fixed as symbols in the *soul*—a symbol of divine power over body and soul, continuing

in the souls of the listeners from that day forth for ever? Can we possibly understand the story, be it true or false, without the triple distinction of body, soul, and spirit in man? Yet we do all thoroughly understand the story! And when the sick of the palsy "arose and took up his bed, and went forth before them, and they were all amazed, and glorified God!" how shall we *understand* the whole story, whether true or false, unless we assume and believe in body, soul, and spirit?

It seems to me impossible even to apprehend the meaning of such a story or event, whether true or not true, without we assume or postulate a body, soul, and spirit in man. The words and symbolic action did not affect the body, and left the spirit still free to judge. That might still say, this miracle is by the power of Beelzebub, or it is by the power of God, or it is by fraud and collusion, and the sick of the palsy was only an impostor in confederacy with Jesus. The spirit of the Scribes and Pharisees was still free, the body was also unaffected, but the soul and the soul's memory would carry the whole words, and scene, and circumstances to the day of death and resurrection, as judged by the spirit. But unless man possesses those three parts, body, soul, and spirit, I do not think that such a story, which we all fully understand, could be properly or possibly understood or comprehended; and the truth or falsehood is quite beside the question of the understanding or comprehension of a story, but our understanding the story is conclusive as to the *necessary*, or self-evident distinction of body, soul, and spirit.

But, it may be said, the old war-horse is roused by the sound of a trumpet to the memory of former fields, and

makes a mimic charge; the Swiss peasant melts into patriotic tenderness at the sound of the *Ranz des Vaches*, and many such animal or other influences may be named. Has the war-horse a soul as well as the Swiss? The fanatic also may gloat with holy fervour over some memory of a spiritual act, ending in a material triumph. The dog will hunt in his dreams! Has the dog also a soul, as well as the fanatic.

But the distinction between such cases is shown, 1st, by the power of self-observation and self-reflection, or looking within upon ourselves—the power of knowing that we feel, and feeling that we know—which neither the dog nor the horse appear to possess, and which men in general call their mind or personality; and having thus postulated mind—the human mind—distinct from the not self-regarding or not self-examining mind of the animal;—then the distinction between soul and spirit is, also, shown by the power and influence of words, signs, and symbols, only adapted to the understanding of human thinkers. For words have and do exercise an influence on the soul, not dependent on the mere motions and forms of the words themselves, but on their *symbolic* meanings; and this power and influence, our spirits can effectually or to some extent resist and control, or else can yield and submit to, without any struggle, but these meanings still affect some parts of our mind—*i.e.*, the soul,—according to certain obscure and unascertained laws, of which fanaticism, enthusiasm, mysticism, patriotism, spiritualism, &c. &c., afford many well-known instances, both before, and ever since the days, when the first crusaders, listening to Peter the Hermit, exclaimed, “It is the will of God! onwards to the holy sepulchre!”

But the part of our minds affected by these words and symbols—principles—is what I call the *soul*; and it is something, as I think, wholly distinct, to our mental consciousness, from that part of our mind which directs, animates, regulates, and controls the effects of such words and symbols, and resists, or yields to, the power and influence of their meanings. The inferior part thus affected we call our soul, and the superior directing and controlling part we call our spirit, self-existent and incomprehensible, and made in the image of God Himself. Therefore, I say, for the clear understanding of the most obvious phenomena of human *language*—signs, symbols, actions—and their effects on the human mind, the distinction of soul and spirit is absolutely necessary. But not so with the dog and the horse, who do not possess the power of introspection, or mind or soul, at all, like man, but seem to possess merely a flux, a series, or current of their *animal* circulation, or mere nervous vibrations, which rouse them to memory, or joy, or courage, or anger, but which—so far as we know or can understand the constitution of animal minds—are mere material affections of the body, and not properly or in anywise mental or psychical, in the same way that man's own internal *self*-reflection or *self*-consciousness is mental or psychical.

Thus, then, man is to his fellow-man what each man is to himself—a trinity in unity of *body*, *soul*, and *spirit*. But to God who, as a Spirit, deals with, or is in relation to, the invisible and internal man only, man is *heart*, *soul*, and *mind* (*διανοια*), penetrating intelligence; and man's *true strength* must be sought and found in God alone, to worship Him in spirit and in truth.

Take for another example the legal question of

whether the effect of certain acts of a man amounts to murder or to theft. To be a murder, there must not only be homicide, or the *death* of the victim, by, or in consequence of, the *act* of the *body* of the murderer, but there must be also the felonious intention, the *malice prepense*, the *spirit* and intent with which the act was commenced ; and this is evident, because there must not be such a delusion of *soul* or mind as renders the man irresponsible for his actions ; although he fully intended the death of his victim. On all these three questions the surrounding circumstances may throw light before we can form a just judgment ; and without these *three* parts of man—the *body*, to do the act, the *soul*, to arrange and contrive, and the *spirit*, to direct—we cannot truly and properly understand or discuss the ordinary legal question of murder or no murder. Although the language of the lawyers is not always, or entirely, accurate, yet it will be found that the three parts are always assumed.

So in the case of theft. There must not only be the *asportation* or bodily taking away of another's goods, but also the *animus furandi*, or intention, and internal state of mind or soul intending to deprive him of his property, at once *knowing* and *wilful*—*i. e.*, an act of the *body*, a state of the mind or *soul*, and an intention of the *spirit*, directing and controlling the whole act of the alleged thief. Of course, in the arguments of the lawyers, the *soul* and *spirit*, or understanding and intention, are sometimes confused and mixed up together, for lawyers are not accurate metaphysicians ; but without this double nature of man's mind, whether called understanding and reason, or perceptions and sentiments, or intellect and will—without these

two parts of man's hidden mind, we cannot perfectly understand, or even properly comprehend, a lawyer's argument, whether a certain act amounted to murder or to theft.*

Body, soul, and spirit are therefore involved in every act of man upon earth; and without taking all three into consideration, we cannot properly comprehend any question of law or of politics, or of external or visible, as distinct from internal and invisible, religion. We necessarily fall into error or confusion unless we assume two parts of the invisible mind of man, the soul and the spirit.

But when we speak of man in relation to God—who judges the internal man, and reads the heart, and towards whom all outward forms of the body are nothing, except as they proceed from the heart and spirit or invisible man, and Who must be worshipped in spirit and in truth—then it is more proper to speak of *loving* God

* Of course there are materialistic lawyers and jurists of great reputation, as well as philosophers, who attempt to reason about *animus* and intention, while denying the mind's existence. But their shuffling logic always betrays them! Such jurists deny the distinction between "Persons," and "Things," and "Law," and "Equity," and cannot, or rather *will* not, for example, distinguish between the logical and legal *meaning* of a signed contract, as construed by an acute lawyer, and the real and mutual *intention* of the possibly stupid parties who signed it, and who both, possibly, by previous and subsequent acts, have showed most plainly their joint meaning to be different from the meaning put by the lawyers on the contract they have signed. But an English judge in equity goes into the whole question of *intention* as affected by accident, mistake, or fraud, and prevents a wrong by setting aside or reforming the contract. Such materialistic jurists call such judicial acts legislation, which is logically most absurd! It is preventing the law itself—the *words* of perhaps stupid legislators—from being *used* as an instrument of fraud and oppression; and we owe the permanence of English law to the separation of law and equity, and to the existence of our Courts of Equity as safety-valves against legalised wrongs. As Lord Bacon said, *omnino me placet hæc separatio*.

with internal heart, and soul, and intelligence, than with body, soul, and spirit; because the outward act of the *body* is nothing to a pure Spirit, except as it proceeds from the invisible *heart* heartily. So prayer to God also involves and requires the heart, and soul, and intelligence (*διανοια*). It is not the kneeling of the knees, nor the gabbling of the words, which constitute prayer; there must be also the kneeling with the heart, and the feeling of the words. There must be the earnest direction of the whole inward man, heart and soul, with and by an intelligent Spirit, for without these, prayer in spirit and in truth, to the eye of God, does not and cannot exist.

In short, then, we can have only a form of godliness without the spirit thereof,—a state predicted of the Church in the latter days,—unless heart and soul and mind, or body, soul, and spirit,—all, join in each act of piety or religion.

It may be true that “in the present state of our knowledge, a sensorium within the brain is an entire misconception,” and even that “our present insight enables us to say, with great probability, ‘no currents, no mind,’ or even ‘no phosphorus, no thought;’” and it may be true that “the nerve force is neither electricity nor magnetism.” But nerve force, and vital force, and mechanical force, and chemical force, as well as light, heat, electricity, and magnetism, are all mutually convertible, and have a common origin, even in *gravity*, if you please (*ante*, p. 280). But we know nothing whatever of any of these forces, except only divers methods of applying them, and of finding them generally in nature, and in the external objects in the universe. But it is perfectly idle and irrational, to confound the human *spirit* with

any one or more of them ; because the supposition will not explain the obvious facts—the spontaneity of the human will over all.

Developing thought uses up the brain, and developing a steam-engine uses up the muscles ; but there must be a mind or spirit to develop both the one and the other, in order to use up the brain, as well as to use up the muscles. But the mind that acts is both subjective and is free—*i. e.*, consists of two parts, a subjective *soul*, and a free *spirit*.

There is no doubt as to our physical organisation, both in soul and body. “The activity of an organ is sustained at the expense of the matter of which it is composed. No thought passes through the mind but an equivalent portion of the substance of the brain is consumed ; no nervous current flows along the nervous conductors, but a corresponding portion of nervous tissue is used up ; no muscular movement, no glandular secretion, takes place, without a proportionate waste of muscle and gland.” The body is the instrument of the spirit in the use of our brains, as well as in the use of our muscles. “Able-bodied men in their ordinary labour use from 2 lb. to 5 lb. and upwards of their actual weight twice a-day.” And a literary man, no doubt, in like manner, loses so many ounces of his brain in his peculiar labour, and the bodily waste must be in both cases repaired, or bodily pain and sickness must result.

The one produces a steam-engine or gasometer, and the other a work on politics or religion. The motive of the one is to feed his hungry wife and children, and of the other to promote the welfare of the many children of humanity, or the worship of God. But there is a mind, or spirit, or will, supreme director in both cases,

and it is directing the muscles and muscular current for their end, and also the brain and cranial cellular current for their end; and it might as well be said that the steam-engine or gasometer is the secretion of the man's muscles as that political or religious thought is the secretion of the man's brain. All that man has ever done upon earth, mental, physical, or verbal, in religion, politics, mechanics, or language, are the products of *mind*. But that mind is not the body; and yet it is partly subjective and under the influence of symbols, and partly free, and able to struggle against such verbal or symbolic influence.

But the whole humanitarian result has been produced by language—by signs, symbols, actions—first selected and shown by the mind, and gradually applied, by the free spirit, to man's practical purposes. If you say that the blows of the mechanic's hammer are not words, signs, or symbols, I reply, without doubt or question, that they are so. They have each a direction, an intention, an adaptation, directed by the mind, to the ultimate result designed and formed in the mind, with a view to produce the end intended, whether that end be a steam-engine or a gasometer, or a political law or a religious dogma. And in both and in all such cases, that end must have been originally a *symbol* in the mind of the mechanic, the politician, or the dogmatist, and possibly producing many results not foreseen by any of them.

The materialist errs in denying the invisible *mind*, the origin of every thought, word, and deed. The idealist errs in denying the visible *matter*, which, though it may be, to man perhaps, in the abstract, a mere *negation*, or temporary absence, of the First Mind, is not therefore

nothing, but something unknown to man, except as a *relation* to the known; and the *conceptualist* confuses and confounds the two—mind and matter—together, by his concepts, which must ever remain unknown, except by the *symbols*—the language which is the only instrument of the mind's power over either mind or matter. For even the poorest mechanic himself must have realised something like an intelligible *symbol* in his mind, of what is intended, before he can create its visible representative in the instrument or fictile object which he produces as the result of his labour. But we should equally err if we refused to distinguish the two parts of man's mind—the soul, subject to symbols, sympathies, and impressions, &c., and the free governing spirit, subject to nothing in the whole universe, free to choose and free to act—even to ruin or destroy its own soul, and its own body.

Mind alone is the source of power, and symbols are the instruments by which the mind indirectly operates on *matter*, even in the grossest as well as in the most refined and æsthetic productions. And in the mind of the abstract reasoner, a Phryne pleads her cause and speaks a *language* with her naked beauty, as perfect and as eloquent as if it were the language of Demosthenes.

All actions are merely the symbols of the mind within, and we must judge those actions, not by themselves or their outward effects, but by their symbolic intention—the mental motive which produced the action, and of which it must be deemed the symbol, be that symbol true or false, according to some law or system previously adopted and laid down.

The human mind, then, consists of soul and spirit.

The soul is probably an organism of imponderable matter. Its life is spiritual. Its food is symbols—symbols which embody intellectual *thoughts*, human *emotions*, divine or demoniac spiritual *principles*; and it is subject to certain laws which may be sought out and investigated, as the laws of other imponderables are investigated, but with this difference—that they are unorganised imponderable matters, and the soul is an organised imponderable, possessing a life of its own, and more or less subject to the spirit of the man. We cannot say that the soul is the brain, but the soul's presence may be the spiritual life of the brain, just as the vital powers are the life of the body. But the chemistry of ponderable matter is not the chemistry of organic life; nor can the chemistry of imponderables be deemed the chemistry of the life of the soul, nor can the laws of electricity and magnetism be considered the laws of the human soul.

The human body is not subject to the laws of inorganic chemistry, during life, but is subject to the laws of a higher species of chemistry. The muscles during life can sustain a weight which, when dead, would tear them asunder. The stomach during life can contain, and does contain, substances which, when dead, chemically decompose it. So it is with the human soul. It is not, during life, subject to the ordinary chemistry of imponderables—of light, electricity, or magnetism. The soul possesses a higher chemistry of its own. It is governed by a spirit, which also is its life; and that spirit can resist or can yield to the influence of signs, symbols, language—of rhetoric, oratory, pietism, or fanaticism; or to the influences of splendid ceremonial, of the grandeurs of the rising or the setting sun,—of pantheism, rationalism, idealism, materialism, or to the

doctrines and principles of utility or expediency—in short, to emotional, sentimental, and intellectual symbolism.

Can any rational person deny the extraordinary power and influence of mere symbolic dogmatism, on each and every of these subjects? The organic construction of the human soul is a very obscure part of human nature. But it is mere irrationality to deny it altogether, or to confound the truly subjective and often passive and impressionable part of the human mind—the soul—with the active and controlling part—the spirit; and it is an equal error to confuse or confound the soul with the brain. How can a likeness, symbol, or type, the meanings of our words, influence the Brain?

The soul is an organised being, often dead while yet the man's body lives—dead to all that is true, good, and beautiful; dead in spiritual life, yet not altogether dead, or capable of altogether dying on earth. For after death comes the soul's judgment, and while there's life of the body on earth, there's hope of true life for the soul. And the food of this organism, within us all, is thought, ideas, conceptions, the inward and spiritual feelings, perceptions, and sentiments which are attached to SYMBOLS, signs, words, — symbolic actions, language. Without such spiritual realisations, which can be known only to the individual, and to Spirits higher than man, the symbols have no life whatever—but are dead and empty forms and motions—passing sounds and shadows.

Concerning this spiritual department of the human organism—either soul or spirit—none but the individual and his Gods can have any knowledge; for no man “knoweth the things of a man save the spirit of a

man that is in him ;” and the true Christian will leave such to the one Shepherd and Bishop of souls ; but he is not precluded from using language earnestly to promote that influence. But spiritual influence cannot be truly promoted by material force over the human body ; for what is gained in the outward and visible forms, is lost, and more than lost, in the inward and spiritual emotion.

The distinction, then, between the human *soul* and the human *spirit*—the governing spirit of the man—is as clear as possible to the attentive self-observer and thinker ; and the soul has three distinct subjective departments corresponding to the good, the true, and the beautiful. None but men who have not sounded the depths of their own minds, can, as I conceive, doubt that beauty, goodness, and truth have all their own subjective departments in the human soul ; while the *Spirit* is free to choose its own course in respect of all and each.

But how do we use our souls and spirits in thinking ? It is useless to dogmatise on such deep and unknown subjects. What seems to me certain is, that the spirit is perfectly free and absolute, but that the soul is not free—and that the soul is an organism subject to laws. It thinks truth, it feels beauty, it loves and discerns goodness, according to the laws of its nature, and subject to these laws ; and yet it is capable from time to time, under the influence of the spirit, of more or less violating these laws ; just as the body is capable of violating and disregarding, within certain limits, the laws of animal life, and with like consequences in both cases, of pain—bodily pain and mental pain.

But it will be observed, that the three departments of

the soul show us clearly that *truth* is concerned with language, *beauty* with matter, and *goodness* with mind—*i.e.*, chiefly concerned, for they all run into each other; for the soul is *one*, though it has these *three* departments, which have been generally observed by all thoughtful reasoners. But each is possessed by the other two; and is also, in its turn, possessed by them. Truth and beauty possess a goodness of their own, and in its turn goodness possesses both a truth and a beauty; and so all round with each of the three.

The simplest element of truth, is orderly number, of beauty, is orderly space, of goodness, is orderly time—*i.e.*, harmony with the Divine Spirit in time and for eternity—the beginning and end of human perfection.

But it is the *language* of beauty and of goodness that requires truth; and philosophy, as the science of all truth, though we call her divine and beautiful in reference to her thoughts and subject matter, is still only a science of language. "Mind, mind alone, bear witness earth and heaven! the living fountain in itself contains of beauteous and sublime"—but that is, beauty and goodness and sublimity are abstract, subjective, *mental*, known only to the individual who can feel and see them; and it is only their outward and visible forms, signs, symbols, language, that men can really discuss—their symbolic truth. But this is equally true of goodness and of truth, as well as beauty. All men are, and must for ever remain, involved in this prison of symbols, from whose fetters they can only escape by forging new and better fetters for themselves, by and with the assistance of the one Divine Spirit.

The seven *bodily* senses are two, whose organs are internal—hunger and thirst; and five, whose organs

are external—seeing, hearing, *touch*, taste, and smell—all of which last seem modifications of touch.

The *three* intellectual senses are—number, time, and space.

The five intellectual powers are—attention, comparison, reflection, conception, and judgment; and the mental result of the exercise of both senses and powers is a symbol, the only object of human cognition. Words, signs, symbols, *language* only, are common to many men. The mental meanings of their words are the property not of mankind, but of the individual man alone. But the soul possesses many unintellectual passions and sentiments.

But the two internal bodily senses of hunger and thirst are not in any way under our control, either to will or not to will. They arise within from the healthy exercise and natural waste of the material body. But one of these causes—healthy exercise—is under our own control. So also there is in the soul, a hunger and thirst after righteousness and truth, also not under our control, either to will or not to will. But they also arise within the soul from two causes; one of which is the healthy exercise of the soul's powers. Of the other cause we need say nothing—waste or not waste. But over the healthy exercise, of the soul's powers and senses and capacities, our spirits do exert very considerable control. In fact, the exercise of the body and that of the soul are both and equally under the control (to a very considerable extent) of our spirit, and will—the active exertion of the free spirit. Both body and soul are possibly swimming in a current; but the spirit can choose either to swim with the current, or against the current, or across, and so independently of the current, according to the

laws of the mechanics of matter, and, if we may so speak, of the mechanics of subjective mind or *soul*.

In my opinion, the phrenologists have given far the best analysis of the human mind, and its natural powers and tastes and capacities and sentiments. But if man has, as he probably has, such natural senses or capacities as form, weight, and colour, as well as constructiveness, &c.; in order to judge of these things intellectually, our business is to reduce forms, weights, and colours, &c., to measurements of number, space, and time.

If we have, as we no doubt have, natural senses or capacities for constructiveness, symmetry in space, or harmony in music, our business is still to reduce these intellectually to measurements in number, space, and time; and so we produce the sciences of geometry, and optics, and acoustics, and mechanics, and music, and statics, and dynamics, &c. Statics and dynamics are the sciences of weights on the balance, and of weights not on the balance, but producing motion; or of forces producing motion and forces preventing motion. But all forces must be reduced to weight, or to the force of earthly attraction.

But we ought to distinguish between the animal *passions*, like sexual love and love of offspring, friendship or social love, &c., and the active *capacities*, like constructiveness, destructiveness, &c., and the intellectual *perceptions*, like form, colour, harmony, and imaginative powers, causes, resemblances, comparisons, &c., and divine *sentiments*, like justice, conscientiousness, firmness, veneration, and benevolence—all these are subject to laws of the *soul*; but the *spirit* over all is free.

But it is not my object to map out the human Mind, but merely to clearly distinguish it into its fundamental

parts — its self-evident elements, the SOUL and the SPIRIT; without which we cannot properly or correctly investigate or understand either its phenomena or noumina, whichever we please to call our own private individual consciousness of self; or even the ordinary events of human history.

Men cannot, I think, accurately think or reason about the human Mind; until they have divided it into the subjective SOUL and the free SPIRIT. But having made this division of the human mind, which seems to me, altogether obvious and self-evident, the whole discussion between *liberty* and *necessity* sinks into the region of confusion and ambiguity. Both sides are partly true and partly false. The *soul* is subject to some laws of necessity, but the *spirit* possesses indubitable liberty. And thus foreknowledge becomes entirely consistent with freedom, and election entirely consistent with justice and with truth. But this is not the place for developing these conceptions.

CHAPTER XVIII.

LANGUAGE.

ALL human language, considered as accurate knowledge or science, consists in *definition* or limitation. There is no greater mistake than that of the modern philosophers who despise the Aristotelian logic and syllogism, because, as they say, the conclusion is already contained in the major premiss! It—the conclusion—is only a particular limitation or application of the general truth already admitted in the major premiss; and therefore the conclusion, they say, tells you nothing you did not know before. But it is this very limitation which makes and constitutes all science to the human intellect. To connect the particular limitation or application with the general and assumed truth is the true and only operation of the intellect. To draw your particular applications down until you can lay your finger, as it were, on the visible thing or action which is right or wrong, or true or false—that is all that the intellect can do; for we must always begin with some general assumption or *theory*—a major premiss.

“Great masses of knowledge,” says Sir John Herschel,* “are daily perishing before our eyes, because our [mental] eyes are not open to them. In sciences of observation, it is perhaps not using too strong an ex-

* On Terrestrial Magnetism, Essays, p. 66.

pression to assert that the *theory* is the science." Why is this? Because if we have no *theory*, we are unable to connect our observations, or know what to observe. But the theory is the general truth, or supposed truth, which enables us to make observations and to string our observations together, either for or against it. Without some general thought or assumed principle, we cannot even set about, either observation or experiment in any rational manner, so as to understand what is actually passing before our eyes.

How many ages passed before we began to understand in the least the formation of the rocks beneath our feet! But start a theory, the igneous or the aqueous origin of rocks, with Werner or Hutton, and men can begin to reason, and then only can begin to observe properly—that is, either for or against the theory or thought assumed. We must start with the general, or we cannot reason about the particular, or even observe it. Even hasty generalisation is better than none, for without some generalisation we can neither observe nor reason. Our intellect is barren or dead.

There are always three questions to ask in classing and defining our things, thoughts, and words—

1st, Is the thing in question a spirit, a body, or a word?—are we speaking of mind, matter, or language?

2d, Are we considering or *thinking* of it as a (mental, or physical, or verbal) *state* in itself as one thing, or as a (mental, or physical, or verbal) *relation* to other and what things?—its states, its relations.

3d, What are the self-evident *resemblances* perceived by the mind which *all* the individuals of the class possess?

The last is usually termed *definition* or essential pro-

perties which make the things to be thought what they are, and which cause us to adopt a *class name* for the things ; but it always involves the fundamental conception, theory or *axiom* of the science.

But we must never forget that we can only know the thing by and through the thought, and we can only know the thought by and through the word. The *thing* in itself remains ever wholly unknown to mankind. The *thought* itself is only known to the individual man who thinks it. And it is only the *word*—which is the general name for the assumed general thought of the thing—about which we can speak or reason together. The word is both the thing and the thought, in all true science and cognition, and in all common reasoning together. But then we must properly define and limit, and divide and distinguish, our *words*.

But syllogism may be, and was, no doubt, elaborated to a very useless degree, and helped at last to “darken counsel.” For the syllogism is no clearer than the rules *de omni* and *de nullo* from which the whole theory of syllogism can be deduced. The rule (that what we affirm or deny of the whole group or class, may be truly affirmed or denied of every particular group or class or individual contained in it) is certainly a self-evident truth easier of application than the laws of syllogistic reasoning drawn out and applied in a formal manner. Every one can reason more or less ; but what generally prevents men seeing the truth, is some stupid dogma founded on what they call observation or experiment, misunderstood or misapplied—either an ambiguous word or false axiom !

When we examine the relations of mind, matter, and language amongst themselves, we find and see that it

is evident; that Matter is the instrument of Mind over *matter*, and Language is the instrument of Mind over *mind*. But mind not only in itself contains the living fountains of beauty and sublimity, and of goodness and truth; but also contains, and is the only source and spring of all force and all influence—of all orderly form and motion—of all possible relations, and of all symmetry, and of all harmony—of all wisdom and beauty, and truth and goodness, as well as of all power and all strength.

Mind is involved in every cause, in every action, in every conclusion; and Language—*symbolism* through and with matter, is its only instrument. What we call the force and power of matter are only those qualities bestowed on it by its Creator, and of the real nature of which, Man knows absolutely nothing; he knows only that he can, by approximating or separating divers parts or portions of matter to or from each other, produce certain material actions and motions, and can so effect his own mental designs and intentions over *matter*. We can take the motion of the atmosphere and the motion of water, and can transmit their motions to sails, mills, and other matters; or we can take the gravity of a weight falling down, and can make it move machinery; or we can take the expansive forces upwards of steam and vapours, and use them in the same way against the force of gravity.

Our minds can thus use matter as an instrument in thousands of different ways, but only and always as our tool and instrument over *matter* or matters. Our bodies are in all cases, at our first start, the instrument for effecting these purposes. Ultimately the human body, directed by the mind, does the whole labour of

man on the globe, by merely approximating or separating divers portions of matter. But all this is only the sphere of utility; and *mind* is wholly unaffected by Matter itself, and can only be influenced by *language*; which we have shown to be the motions and forms of matter made and produced by mind, as words, signs, and *symbols*. This is the sphere of morality.

If my argument on the nature of language is true and unanswerable—if it be true that every word in every language is simply a *number* of things and a *product* of thoughts—then it necessarily follows that, as the number expressed by a general term is always *all*—*i. e.*, infinite and universal, and altogether indefinite and undefinable, words must be limited and defined by marking down and defining the *thoughts* which are joined and complicated, in order to *produce* the general thought or idea of the class. These thoughts, we have shown, are the *resemblances* or likenesses perceived by the mind between the units forming the class. Each unit of the class must possess *all* these resemblances on which the class is founded by the mind, or it ceases to be a unit of that class—it ceases to be properly *numbered* or included with all the other units under the name of the class.

Words are so easily made, or else altered by even a point or a letter, that that writer stands self-condemned as a teacher of falsehood who knowingly uses one word in two senses or two meanings. He is false to himself by self-contradiction or ambiguity, and is to others a teacher of falsehood; and if he does so unknowingly; then as soon as the meaning of the word becomes doubtful to himself, he should cease to use that word till it has become clearer to his mind. To profess and

to act otherwise is to range yourself openly on the side of the demon of falsehood.

But clearly the proper way to make out and define a word, according to this theory of language, as we have developed it into number, is to make out a *list*, or numbered line, of all those likenesses which each individual of the class must possess, in order to deserve the name of the class, and to be numbered with all the other units. And these *likenesses* are all substantives—*thoughts* or mental things—and should be therefore set down in a numbered *list*, not in a grammatical sentence, but as the substantive *factors* of the *word* to be defined.

Of course, for philosophers, or men of science, to argue and reason with one another without defining their words, is about as reasonable and useful, as might be, the mutual confabulations of two men who do not understand each other's language, and are blind to each other's signs. But how words are to be defined has always been a great subject of doubt and debate.

The Aristotelian logic, whose three first predicables were genus, species, and essential difference, defined words by their genus and essential difference—that is, created every word as an outward material *form* or species—the limited generality of some more general term; and added to the more general term, the peculiar *property* which was supposed to be its essential difference: as when man was defined as a reasonable animal, man was treated as being a species of animal, peculiarly, or in essential difference, endowed with reason, of which no other animal possessed any. Its genus was *animal*, and its essential difference was *rationality*.

But as we have shown that every word is a *number*

of things, and a *product* of thoughts, and that the number of things to which the *name* can be applied is wholly infinite and undefined, the only true possible limit or definition of the word, or general term, consists of the *factors* which complicate the *product*, or general thought; and until we have effected this by enumerating in a list all the thoughts which are peculiar to every unit of the class, or which produces the whole idea of the class in our minds—its states as a unity—*i.e.*, a sufficient number of them to fix the class—until this is effected, the word is ambiguous and undefined; or else it should be openly assumed as self-evident; and these assumptions, by the law of parcimony, must be as few as possible.

Nothing is more unpleasant to a shuffling reasoner than to be asked to define his words! He likes to treat every one of his words like an established coin, which all the world are bound to take; and being taken and accepted, he proceeds to declare its value as the finest gold, when it may be truly the most sorry pinchbeck. But, nevertheless, the factors of every word, are the *resemblances* or likenesses of its units—the things called by the name.

But what is

RESEMBLANCE ?

The human mind possesses instruments in the nerves of the body, infinitely superior not only to its powers of description in language, but to any mechanical instruments that man has yet invented. The delicacy of the human touch, for example, can detect an unevenness in a polished plane surface of metal which no kind of instrument yet produced can detect; and so perfect is Touch, the coarsest of our senses, that the finest parts of the finest machinery have still to be finished by the

human hand! But Resemblance or difference is not itself material.

The aural nerves can detect shadows and reflections in a note for which our mathematical analysis is at a loss to account. And spectrum analysis seems to exhibit the powers of our optic nerves as absolutely infinite in discrimination; for with our eyes we detect not only the shadows of shades of colours dependent on the billionth of the shape of a wave or undulation, of which millions must be contained in the space of a letter or full stop on this page, and of which every shade must vary the form—but our eyes, by light, also detect the existence of the millionth part of a grain of material substance dissolved in a liquid. The powers of the optic nerve are beyond all thought and all conception infinite. But harmonious resemblance is not itself material.

But man's mind has, I think, a natural sense of resemblance founded on comparison—founded on the purely natural senses of relation, symmetry, and harmony—*i. e.*, of number, time, and space. We all often see and feel a likeness without being able to say in what it consists. But it is the business and object of science to measure these resemblances, and to define and limit them by number, space, and time; so that *resemblance* in general, seems to me, merely an unscientific or inaccurate description or perception of our senses of number, time, and space when in action—but not yet scientifically measured.

Resemblance is the sense, and comparison is the power—a natural sense and a natural power in the mind itself. But all resemblance, if our intellects were as perfect as our senses, would and ought to be measurable by

number, space, and time. Our senses are infinitely more delicate, than our intellectual powers undeveloped. But by our internal power of comparison, and our internal sense of resemblance, the mind perceives a resemblance between *two* things, whether external material things, or internal mental things; but it is altogether vague and uncertain and unscientific, and must remain unscientific, until we can reduce that resemblance to number, space, or time. Resemblance is in itself altogether mental.

It tells us nothing to say there is a resemblance! But when we can say that there is a numerical resemblance, a symmetrical resemblance, a harmonious resemblance, in number, time, or space—that becomes scientific. And to find numerical, temporal, or spatial resemblances between things, is the proper object of the man of science. Resemblance appears to me, therefore, merely a vague unscientific term, an undefined and indecomposable abstract term, for science, yet to be discovered, in number, space, and time.

But all abstract words are, like the names of external things, the products of certain resemblances perceived by the mind, and themselves abstract; and if we seek to be accurate and scientific in the use of such words, we must, and ought to fix what these factors of the word in question are to be, and that is the only true and correct method of definition. We should always be ready to put down the *factors* of every word we insist upon using as a word of science; or else openly declare the word self-evident and fundamental.

But ultimately we must arrive at general words which are assumed as self-evident, like mind, matter, language. From these fundamental assumptions we are logically

bound to deduce all others, such as number, time, and space, state, relation, &c., and resemblance itself, which is the mental connection between *two* or more things by which the mind combines them under one name, is merely a name for some undefined relation inaccurate and unscientific, between the things. And so we generally speak of mental *relations* and of physical *resemblances* and verbal *analogies* very indefinitely and ambiguously till reduced to number, time, and space.

Men in general would admit that the human mind possesses a general sense of resemblance—a power to perceive likeness—an internal natural sense, or power, to catch some likeness or resemblance, between two or more things or thoughts, to some extent born with all of us, but capable of being improved by education and exercise. But the human capacity to perceive resemblances varies according to the person and subject-matter; and resemblance, and its opposite, contrast, exist only in those minds which are able to form them.

One man has a strong sense of music, and quickly perceives and hears musical resemblances and contrasts, concords and discords, not perceived by others. Another, possibly an artist, perceives resemblances in *forms* and *colours* which the musician wholly overlooks, because the artist has a natural and an educated sense of form and colour, and the musician has the same only of sound.

But we may descend from that to size and weight, and to a butcher or grazier, for example, who will tell to within a few pounds the proportional weights of a number of oxen as various as possible in appearance, and of which the artist and musician have no idea or means of comparison whatever; while of music and

art, of concord and discord, or of form and colour, the butcher and grazier have little or no correct sense whatever.

So a mechanic or machinist will perceive a mechanical resemblance between two machines as different as possible in form, and, if they understand the science of mechanics, will be able to show the same principle employed in both. But music, form, colour, size, weight, constructiveness, are all natural senses, and all involve the sense of resemblance, and vary from infancy in most men, though greatly improvable by exercise and education. But in all these and other cases of physical resemblances, we must, for the purpose of scientific classification, endeavour to define and reduce our resemblances so as to be measurable by number, time, and space, which are our only scientific measures of all material things. Nothing can be said to be classified scientifically until it has been reduced to measurement by *space, time, and number*. Till then, it is merely æsthetic and emotional, not scientific or intellectual.

THINGS, THOUGHTS,—CATEGORIES, PREDICABLES.

All Aristotle's categories and predicables are also loose abstract terms, expressing resemblances not by him reduced to number, space, or time, and so not accurate or scientific. Every pseudo-scientific term expresses a resemblance not strictly reduced to number, time, or space. Let us go through Aristotle's categories *seriatim*. But categories generally mean things, and predicables mean thoughts; but things and thoughts are confused expressions, for there are material, mental, and verbal things, and a thought is a thing, and both are *words*. Therefore we should always distinguish

material things, from mental things, and both, from verbal things.

ΟυσΙΑ, OR SUBSTANCE.

This was a confused expression or general term, like *thing*, applicable either to matter or mind indifferently, and even to logic, as we say the substance of a proposition. The ambiguity of substance should exclude it from strict science, and the same is true of all translations of it, such as Being, existence, &c. And the same is true of thing and thought until reduced to *number*, *space*, and *time*—our only measures in science, where ambiguity and mystery are intolerable.

QUANTITY

is likewise altogether loose and confused, until we have a *unit* of quantity. Then it becomes a NUMBER of units, and definite and scientific, and then it is *ποσόν*—how much—*i.e.*, how much and how many of the units assumed, or selected as the fundamental measure of quantity by number, space, and time.

QUALITY

is evidently a loose inaccurate unscientific expression, which each careful man endeavours to reduce to accuracy by number and space, and by time where that is involved. The master estimates the quality of the workman by the quantity of work, and the time taken to produce it. We struggle to reduce quality to quantity, which is more evidently number, space, and time, whenever we think or try to think definitely of quality.

The corn-merchant, for example, measures the bulk

and the weight—the number of pounds in the number of bushels—units of gravity into units of space; but will add also an immeasurable appreciation of quality—colour and uniformity of grain—resemblances not yet scientific, but very apparent to the merchant. The wine-merchant tries the quantity of alcohol by distillation and quantity in a given bulk of his liquid, but has no measure for aroma, &c. And the scientific chemist rejects quality altogether, as far as he can, and reduces everything to weight or gravity and number; yet he also often finds some immeasurable defect in purity affect his experiments—*i.e.*, a purity or quality which he has not yet learnt how to measure or reduce to time, space, or number, and thus, he gets into electrical and magnetic conditions, allotropic states, &c.

But most trades have an established standard of purity or quality, like the corn-merchant with his bushel-weight, or the goldsmith with the precious metals, and many other established trades with understood qualities, generally measurable by some definite quantity, whereby the quality, *ποιον*, or how like, or of what sort, becomes reducible to the quantity, *ποσον*, or how much—which is itself reducible to *number* by units of quantity.

RELATION, OR *προς τι*,

is evidently a very loose general expression for any sort of comparison between two or more things, and is some resemblance between them. Every comparison gives us a relation or resemblance between *two* at least which, as to all external things, must and can be only reduced to scientific certainty by *proportion* in number, *symmetry*

in space, and *harmony* in time—*i.e.*, in order that we may reason accurately or scientifically about it we must get ultimately to number—for space and time are also numerical, and only rendered certain by number.

Of course, it is easy to puzzle ourselves over the artificial or natural relations perceived or invented by the mind, if we do not endeavour to reduce them to some numerical certainty; and Motion is a *relation* in space; but for metaphysicians since the days of Newton to feel confusion about *motion* is, I venture to think, only to exhibit their own careless ignorance of the mathematics, the accurate thinking, or science, on the subject of motion, as it has been reduced by the moderns to the science of *dynamics*.

But you will say, all relations are not numerical, such as fatherhood, brotherhood, sonship, or citizenship. I say that fundamentally they are all numerical—you must begin with number in some way or other. A man cannot have *two* mothers, or, properly and accurately speaking, belong to *two* families. Every relation must begin with two or more, as numbers to be compared together; and we must, to be accurate and scientific, then go to comparisons in time and space—the children of one parent, or the citizens of one state—and having first fixed the *numbers* to be compared, then proceed to other comparisons in space and time; otherwise our minds are in confusion!

The limits of the citizenship, for example, must be fixed in space and time, in law and cause, which we must consider hereafter. But every relation is at bottom numerical, and all its ramifications must be made, as far as possible, numerical in space and time, or your science is not science, but pseudo-science, depending on

loose types and looser thoughts, and on language altogether uncertain. For Law is order in language; and Cause is order in mind—the power or force of mind which preceded an origin, and produced a material thing or mental thought, a new *state*, or new *relation*, as we shall show hereafter.

ACTION and PASSION, *ποιεῖν* and *παθεῖν*,

have only confused unscientific significations till the actions and the passions are measured by number, space, and time, and until they can be reduced to motion and form or rest, scientifically, as material motions. But relation and action and passion are equally applied to mental and physical things, and the applicability of space and time and number to mind must be contemplated as *symmetry*, *harmony*, and *relation*.

We need not delay over the rest of Aristotle's categories—*i.e.*, when, where, posture, and habit—the *που*, *ποῦ*, *χρῆσθαι*, *σκεῖν*—evidently are only loose expressions for certain relations or resemblances of space and time, which are themselves only rendered scientific by number.

We cannot reason about any such things scientifically till we know what is meant; and the only accurate means we have of knowing, what is meant, is to bring them down to our only measures of external things, number and time and space, whereby they may become somewhat definite and scientific, and are made measurable by mankind in general.

Aristotle's Predicables—"the five words"—deserve a little more careful consideration; in order to show how the looser discussions of the ancient and middle-age logicians naturally fall into the more accurate thinking

of modern philosophy and science, as it must be reduced to number, time, and space.

GENUS, SPECIES, DIFFERENCE, PROPERTY, ACCIDENT.

Γενος, genus, is properly race—*origin*, and *history* in *time* and *space*; and *ειδος*, species, is evidently—*form* or appearance in *space*; and, when taken or applied to material things, becomes a new genus, race, or origin. Nothing shows more clearly as a matter of fact the power of language,—that language is a positive *factor* of knowledge amongst mankind; and not only of verbal knowledge, but also a cause and factor of action and passion, of human history, and of human happiness and misery upon earth,—than the history of these words —“substance,” “genus,” and “species;” to which we may well add “essential difference” and “property” and “accident,” Aristotle’s five predicables, which still, to a great extent, govern men’s minds, and bamboozle men of science, and leave them in confusion and ambiguity.

In fact, if we do not watch and carefully guard ourselves, from the use and influence of Aristotle’s predicables, we shall find ourselves hampered in the trammels of materialism, through our words. For in their original meanings they are all, altogether materialistic. *Γενος*, the race, origin, and history in time of the thing *visible* and *sensible*—*i. e.*, material; *ειδος*, the form, shape, and appearance in space, of the thing *visible* and *sensible*—*i. e.*, material; *διαφορα*, the essential difference, distinguishing character, difference, or property, generally *material* or visible and sensible, of the thing, making the thing to be a thing distinct from all other material things; *ιδιον*, all other private and peculiar properties of the thing visible and sensible; *συμβεβηκος* or accident, all other accidental pecu-

liarities whatever, and, of course, generally materialistic—these five heads or divisions, the predicables of Aristotelian logic, form an admirable but very loose summary of all *material* knowledge about anything—its history, form, and chief and other peculiarities, accidental or otherwise. We may use them all, and leave *spirit* or mind out of consideration altogether.

It is, in fact, the language of materialism loosely developed for common everyday use, with the mental accuracy, and ideal characteristics, of number, time, and space altogether thrown into the background.

The indefiniteness of the word *ουσια*, being,—substance,—or existence, combined with the miracles of Christ, in my opinion, alone prevented Europe from stagnating into complete materialism, like the Chinese or Hindoos, under the influence of Aristotle's language. The necessity of explaining miracles, such as the feeding of multitudes with a few loaves and fishes, to believers in Christ, or the necessity of discussing the *ουσια*, being or nature of Christ himself, probably saved Europe from the total materialism of Aristotle's language. And so it became mere nominalism or verbalism; and whole races, and peoples, and tongues, and governments in the Churches of the East or West, or Greek and Latin Churches, became subject to one or other use of the indefinite word *ουσια* or substance, and fought and murdered each other for this word "substance" or "*ουσια*."

Trace the history of Arianism, or the material interpretation of the word *ουσια*, in the East—or trace the history of Romanism, or the material interpretation and use of the word *substance*, in the West, and we have great part of the history of the Greek and Latin Churches; and that history exhibits the influence and

power of these abstract symbols. But men must still choose their *spiritual* or *material* meanings.

And so the indefinite use of the word *sein* in Germany and *being* in England to signify either a verb or a substantive, still confuses the question whether Mind or Spirit is a thing in itself, or only a predicable—a state of matter! a mere think! or a flux! or a series! or a possibility! or a motion, *life!!* And great philosophers and theologians still furiously dispute about such indefinite or ambiguous words.

But men must make up their minds on the real meanings of their terms before they can possibly reason with any truth or accuracy at all. We do not know and never can know anything whatever about the reality of matter or of mind except in our own proper persons, in our own individual bodies, and in our own souls, without any power to transmit the truth except in *words* alone. It is absurd to shuffle with our words and deal ambiguously with them, as if they were more than words. It is falsehood and self-contradiction in one or both ambiguities concerning Things and Thoughts.

It is a fundamental question, which no other man can determine for us, but which each determines for himself, whether our mind is a state of our body, or our body a state of our mind; or whether they are one and the same, or are different things, thoughts, and words. If mind and matter, or body and soul, is only a verbal distinction, it ought to be abolished! but try and abolish it, and see what absurd confusion and self-contradiction you immediately fall into!

In fact, we are unable to abolish the *meanings* of our words, or their *effects* and influence on other minds and bodies as well as on our own, and the materialist and

utilitarian contradict themselves whenever they speak and reason. Their words and actions are fundamentally contradictory.

The word is a vibration, and its meaning may be an impression, let us say, on the soul; but what is it that sits aloft in judgment upon that impression, and exercises judgment over both soul and body? Is it not something distinct, the *spirit* of the man, the will, the self-conscious something or another, totally distinct from the body, which felt the sound, and from the soul, bodily if you please, which received the impression? Do we not all know well in our heart of hearts that there is *something*—a positive thing, our *self*, our spirit, our *free* mind—which does feel itself wholly different from, and makes itself judge over, the actions of our bodies, and the impressions of the souls; that there is that internal something, that self, which is neither body nor soul, but is a human judge supreme, sitting within the body and the soul, which are impressed by the words—the Spirit! However, it is a most idle work to reason with indefinite words! That ought to be contemptible to the man of intellect. But before we can reason accurately, about mind and matter, we must make up our minds as to the fundamental assumption, either that they are *two* things or *one* thing; and that involves our first predicable *number*! That is the very first question that we can put to ourselves about mind and matter—are they two or one? and till you answer that, you are a mere shuffler with ambiguous words, either consciously or unconsciously dishonest. If you start with the assumption that they are *ONE*, then it requires no argument to *prove*; but it follows at once that either your mind is a “flux” or your body a “possibility.”

But you cannot have both, as desired by some positive, but very defective, though illustrious, logicians! That is bad logic! that is shuffling with words! That is being an idealist when we talk of body, and a materialist when we talk of mind! A Flux, is a material motion; a Possibility, a mental doubt.

If you start by saying that two things are ONE here and now, then you contradict yourself if you, here and now, forthwith call them two. That is plain self-contradiction, whatever your opinion may be on the question, whether truth is from induction or deduction, or whether that "twice two is four" is a deductive or inductive truth!

However, the reader of my argument is always supposed and assumed to believe that mind and matter—that body and spirit—are two things, and not one thing; two always, and everywhere distinct and different, and never one and the same. That we honestly assumed and avowed at the beginning, and shall, we hope, maintain to the end. Though I go on to say that, the mental and secret sense and force and meaning of *words* overthrow logically the materialist; just as their material sense and aural force, as vibrations, overthrow logically the idealist!

But it is clear, that all the abstract words involved in Aristotelian logic, are all loose and inaccurate expressions, primarily materialistic, and not necessarily in any wise idealistic; and it is also clear, that they can only become accurate and scientific, or be reasoned about accurately, by us moderns, who believe in both mind and matter, when they are reduced to measurement in time, space, and number, so far as all external and material things are concerned; and that number, space,

and time are our true mental senses for measuring external things. But there are some other abstract words now in much use, the meanings of which it is very desirable to clear up a little. *Order, method, system, law, cause, &c.* These are in all our mouths, and require some little consideration.

ORDER, METHOD, SYSTEM.

There is certainly a natural sense, or desire for Order, varying in its power, in children from their earliest years. We all have an innate sense of order more or less—a natural desire to arrange things in order. But, besides being a natural internal *sense* in the mind, what is its scientific force and meaning as a word in common use? I think *order* primarily is the simplest scientific *state of number*. Number comes first, but order afterwards to arrange the number. We cannot have order till we have a number; but if we have a number, the mind desires to place them in order in number, in order in time, in order in space! But order in time requires a number of times, at least two—first and second; order in space or extension also requires number of parts to become orderly. There is no order in one space; but we can divide it or add to it, and then put its parts or its additions of space and their contents in order, one after or before the other orderly, and measure space by units of space. When we have a number of things in disorder, they are still a *number*, but not reduced to order, which is an accurate or scientific state of things! If we number them, we put them in order by ones as units. After that we may order them in time, and fix the second of time at which each of them first existed, if they did not come into existence, all at the same

time—that is, their genesis or origin and history in time. Then we may proceed to order them in space, and may fix all their several and relative extensions and distances by number and time with such care and accuracy as our measures of space and motion admit of. But as soon as we are involved with space and time, there arises *motion* of material things, and *form* and succession in time.

But Order is the product of *number* and mind—that is, a *scientific state* or arrangement of numbers. A number of things are in order when they are reduced by the mind to a scientific state. All order agrees in this, that the things will be *known* and recognised by their order—*i.e.*, the order in which we have placed them. *Method* is a kind of order, generally involving not only number, but also space. It is a more complicated order, signifying orderly travelling along a road, and we may have a material order, which is a method, and a mental or temporal order, which is a system. We should say, a well-defined method and a harmonious system. These seem to me the scientific force of *order*, *method*, and *system*.

Thus Order primarily is the product	Number . State.
Method is	„ Order . Space . State.
System is	„ Method . Time . State.

But this relates to material things, like a method of construction or a system of drainage—a metaphorical road or way for our mind to take in space and time. But a systematic method and methodical system are two different things—the one should be symmetrical and the other harmonious. But metaphors are dangerous in all reasoning, unless we are more than ordinarily careful to distinguish between mind and body. But a method should be symmetrical, and a system har-

monious, as a general rule ; thus *order* is verbal, *method* is material, and *system* is mental, and symmetry is of matter, and harmony is of mind.

L A W.

We hear a great deal about Law nowadays, and everybody uses the word, but very few could say at once what general or universal meaning is attached to this general term, *law*. It is so easy to make and distinguish signs, that there is no excuse for any philosopher or man of science having *two* meanings for *one* general term, though we are all very liable, in the eagerness of controversy, to overlook our departure from one fixed meaning, and find ourselves confounding and confusing two meanings into one word. But it is the object of all true science to be careful and accurate, and to avoid such ambiguity, which is the indirect form of falsehood—a form of falsehood very often quite unconsciously committed. “Law is the product of (words and order). All laws are orderly words laid down by lawgivers. And so the laws of gravitation are orderly words from the writings of Newton, and the laws of the decalogue are orderly words from the writings of Moses; the laws of population are orderly words from writers on population, and so on.” “Law is not action, but a rule of action,” says Sir J. Herschel. But Law is not strictly a physical rule, or a mental rule, but a *verbal rule* of action, and equally applicable to matter or to mind. All laws are *words*, forming the rule by which things and persons are reduced to *order*. There is no mystery or theology about the laws of nature; they merely mean those *verbal rules* which men have invented or discovered, for reducing natural things to order. Grand mouthing pre-

tenders to science, with little love of truth, love to talk of "the universal reign of law"! But this merely means the universal reign of orderly human words; a conclusion far removed at present from mankind, and entirely *theological*, of which we need not be in the least alarmed, if properly understood. For every natural Law presupposes and presumes the existence of a Lawgiver in nature quite distinct from the *grand être d'humanité!* When orderly words *reign* in the universe, there will be less confusion about the word *cause*, and about the *First Cause*. All laws, then, are the product, (words \times order), and are to us *verbal* rules, invented by man, or discovered by man, or revealed to man, and are applicable to all *causes* which they can explain, and reduce to rule and order. But what is cause?

CAUSE.

The hatred of certain philosophers for the word cause is a veritable superstition! Every *cause* involves mind or power, and so is applicable to God, who is the first cause and the source of all power, even those powers which are abused to evil, as well as those which are used to do well. God has created minds or free powers, but He is not responsible for their evil actions. But power is to mind: as force is to matter: and as influence is to language. Mind exercises power, matter exerts force, and language exerts, and professes to exert its influence; and great and wonderful have been the influence and disputation produced by the word *cause* in philosophy.

To confound "*order in time*" with *cause*, we all know and feel in our hearts is a falsity; because, though every cause precedes its effect, yet that precession in time we all know and feel in no respect implies our ordinary

sense of the relation of cause and effect, any more than that the first night was the cause of the first day, and every night is the cause of every day, or that Tenterden steeple was the cause of the Goodwin Sands, if its building, in fact, preceded their accumulation. So the logician is driven to beat about the bush, and then says they are "not fundamentally different"!

And, of course, everybody is entitled to say by the law of identity, if he pleases, that he will use "*cause*" to mean antecedent, and antecedent to mean cause. And no one can object, if he would and did adhere honestly, to that use of the word; and does not (which he infallibly soon will do) use it like ordinary people, so as to include the idea of *power*; and thus more or less admit the thought of *mind*, without confessing its existence. But such use of the word confuses and confounds men's thoughts of *cause*, which evidently always involves *power* and action, with two things which have nothing to do with causation—time and order.

Let us first take the lawyer's use of the word Cause, and examine it in the first place.*

A cause at law is an *action* between a plaintiff and defendant. The plaintiff comes first, and the defendant comes after; and when they, the parties, are both present together, there is a legal hubbub—in short, a few words between them; and the cause comes into court before a judge, an admitted possessor of a certain amount of power, wisdom, and goodness. The judge applies or *lays down* the law in words, and the cause is at an end; the plaintiff and defendant sink into their new positions

* The following pages as to the meaning of the word "cause" are taken from 'Philosophy; or, Science of Truth,' p. 246, to which I have seen no attempt at an answer.

in peace, and the law-cause is at an end, and has become, in lawyer phrase, a *law case*, laid by for future reference. Just as we put a book in our *bookcase*, good and bad ; so we put our law cases registered altogether till we want them. Therefore, we have a law *cause*, the product of Parties \times Action \times (power, wisdom, and goodness) ending in a law *case*. But mind is a product of power, wisdom, and goodness, in greater or less development. Therefore, a cause is the product of Parties \times Action \times Mind ; and the thing produced is a case of law or law case. Thus the lawyers, at all events, mean by *cause* a thing composed of *parties, action, and mind*, producing an *effect* or new arrangement of things and parties, called a law point or law case. The cause ends in a case ; the \cup in the word, expressing the mutual action of the parties, having been settled and excluded by the Power of the judge.

Now, I say that not only all lawyers, but all Englishmen—and most other nations also—commonly use the word Cause in this manner—viz., as a confused action of parties settled by the Power of Mind of a judge. Suppose, therefore, that in place of bringing into court a plaintiff and defendant, two *persons*, we brought into court an acid and an alkali, two *things*, or an electric current and some water—in short, any active material things, or things in activity ; and a hubbub follows between them, action and reaction, ending in a neutral salt in the first case, and two gases in the other, or some other effect or consequence of the action in every case. Well ! the cause begins, proceeds, and ends ; and in place of an acid and an alkali, we have a neutral salt ; or, in place of water, we have two gases ; or at the end of the action and reaction we have some other effect or conse-

quence ; we have, in short, in every such cause, a case of chemical law. We thus have two or more law points, or law cases in chemistry. Well, then ! is the difference very startling, or, in truth, is there any difference whatever to our human apprehension between the Lawyers' and the Chemists' use of the word *Cause* ?

Two or more things or particles, not minds or persons, come or are put together, as a *cause*, and there ensues a hubbub or hurlyburly between them, which we do not in the least understand, but which we call the cause or antecedent, and it ends in an effect or consequent, a case of natural law. And the chemist or natural philosopher, in his laboratory, endeavours to pick out the law of the chemistry case, just as a lawyer in his chambers, endeavours to get at the law of his law case. In the one case we have *persons*, or parties, in action, in the other case we have *things* in activity. This is the plain unsophisticated truth, and every Englishman so speaks, and verbally admits it, when he uses the word *Cause*.

We have certainly yet to learn why we Englishmen are to use the word cause in any other sense, in the courts of natural philosophy, than we do in the courts of our country ; or why we are to leave the power, wisdom, and goodness of the judge out of court in the one case, and not in the other.

For my part, I will not leave it out till some sufficient reason be given ; and, therefore, in the cause between the acid and the alkali, or electricity and water, or any other cause in natural philosophy, I refer the consequent, the neutral salt, or the two gases, to the due and proper application of Power or mind by the Supreme Omnipotent Judge, by Himself or His *agents*, universally present in Court ; just as I refer the final arrangement

between plaintiff and defendant at Westminster to the application of power or mind by the judges there, and endeavour, by searching and examining all the circumstances from the beginning of the cause to the end of it, to find out the law which the authorities must reasonably have intended to lay down.

We cannot refer to the judge himself in the one case or the other; but we can if we choose, in both cases, start a new and similar cause, or try to do so in order to hear or see a new and more lucid judgment if possible.

The advantage which natural philosophy has over the practice of the law is, that you are more sure of not receiving different answers to the same question in the one case than in the other; but how Cause can be confounded with Law, or how an antecedent or former state of things can be confounded with the law, the dead rule according to which, the living power, wisdom, or goodness of the judge produces a new state of the same things, or how Cause can be confounded with Succession in Time, appears to me a most surprising abuse of words.

Cause is, parties, action, Mind.

Effect is, parties, new arrangement.

And Law is the *verbal* expression or rule which the judge lays down, or which the *lawyer* or the *looker-on* adopts in order to express the change which has taken place, devised by his judgment from the facts of the whole cause, carefully examined from the beginning to the end. Law is *words in order*—orderly words.

Lawyers misinterpret cases, and so do natural philosophers. It is often needful at law to go and search the records of an old cause to find who all the parties were, and whether there were not some other parties than those mentioned in the reports, in order to account for

the strange conclusion. But it would be a most surprising effort of *reason* if we came to the conclusion that the judge had left the court, and that the judgment proceeded without him, and that the cause was settled by the parties ending their difference according to the clock at Westminster—that is to say, by *order in time*—or tossing up which should go first and which last, or ending in “a phenomenon with no cause at all!” A consequent without an antecedent!

We say, therefore, that in the courts of nature the Judge is always present, by Himself or His agents, whenever a cause ends in a case of natural law. And we say that a *law* of nature is merely *our words* to try and explain to ourselves the reason of the cause ending in an effect or case of the law. When we are puzzled, we try, if possible, to put the *parties* or *particles* to the question, as Bacon recommended. We take them separately, and, if possible, crucify them till they tell us their whole history, and how they came, and what they would do in other circumstances, and whether they are single or double, and so forth; and turn them round and round, and backwards and forwards, and inside out, if possible, both while the cause proceeds, and before it begins, and after it ends, and we register every answer they give us; and, without doubt, the Great and All-powerful and All-wise and All-good Judge in the Courts of Nature approves of man's searching disposition. He says, “My son, get wisdom!” And Nature is the great mathematician and the great Mechanic constantly at work applying the wisest laws, which it is man's duty to search for and discover.

External nature was intended to rouse our sluggish

spirit, to elevate us from the pleasures of sense to the pleasures of intellect, and from the pleasures of intellect to the glories of that Divine goodness which is dimly shadowed in the best feelings of mankind. But what possible excuse is there for any man who admits the existence of an Omnipotent God, to hide this plain state of the case with "order in time," and "the uniformity of the succession of events;" and, as it were, to use the very *goodness* and clearness and certainty of God's law as a reason for turning the judge out of his own court, in the decision of the *cause* between his own subjects, his own creations, his own particles of matter.

Now, how is this absurdity attempted to be supported? First, by shuffling *cause*, which does of necessity, according to all proper usage, imply compound parties, and some action between them, into a *single antecedent*; and secondly, by shuffling the new state of the parties when the cause is concluded, also into a *single consequent*, and calling this new state of parties the *effect* of the first state; just as if this new arrangement was effected without any *mental* power or interference whatever, as if arrangements were made by blind particles of *non-thinking* things of their own accord, and according to the most beautiful, sublime, and subtle laws that man can conceive in his loftiest mind, and express in intelligible words and symbols!

However, if materialistic philosophers choose to use the word Cause in a manner different from all other men, who understand by *cause* an action between two or more *persons*, and thence by analogy transfer it to action and reaction between two or more external things or *particles*, and consider *cause* as an action between two or more things ending, in both cases, in some new ar-

rangement of persons or things, by the fiat of a powerful, wise, or good Judge, or his agents, they are bound to give us some clear and intelligible new meaning for the old word *cause*. What produces the thought of cause in their mind? In short, if it be not, as I say, the product of *parties, action, mind*, ending in a new arrangement of the parties, the persons, or things, called the law case—either the municipal law case, or the natural law case, or the moral law case—what do they mean? Can these philosophers give us any meaning without being self-contradictory? Can they avoid talking of a consequent which had no antecedent—*i.e.*, “a phenomenon with no cause at all”—or of “order in time,” with *no order* at all—*i.e.*, a *variety* of distinct causes for the *same* effect? We are not bound to give up our plain intelligible words for self-contradictory trash.

But the most amusing excuse of some of these philosophers who propose to turn the Great Judge of the Universe out of His own natural court, and to make causes between things decide themselves by order in time or the clock at Greenwich Observatory, and without His presence and action and power, is what may be called the *infra dig.* argument. It is, in short, beneath His importance; it is *infra dig.* for the Great Judge to be called in to settle a question between an acid and an alkali, or two atoms of matter. In short, let us speak it with reverence, He must be *too busy* to attend to such a multiplicity of trifles as we from habit think the wondrous laws and operations of nature in the meanest particles of matter. What a wretched shuffle this is, to try and hide God's *particular* providence, His omnipresence and omniscience, and in thought to try

and exclude Him from this wondrous universe which He has created, and now sustains at every moment in every particle! In short, this confusion of Cause and Law seems a mere opinion, founded on a personal dislike to the thought of God's particular providence, to God's omniscience, and to His omnipresence. Weak and wicked man strives to thicken the veil that separates him from his Maker, and would rather think of this universe as a great clock wound up by a watchmaker, and then mankind and all left to work itself down, free from all *responsibility* to any Being; but, of course, leaving the original maker of the watch responsible for all irregularities. That seems the whole secret, and the whole reason that exists for confounding law and cause. Materialistic philosophers not only dislike to acknowledge the free will of man, and his fall and just punishment, but would, if possible, conceal from themselves God's omnipresence and omniscience, His Divine *particular* Providence operating in the meanest particles of matter.

However, we shall continue to hold, both in the laws of nature and in the laws of man, that *Cause* is the product of *parties, action, and Mind*; and that *Law* is the *verbal rule or order laid down*, the product of *words and order*, which brings, verbally, the old state of parties into the new arrangement. There are very many causes in nature of which we are ignorant; but our business is to search for the first or *antecedent arrangement* of all the parties or things concerned, and thence to find some *verbal rule* which will reduce them to the new or *consequent arrangement*. The order and the uniformity are a part of the law—that is, of *our verbal expression* of it—and not any part of the cause or of the effect. But all

our discoveries are still only human words. Our verbal expression of the law must, of course, be orderly and uniform, or it is no *law at all*—*i.e.*, not by us laid down properly for an intelligent creature to understand. As soon, however, as the judge is admitted to be always in court, and nothing too mean for his attention, all other difficulties will vanish from the devout and conscientious mind, and he will seek the laws of nature with that faithful humility and reverence which are most fitted to enable us to discover what is both true and useful.

But some poor bewildered mortal may possibly exclaim, Why, this is Pantheism! Is God in every particle of matter, and in every action and reaction that takes place between every two or more petty particles? To which I answer, Is the judge at Westminster *in the parties* to the cause, or mixed up with their squabbles, which he settles and determines? No! Well, then, why are we to suppose any such folly in a natural cause or a natural action? The power and wisdom and goodness of the Judge are not in the particles of matter, but everywhere, except in the free will of evil minds, operating and enforcing good, wise, and powerful laws, and only just as long as He thinks fit; but the Judge Himself is Mind, not matter, nor *in* any matter. Pantheism is as absurd and as self-contradictory as Pan-Atheism. This is only the constant old shift or shuffle between the folly of materialism and the folly of dogmatic idealism. When driven from one refuge, the defeated philosopher flies to another equally absurd.

Thus, however, we are not obliged to use the word cause in two senses, or in none at all. The analogy between persons and things, between parties and parts, between minds and bodies, is perfect throughout, but

they cannot be confounded. If the devout mind will but always remember who the Great Judge, by whose laws, discovered and laid down by man in human words, all *causes* between material things and their parts and particles, are settled, he will be in the best frame of mind to discover the truest *verbal* expression for those laws, after he has carefully examined a cause or case of natural law. But if you persist, like a child, in asking for some *verbal* expression for what you and I cannot understand, I can but fall back on the *verbal* expression revealed to Moses in the infancy of man's moral education, and say, that the Spirit of God moves on the face of the earth, and is ever ready to enter the chaos of human free will, and to say, Let there be light, to the humble and penitent searcher for the light of Truth. "If ye, then, being evil, know how to give good gifts unto your children; how much more shall your Heavenly Father give the Holy Spirit to them that ask Him?"

"I have no toleration for *false words*, and don't wish to have any." If I think them evil malefactors, I desire to crucify them with the truth. It is such words as "strictly speaking," "not fundamentally different," &c., which suffice to baffle the most powerful intellects. "Order in time is not fundamentally different from causation!" Why, this admits a *difference*, and says it is not fundamental. Does fundamental mean to *found-a-mental-thing-upon*, or *find* a mental thing for? Well, if we cannot found a mental thing upon the difference, and yet admit there is a difference, we should admit our ignorance, and not call two different things by the same name. "The succession of events," *otherwise called* the law of causation! Night the cause of day, day the cause of night! Every first the cause of every second! and

every second the cause of every third! and so on; any amount of absurdity rather than confess ignorance and become humble. Now, is it that men cannot *found*, or cannot *find*, a mental thing; and not being able to find or found, think themselves entitled to *confound* order in time with cause, though they know and admit that they know them to be *different*?

We thus have discussed shortly law and cause, by reducing these words to their factors; and hope that if any reader who in times past has found his mind in anywise bewildered between *formal causes* and *efficient causes*, and *moral causes* and *final causes*, will candidly read over and consider the verbal solution which we have given, he will discover that it is a pathway clear and distinct across the weary wilderness of words, through which even great philosophers have vainly endeavoured to pass, in the settlement of this question; and that he will acknowledge that our explanation is one which can be rendered throughout perfectly clear and intelligible. Of course it depends on our assumption that the word Cause is a product of (parties, action, judge); or in external nature (things, action, Mind)—*i.e.*, the mind of God, whenever we refer to external nature, subject to Him. It of course assumes that there is only one meaning for the word cause, and it adheres to that meaning throughout, and shows that in his most ordinary language man still confesses the Maker whom he sometimes wishes to deny. When the *things* become mental things—*i.e.*, human persons—and the *action* becomes human words, and the *mind* becomes a human judge, we have a law cause; but when the *things* are external bodies or particles, and the *action* not the *words* of persons but the *works* of particles, and the *mind* becomes the

Creator of the universe, or His agents, then the cause becomes a cause in Nature.

But, on the one hand, to confound the *mind* of the universe with the *work* of particles of matter, is, we say, mere superstition and idolatry; and, on the other, to deny His presence in every natural cause, in every action of every particle of matter, is to deny His omnipresence, omniscience, and power. There is not a hair of our heads that is not numbered. There is not a sparrow falls to the ground but by His will; not one of them "forgotten before God." There is not a particle of matter which works or operates but by His express knowledge, permission, power, and will. This truth of a Divine particular Providence is a truth as far removed from superstition and idolatry as it is from infidelity and blasphemy!

THEOLOGICAL, METAPHYSICAL, POSITIVE.

The true relations between these three words—thoughts and things—has, as I conceive, been wholly misunderstood! The first relates to Spirits, the second to Language, the third to Matter! The language of metaphysics, as I have already observed, is altogether metaphorical, and is necessarily so; for metaphysics being of the human mind alone, and each mind being secretly enclosed and altogether hidden in the individual breast and brain, metaphor, or the use of material images in a mental sense or meaning, is the only possible method and means for one man to tell to another man anything whatever concerning his mind! The mind is hidden except to the individual whose mind it is, and other men can only be made to

understand its mental operations by metaphorical language, of which all the metaphors must be taken from external things and their relations or actions.

Thus all metaphysical language is metaphorical. But the true understanding or development of *mind* itself as a general subject of human knowledge can only be a mental language, and that a metaphorical language, of which the first word is mind or spirit or breath. Matter is the type of mind, and the utility of matter is the type of the morality of mind. This metaphorical language is the constant language of the Founder of Christianity.

“The stone which the builders rejected has become the headstone of the corner,” is said of Christ himself. His mind is the corner-stone of the moral world. He is our rock on which we build, and He himself has become our great exemplar, and His language our corner-stone, our mental guide to building up our own religion and morals. All this is to the Christian intelligible metaphor; but it is also philosophical truth. The life of matter is the type of the life of the mind; and the breath of our bodies is the type of that Holy Spirit from whom, and in whom, and by whom all our true mental life must begin, proceed, and grow. When we speak, therefore, of the metaphysical, the word clearly refers to human language only, all of which is the language of metaphor; and metaphysics are wholly physics metaphored within our brains as mind, and representing mind or spirit and its relations to matter and to minds.

But when we speak of theology and the theological, we speak not of the human mind alone, but of its *relations* to other minds. “Ye are all gods,” said Christ, adopting the words of David and applying them to

mankind ; and as spirits made in the image of God, men are all gods—spirits made in the divine image; and theology is the relations that exist between men as spirits and God as the one great Spirit; and the theological is necessarily only the logic of theology—*i.e.*, of the relations of mind or spirit—so the Positive is that which relates to things positive—*i.e.*, posited in space, or material things alone! Thus the theological is of spirit, the metaphysical of language, and the positive of matter alone.

But the logic of theology does not pass into the logic of metaphysics, nor the logic of metaphysics into the logic of physics. The logic of physics, on the contrary, passes by metaphor into the logic of metaphysics, and the logic of metaphysics passes by spiritual symbolism into the logic of theology. Matter is the type of mind, and the human mind, in its capacity for power, wisdom, and goodness, is the humble type of the God who made it in His own image! and man's business on earth is to strive and seek to revive and recreate, or perfect in himself, an image or imitation of God's power, wisdom, and goodness, and the best method of doing so has been best pointed out by the words and action of Jesus of Nazareth.

The truth, in fact, is the very reverse of that supposed by the author of positive philosophy. His supposition is indeed pure materialism. The theological does not pass away altogether, for that is to abolish mind or spirit; nor does it pass into the metaphysical, or into mere forms of words, forces, causes, principles; but rather the metaphysical passes into the theological. Nor does the metaphysical pass away altogether and leave only the positive; for in fact we can only know

the positive through the metaphysical, while at the same time the language of metaphysics is the metaphorical language of physics, and the positive is only the scientific language of matter or physics accurately and scientifically understood by the mind, and expressed in accurate language.

Theology is the science of spirits, metaphysics the science of language, and the positive is the science of matter; and mind, matter, and language are fundamental existences known to ourselves, to exist in ourselves, and they must ever continue to exist while man exists; for man shares in all three as a *spirit* thinking within a *body* acting and speaking *symbols*.

The shallow notion of Auguste Comte, therefore, that the history of man is the passing of the theological into the metaphysical, and the swallowing up of both in the positive, is in substance, I repeat, pure materialism. And the idea arose from confounding the mental history of each individual, which to some extent also is the type of the history of the race, with the truth of fact! The child is most theological, the youth most metaphysical, and the man most positive. The fetichism of the infant passes into the verbally-acquired metaphysical principles of the youth, and the metaphysical principles of the youth are modified by the practical experience of the man. So far Comte's idea is a true description of the history of each individual mind, and also partially a true description of the history—the mental history—of the human race.

But it is just as false to think or say that the individual's mind perishes as he grows up, as to think or say that theology can ever perish. It is just as false to say that language ceases to the man of action, as to say

that metaphysics can ever disappear. We cannot even comprehend the positive—*i. e.*, matter—without metaphysics; for the first comparison which we make, or likeness, or resemblance, which we perceive is metaphysical and mental. Men, indeed, both as nations and as individuals, may sink into the positive as mere materialists; but their mind continues to exist, and their language will live to bear witness of the truth, and to condemn the folly and the madness of the base materialism into which their mind has fallen! This is true of individuals and of nations; and this is all the truth that exists in the grand principle of the Positive Philosophy, which well exhibits its own self-contradiction, by its own metaphysics and its own author's theology.

Thus, for example, we behold positive philosophy reduced to its "binary combinations" of the "objective and subjective," to "statics and dynamics," and to the sciences of "number and extension and motion," in violation of what its author calls our "just repugnance to ternary combinations"!* But the objective and subjective, and rest and motion, and number and extension, are all metaphysical, and, moreover, confused metaphysics; and the worship of the "être suprême"—the "déesse de l'humanité"—the woman of thirty with a child in her arms—all this is not only theology! but false and very absurd theology!

The inconsistencies of the philosopher do not prove the falsehood of his doctrines; but the theological can never disappear—it is mind; the metaphysical can never be got rid of—it is language; and the positive, which is the science of matter, can only be truly understood by uniting the reverence for the theological with the

* Notre juste repugnance aux combinaisons ternaires.—Cat. Pos. 150.

intelligence of the metaphysical, and by reducing material phenomena to human words, for the metaphysics of matter, in childlike submission and reverence towards the Creator of all things.

And instead of "intelligence being the only possible basis of faith,"—of such faith as Auguste Comte can suggest, or of any other—faith is the only possible basis both of the intelligence and reason, and also of the material and positive. We must begin with faith before we can reason; we must believe in the material before we can posit it in the intelligence; we must ourselves create the metaphysical and ideal beings and existences, Number, Time, and Space, before we can have any positive general human knowledge—true or accurate Science—of the material beings by which we are surrounded. And thus the fundamental doctrine of the "*philosophie positive*"—of the Theological being swallowed up in the Metaphysical, and both in the Positive—is a mistake in the very elements of knowledge and reasoning; and the materialist must return to the theological faith of his infancy, and correct the metaphysical principles of his youth, before he can even begin to truly understand, and properly appreciate the Positive, in which his soul is wrapped; and his positive physics must be reduced to metaphysics before his intelligence can truly comprehend them.

Nor does this present to the intelligent Symbolist any theoretical difficulty whatever; for he perceives and knows that the human mind can only know the mind of God through words and signs and symbols, which to be true, must be revealed by God himself, and implanted and nourished and vivified by the Eternal Spirit of God; and the human mind can only know external nature

through words and signs and symbols, invented and adopted and improved from age to age by man himself, feeling himself the faithful child of God, and the humble interpreter of God's works and words. These combine unity in variety, and variety infinite in form—ONE generalised into variety of *matters*, and ONE also into variety of MINDS, and the third into the true mental comprehension of the *language* which describes them both. But the actions of inferior spirits are not the actions of God; they have been created free, and God is not responsible for their evil deeds; and the phenomena of matter and of mind are without doubt more or less subject to the actions and influence of *minds* inferior to God, but created with powers, great or little, over the phenomena of *matter*. The origin of evil, like all origin, must ever remain a mystery to man; but God is not the Author of evil; for that would be a contradiction.

Thus the theological is the product (Language \times God),
 The metaphysical that of (Language \times Human Mind),
 And the positive that of (Language \times Matter).

In fact, every theology professes to be the *relation* between some words and God; metaphysics the *relation* between some words and the human Mind; and the positive is the *relation* assumed or acknowledged by us, as self-evident and true, between some words and Matter. Such distinctions are inaccurate and useless until we limit and define the relation in question by number, time, and space, and therefore we should adhere to mind, matter, and language—spirits, bodies, and words, as the fundamental things we have to reason about. We shall consider the question of miracles in the next chapter on the *possible*, the *credible*, the *True*.

EXISTENCE, EQUALITY, PROPORTION.

These three words are indefinite and ambiguous, until we limit them to mind, matter, and language; by number, time, and space; of which the various sciences afford ample proof. There is material existence, mental existence, and verbal existence, which last is the states and relations of words in grammar. So there is equality and proportion in number, time, and space, and in mind, matter, and language.

We have already explained order, symmetry, and harmony. Order is a state of number; symmetry an orderly state of space; and harmony is order in time and space.

LETTER and SPIRIT.

These words, as applied to symbols, explain themselves. The *letter* is the logical, verbal, legal, formal, external, outside state or relation of symbolic action, or language; and the *spirit* is the internal, emotional, mental, and sentimental relation of the same action or language;—all which must be quite unintelligible to those who refuse to recognise the distinction of soul and spirit as the two parts of the human mind corresponding to the letter and spirit of words and actions.

ACTIVITY, LIBERTY, NECESSITY.

These three words properly relate to matter, mind, and language respectively. *Activity* is of matter;—what we term the spontaneous actions of matter on other matter, when placed within the proper sphere or motion, seem all reducible to attraction, repulsion, and circulation, or to vibration and undulation. The same particles

which at one moment violently attract and adhere to each other, on the application of some imponderable matter, like heat or electricity, violently repel each other. We see, in motion, the facts of attraction, repulsion, and circulation, but only guess and make theories about the causes and reasons for such strange likes and dislikes or proceedings—we hide our ignorance in a word like the affinity or activity or attraction—of matter.

Liberty is properly of spirit alone ; it is the internal consciousness and conviction of that Spirit which is within each of us, and which speaks of my body, my soul, my actions, my words, my thoughts. But if it be true, as I think is self-evident, that body and soul are both material, and subject to the laws of biology and psychology, both being sciences at present very little understood ; the word liberty, does not strictly or primarily apply to either body or soul, which are only the instruments of the human spirit ; but no man can deprive himself of the secret conviction that his spirit is free, although his body may be enslaved to a man by law, and his soul also hopelessly enslaved to bad habits, bad spirits, bad sentiments, bad principles, or false words.

The only *necessity* known to man is entirely *verbal* and symbolic. There is a fundamental falsehood and absurdity in speaking of material necessity or mental necessity, though we are all too often in the habit of so speaking—what we properly mean by such language is merely the *legal* necessity of obeying certain verbal laws which we have discovered to affect our bodies or our souls, or else, bearing pain or death, the sanctions of such laws over our souls and bodies. But we do not know why such material laws exist. The laws of symbols and cognition are also verbal rules, and

we often have discovered their necessity—*i.e.*, absolute verbal necessity,—like the laws of logical inference, of mathematical curves and lines—the laws of number, space, and time, &c.—all such scientific knowledge is *necessary* truth; which cannot possibly be otherwise in any intellect. But it is all merely verbal and symbolic.

For example, the law that a body vibrating in the curve called a cycloid, attracted by the force of gravity, is independent of space—that is, that it must vibrate fifty miles in the same time that it will vibrate five inches; that is a necessary theoretical truth, founded on the law of gravity, and the nature of that curve, and nobody but one who is ignorant or stupid can doubt it. So again Dalton's law of definite proportions is a necessary truth, founded on the word *atom*, or ultimate particle, and no one but a person who is either ignorant or stupid can doubt it, as I have elsewhere proved.* But it is much easier to demonstrate stupidity, in logic or mathematics, than in politics or sociology. *Necessity*, therefore, as known to man, has only reference to human words, signs, and symbols. When men of science speak of certain curves and motions and forces and atoms, they are talking of words whose scientific meanings are fixed; and they can crucify a falsity with logic. But metaphysics and politics and sociology are not yet scientific, and therefore the spirit of falsehood can in such pseudo-sciences well contend with the spirit of truth, by means of false or ambiguous words. And so in discussing *Necessity*, the devil is able to mix up the body, soul, and spirit of a man altogether in a parcel of false and ambiguous metaphysical words, so as to puzzle some of

* Philosophy, or Science of Truth, p. 207.

the best and purest minds the world has ever seen. But the days of his end approach, and the light of truth begins to dawn over the whole world. Happy is it then to know that, as thoughts without words are dead, so words without deeds are hypocrisy; and "that a cup of cold water given in the name of Christ shall in no wise lose its reward," however false may be, our theology and metaphysics. But *activity* is material; *liberty* is spiritual; and the only *necessity* known to mankind is mathematical necessity, which is altogether *verbal* or relating to words and symbols.

ORIGIN OF LANGUAGE.

The origin of language is, like every other origin which man can search for, lost in the mists of antiquity. In this, as in all other questions of origin, man finds himself in the middle of a series, of which the earlier and the later terms, or the greater and the lesser terms, are equally beyond the limits of his senses and powers. But as language peculiar to *one* person, would not be language at all, until accepted and adopted by one or *many* others, language presupposes mind and matter; *i.e.*, assumes numbers of persons or many *minds*, as mutually employing the words or *material* symbols of the language itself. And when we examine the likenesses or resemblances of the words of all languages to each other, we ultimately find that, we can reduce them all to the two classes of nouns and verbs, for things and actions, or things and thoughts—in short, for matter and mind; for all things are at first supposed material, and mind is at first assumed as the cause of every action. And so our assumed predicables—*states* of unity and *relations* of plurality—are fundamentally the very same distinc-

tion, turned into the triple *possibilities* to be examined—a state is a possible fact; and a relation a possible theory—respecting mind, matter, or language itself.

It is self-evident that every articulate proposition in words, expresses a thing and a thought about it—a thing, which must be reducible to our categories or classes of things—mind, matter, or language; and a thought, which must be either a state or a relation of the thing. It is absurd, therefore, to attempt to enumerate all states and relations, for they are, like things and thoughts, innumerable; but we divide them into the *possible*, the *credible*, the *true*—all either affirmative or negative.

But the error of all languages has been the error of all philosophy, the overlooking the true position and influence or states and relations of language itself; for, in fact, until men have *words*, they can neither have any science nor any philosophy concerning either thoughts or things; but all human *necessity*, properly so called, is entirely verbal, or symbolic, and confined to words, signs, and symbols, invented by man himself. We can only reason of intellectual necessity, which is verbal.

And as the origin of our ideas is the origin of language, so the science of language is the whole science of *truth*—not of truth as it can be known to God (of which we can know nothing), but of truth as it can be known to man—not of the truth, of things *in themselves*, of which we can know nothing; but of things *in relation* to man's nervous system, which we can investigate, and for which we can invent names. All attempts to reduce language to imitations and interjections, or to what has been humorously called the Bow-wow theory and the Pugh-pugh! theory, must yield to the acknowledged self-

evident assumption of man's *body* and man's *mind*, as being distinct and different; and as so made by all nations and all tongues, and self-evident to every individual. The true origin, and source of language, is the possession and self-perception of a body and a mind—*i.e.*, of matter and mind—things and persons—nouns and verbs. And most probably, in the origin of each tongue each word became both noun and verb by the method of using it, either alone or conjunctively, to express the thing itself or some observed action or relation, the mental application of the thing; as is still the case in Chinese.

The division of languages into the three kinds, monosyllabic, agglutinative, and organic or inflectional, is a grammatical division. The two first are like addition, by *ones*, and by *many*; and the last like multiplication of numbers. But the logic of the monosyllabic Chinese, or the agglutinative Finns or Hungarians, is no doubt the same as that of Sanskrit, Greek, or English, for human reason is the same everywhere. At least we find Chinese state-papers as logical and acute from their own (the Chinese) point of view as English state papers are—and it is by the assumptions of things, thoughts, and words—of definitions, postulates, and axioms—of words, questions, and principles,—all fundamentally the same, that all reasoning proceeds. And all reasoning must always be at bottom, only varied forms of our original assumptions of mind, matter, and language—of spirits, bodies, and words, which are the self-evident foundation of all human truth to all mankind; and to which, all men in fact and truth do subscribe and submit, even when they wish to avoid it, and profess and declare they will reject it! For in these symbols man

is effectually caged and imprisoned ; and when he tries to get out and escape, he becomes forthwith involved in very self-evident contradictions.

It is a very acute and true remark, proved by Professor Peacock, and approved by Dr Whewell, as to the universality of symbols, that "if general symbols express an identity when supposed of any *special* nature, they must also express an identity when general in their nature," and that thus our symbols become more general than our thoughts ; and "our symbols thus reason for us."* But all accurate and logical language is *symbolic*, and more general, than we can be aware of.

But in order to understand properly the origin and nature of language, we must not only distinguish between body, soul, and spirit in each and every man, but also between the three organic departments or phenomena, of man's *body* of which the vegetative or vital force or power is one ; and the organic, muscular, or animal system of our bodies is another ; and the cranio-nervous self-reflecting system is the third ; and we must also distinguish the three departments of man's soul, suited and related respectively to beauty, truth, and goodness—emotion, intellect, and will ; all of which are very distinct in our thoughts of the body and soul of man—distinct not only from each other, but also all entirely distinct from the governing SPIRIT of the whole man, which always feels, and thinks, and speaks of my body, my soul, my organic and nervous systems, my ideas of beauty, or of truth and of goodness, in my own soul ! The languages of most nations confess the self-evident truth of the distinction between beauty, goodness, and truth.

* Whewell, *Phy. Ind. Sci.*, i. 143.

That governing SPIRIT, ever restless and never sleeping, though it will occasionally take pity on its servants, the body and the soul, and may tell them to sleep on and take rest when 'overworked or over-agitated, yet that spirit never feels in itself the want of that rest which soul and body may both loudly declare to be absolutely necessary for further existence upon earth! But that SPIRIT sits aloft, supreme judge over language as uttered by the body and the soul; although the materialism of some nations, as of the Chinese, operates to corrupt the language applicable to soul and spirit.

Men who have not realised this description as true in themselves, have not yet sounded the depths of their own nature in body and soul, and have not yet realised the distinct and superior existence of that spirit in man which has been the source of all enthusiasm and all fanaticism and all patriotism, and all the many other *isms*—in short, of all that has been noble and true, or base and false, in human history!

Now the influence of Language appears to me to be exercised entirely over the human *soul*, not over man's body, and not over his spirit. The body is not influenced by words, signs, symbols, and the spirit is altogether superior to them; the spirit is free to choose, adopt, reject, either the truth or falsehood—to force, in fact, the soul even to lie to itself, and to make the body lie to others respecting its own words, signs, symbols. Hence the deep truth of that principle of the least intellectual but most gentle and most practical of all the apostles of Christ, "If any man offend not in *word*, the same is a perfect man, and able also to bridle the whole *body*"—a very deep truth, not yet understood by utilitarians and positive philosophers. But the influence of lan-

guage, as it seems to me, is wholly on the soul; and words, signs, symbols, if understood and received and adopted, are internal existences in the soul—ideas, images, &c.; and we may worship the outward visible symbol in our soul, and so become idolaters; or we may confound the letter and spirit of the word, sign, or symbol, and possess a form of godliness without the spirit, and become therefore liars, hypocrites, and Pharisees; whilst all the while the good or the evil human Spirit, as the case may be, sits supreme over all, and either confesses or denies the fall—whilst those good and evil Spirits, which can, from without, read man's thoughts, may sympathise or mock.

Words, signs, symbols, therefore—*language* received into and understood by the soul—are and become *ideas* known to the individual man, but of course they remain impossible to be *known* to other men but by guess-work from the outward effect in other words and actions. But God and nature teach us to use matter and its motions, as the metaphorical types of mind and its emotions; and to make metaphors of metaphors, like the *letter* and the *spirit*, applicable to the *Soul* or material part of the mind, and metaphorically to the divine or wholly immaterial human *Spirit*.

But it is mere confusion about language and ideas that produces such questions or principles as the following:—

“It is not man's mind which puts him in possession of ideas, but it is *ideas*—that is, knowledge—which puts him in possession of a mind.” “The mind does not make ideas, but ideas make mind.” “Matter makes mind, and not mind matter.” “It is not the poetic mind which creates the ideas of beauty and sublimity

which it utters, but those ideas which, entering into a man, *create* the poetic mind." "And so in moral truth, it is not our moral nature which makes the distinction between right and wrong, but the existence of right and wrong, and the apprehension of them by us, which *create* our moral nature"! "I have no moral nature before the distinction between right and wrong is revealed to me; my moral nature exists subsequently to this revelation. At any rate, I acquire a moral nature not after, yet in the very act which brings me the distinction." In all suchlike false views of human nature, the influence of language over the soul is clearly perceived, and almost openly acknowledged, but language itself and its powers are left out of consideration. We must strive and think a little more clearly and logically about ideas and symbols; for the Greek or Calabrian brigand, or Irish assassin, will curse the glorious sunset which delays or defeats his attack on the admiring victim.

Ideas enter into our mind, but how? As words, symbols, language—as intellectual ideas, true or false; emotional ideas, poetical or otherwise; moral ideas, good or bad. Morality, ethics, astronomy, &c.—their principles enter our minds, but it is only by means of words, signs, symbols—by means of actions, rhetoric, &c.—they enter into our very *soul*, and we feel the force, and are carried away, as it were, by the influence! They seem, in loose language, to *create* our minds! But it is surely some previous mind which created the words, the signs, the symbols, the actions, the rhetoric! They either may enlighten and purify, or darken and corrupt, our souls, according to our own choice and application of the symbols. But the soul was there before, with its emo-

tional capacity, its intellectual capacity, its moral capacity! the words, the ideas, the rhetoric can only awaken, they do not create the mind. This phenomenon exhibits only one mind by its *words* and actions—its language, penetrating and influencing another mind, and thus awakening deep responsive emotions, truths, moral principles; but God and nature are quite impartial, and leave the choice of the human spirit free to use or abuse.

The free spirit of man sits above all this—carping, disputing, denying, suppressing, or otherwise encouraging, urging, driving, impressing, the words, the very ideas upon its own servant, the soul, according to the wilful mood of the spirit.

The moral capacity is there by nature; the emotional capacity is there by nature; the intellectual capacity is there by nature! God created the soul as He created the body, and gave it the spirit in His own image, free and supreme and absolute over all, both soul and body. But both body and soul may have inherited a weak, a diseased, a corrupt constitution; for parents transmit their physical and psychical natures to their children to at least the third and fourth generations. But each man's spirit is supreme and free, though its body and soul—its instruments—may be bent or distorted. All nations and all tongues recognise these truths.

This supreme spirit in man is free to choose and adopt, or to reject and refuse the words, the symbols. It may absolutely refuse to impress them as ideas upon the soul. It may with little or great, or true or false, moral justice, or benevolence or veneration, either accept or refuse to submit its soul to the elevation or the degradation, the moral or immoral influence, of either words or ideas. It may turn away, and proudly and wilfully and

wickedly reject, the most earnest appeal, the most true and righteous sentiments; and may cavil and sneer at what it well knows it cannot answer, and ought to accept and submit to! And it may successfully darken and obliterate the ideas which have been actually impressed on the soul and the soul's conscience.

But if we forget or deny the nature and influence of *language*, or the distinction and difference between body, soul, and spirit, we cannot properly comprehend these most ordinary phenomena of the human mind, or man's language about them; and we then resort to psychical fictions about association of ideas instead of *language*—human sympathetic approbation in place of mental influence; utility to ourselves or to others, and the cold influence of the golden rule of doing to others as we would be done by, instead of selfishness or materialism; and to false principles of a like sort, as operating even in this world, and being on the whole best for ourselves here; and if not, then *possibly* of our being rewarded for our selfish or careless labours in the next world, if there be a next world! But the whole warmth of the Spirit of truth and love is in such case wholly absent from our moral and intellectual and emotional soul; and our spirit has not yet sought the only source of true life—the one and only true Spirit—that sent by Jesus Christ upon earth to abide with us for ever.

But association of ideas, love of approbation, utility, and customary morality, &c., are only the passive subjection of our souls to the influence of the words and signs and symbols, which we have imbibed and adopted from the current language in which we have been educated and brought up—the shibboleths of our society, party, sect, or nation—no doubt creating a current

of language, which few men have courage or strength either to resist or avoid. But the only true source of strength is not within but without us ; but "the kingdom of God is within us," and it only does not come over our souls, because we do not pray for it as we ought ; and because our spirits are not willing to receive its approaches, even when we say or profess to ask for it, and gabble our paternoster on our knees.

The influence of language, then, is the one great power over the human soul, and it comprises in itself all such powers as association of ideas, love of approbation, ethical customs, utility, expediency, &c., which all have a certain verbal and symbolic influence over the human soul.

But if we feel any doubt, whether to choose humility of mind to God, and submission of body to man with Jesus Christ ; or otherwise to choose pride of mind to God, and resistance of body to man, with all those philosophers and patriots who say all men are born free and equal, and "*aide toi et le ciel t'aidera*," or who insist that what is useful must be just, instead of the very converse, or what is just must be useful ; and who refuse to see that it is quite as easy to differ and dispute about what is useful, as it is about what is just—then it is full time such doubt should cease, and men should make up their minds to choose between light and darkness, and should try and fix their souls and intelligences, upon sound and accurate *language*, not only in science, usually so called, but in morals and politics. And that can only be done by having one fixed meaning for each and every word we use ; and the only true method of defining our words is to set down in a list, all the likenesses or resemblances which each individual of the

class must possess, in order to be properly included in the class as one of the individuals comprised in such class.

We will conclude the chapter by setting down some of the definitions we seek to establish.

The universe is the product . (mind, matter, language) ;

or

(spirits, bodies, and words).

Things or existences, therefore, are of three kinds, mental, physical, and verbal ; and the word *thing* is ambiguous till it is so distinguished.

Questions or possibilities are primarily of two kinds STATES as unities, RELATIONS as pluralities.

Knowledge is the product of (mind, thing, and word).

The first abstract, scientific *state of language* is NUMBER.

” ” *state of matter* is SPACE.

” ” *state of mind* is TIME.

Which three are all abstract necessary deductions from our first assumptions—mind; matter, and language—and are the only measures of the universe.

Pure Spirit is God alone.

Man is (body, soul, and spirit) (in one).

Matter is (mass, force, and form) producing sensations, or (motions and forms in the body).

Words are motions and forms (in the soul).

The *soul* is (emotion, intellect, and will) ; or power, wisdom, and goodness (or badness).

Order is a state of number ; *Symmetry* is order in space ; *Harmony* is order in time and space.

Infinity is fundamentally numerical, or endless number.

Infinite number is unity into infinity.

Infinite space is number, matter *negative*, and time.

Infinite time is number and mind, or (thoughts—states of mind).

Cause is (parties, action, mind).

Effect is parties and passion (or new arrangement).

Law is words and order.

Life is matter, form, organisation, absorption, secretion, reproduction (so far vegetable life); add sensation for a zoophyte, and nervous *action* for an animal.

The *soul* is an organism of imponderable matter—the habitation of the Spirit—an absolute Intelligence—which can control the Emotion, Intellect, and Will of the Soul within certain limits; just as the Soul can within certain limits, control the human Body.

CHAPTER XIX.

THE POSSIBLE—THE CREDIBLE—THE TRUE.

THE materialist is to us fundamentally refuted as soon as the distinct existence of mind and matter becomes self-evident; and the necessitarian is to us fundamentally refuted as soon as the distinct existence of soul and spirit becomes self-evident; and the spirit and meanings of our own words, give us this self-evidence.

But of course, one mere assumption as self-evident is no better than its contrary, as alleged by any other man to be self-evident; for self-evidence is necessarily individual evidence, and does not affect those who deny it. To logically refute the materialist from his own principles and assumptions, we must resort to his own words and their meanings. And we can then show that the materialist, to our minds, contradicts and refutes himself in the very meanings of his own words—as being mere motions, and forms, of which the meanings cannot be matter. So, in order to logically refute the necessitarian from his own principles and assumptions, we must resort to his own actions, and to their spiritual intentions or objects; and we can then show that, to our minds, the necessitarian also contradicts himself by the manifest intentions of all his own actions. We have inconsistency in action, and self-contradiction in words. The one—the materialist—refutes himself,

as we think, in and by every *word* he speaks ; and the other—the necessitarian—refutes himself, as we think, in and by every *deed* he does !

But the necessitarian is doubly refuted to our minds when his words and arguments are considered as deeds—that is, as words with meanings uttered in order to influence the actions of others ; for we cannot add to a flux or a current already in existence by the mere flowing of the current itself. The attempt to do, or to think so, is both mechanically and mentally absurd ! But there is nothing either mechanically or mentally absurd in swimming with the current, or against the current, or across the current, with a spirit and a will of your own ! and in the one case, by swimming with or against the current, you alter the time ; and in the other case, by swimming across the current, you may alter the place of that final catastrophe, towards which the current may be nevertheless hurrying yourself, or the race to which you belong ! But we all think this, only because we each assume the existence of a free spirit in ourselves, and attribute the same free spirit to all other men.

Humanity, “the grand Being of mankind,” of which races may perish, but the Being itself survives,—like those marsh plants, which perish and decay into black peat below, but throw out fresh rootlets, and green branches on the surface above,—is no doubt a great and wonderful organism, of which, and of whose history, we can only study a limited portion. But we are all certainly born into a current, without our consent, and from which we cannot altogether escape so long as we have bodies and souls. Both body and soul are subject to laws and influences, which we have not ourselves enacted or created, and from which we cannot in

any wise free ourselves altogether. As to our bodies and our souls, therefore, the arguments of the materialist and necessitarian are wholly unanswerable. They—the soul and body—are both subject to certain laws and influences, and are both involved in a current from which there is no escape in this world.

But under cover of this practical truth, the materialist and necessitarian hide an absolute falsity; for above both body and soul there is, by the confession contained in the words and actions of all men whomsoever, a ruling and controlling spirit within each man, who deems, and feels, and speaks, and acts his feelings, that his soul and body are his own instruments, and, to some extent, his own slaves, which he can cause and make either to swim with or against or across that current, which he nevertheless feels to be in fact sweeping him along! We are clay from the hands of the potter, and floating in a current from which there is no escape; but we know and feel, each and every one of us, that we have within us, a struggling and undying spirit commanding on board our care-worn and sin-defaced vessel. No other explanation will fit the facts of the case. Man's soul and body are subject to law, but his Spirit is free and absolute.

The *Possible* merely opens the question; and is the passing from indifference or ignorance to doubt. The *Credible* embraces a sphere which includes the most remote improbability which is possible, and also the most certain probability on which we might readily stake our physical existence—our Soul and our Body. But the Intellect is the only seat or sphere of the truth, that men can discuss. Emotional truth, and sentimental truth—the Truth of Love or hatred—are not subjects of

human discussion, but of human action. We are limited by our human nature to the discussion of the truth of symbols. But if we admit the existence of God; and also of Spirit in man; it becomes the most absurd violation of the harmony and analogy of the universe, to deny the existence of demons and angels. It is most absurd to suppose that the universe of mind only includes God and man! What is man and his ephemeral existence, as compared with the ages which geology and astronomy lead us almost necessarily to believe in? Was God alone before the days of Adam?

However, it seems to me altogether and entirely credible *a priori* that there should exist a hierarchy of mind two-fold—the one inferior, and the other superior, to man. Any other conception is absurd upon the face of nature—a burlesque upon man's knowledge of the universe, of which this world, and man's history on earth, form so very trifling a part, in time and space! Good and bad Spirits must exist!

It is the first conviction of infancy, of the infancy of the individual as well as of the infancy of the race, that mind or spirit exists! At first, as infants, we suppose a sentient intelligent spirit, with feelings and principles and sentiments like our own, to be the cause of every event and every motion, and then, at that age, spirit is the cause of everything. But it is the act of a fool, if, in avoiding this early error, we rush into the opposite extreme, and say, in the manhood of our thoughts—"there is no God," or "there is no Spirit;" or that "God and spirits have wholly withdrawn Himself and themselves, and that there is now nothing but matter and its never-ceasing uniform laws!"—if we say that "all else is the dream of our infancy, or the weak logic of our youth!" This is

folly greater than the ignorance of childhood; for the hasty and false generalisations of infancy, knowing nothing but its own mind, and of youth, knowing only the principles it has been taught, do not in any wise disturb the fact, of the action of the self-regulating spirit within, or of its own knowledge, from which the hasty induction concerning all action was drawn.

The existence of man's mind—his spontaneity, and his free will and intention, and his power to bear or forbear, to seek or not to seek, to act or not to act, to submit or to resist—is not less certain in the old man than in the young infant! The actual existence of a man's own mind, distinct from, and to some extent, superior to the laws of his body, is as certain at all periods of a man's life as it is at first. The laws of matter become better understood, but they are consistent with, and do not in the least overturn, either the existence of mind or spirit itself, or a reasonable belief in the laws of man's mind and the operations of other spirits.

It was a hasty generalisation, no doubt, of our infancy, that every event, and every sensible action or motion, was the direct action of a mind or intelligence like our own human mind, with a sense of pleasure and pain, and good and evil, in everything. It is equally foolish as children, to beat our toys for hurting our bodies, and as men, to despise the professor, the priest, or philosopher, for having deceived our minds or souls.

Every event is neither a miracle performed by God, nor one performed by an angel or a devil! But does it, therefore, follow that there is neither God, nor angel, nor devil; neither minds that do good nor minds that do evil, excepting only mankind? Men certainly do good and do evil; and we have the priest at one elbow, and the

philosopher at the other ; and the wise man will humbly despise them both, but only so far as, either makes himself, or seeks to make himself, to our minds or souls, the Way—the Truth—the Life.

“The existence of a First Cause—of a God—is,” said Descartes, “as certain as any mathematical problem ;” and the existence of matter as the subject of general laws, which, so far as our own personal experience goes, appear to be invariable under the same circumstances, by degrees becomes also clear and certain, so far as our own and our friends’ experiences extend. Be it so ! But does this experience abolish our first and constant *im*perience within, of the existence of our own mind, and the experience without, of existence on earth of other creatures like to ourselves, and possessing parental and other powers over us for good or evil, and with minds and wills and intentions like ourselves, sometimes good and sometimes evil ? How does the *material* experience of after-life alter the *mental* experience of all our life ? Do not the facts of mind remain as certain as the facts of matter ? Are they not from the beginning and throughout, as Berkeley thought, more certain ?

It is the hasty induction, and self-contradiction, of the materialist and positive philosopher to say, that the existence of mind becomes less certain because our minds have acquired some knowledge of the existence and laws of matter. Nor are all logical and metaphysical principles false because some men have entertained, and been satisfied with, certain false principles. The existence of falsehood no more proves the non-existence of truth, than the existence of matter proves the non-existence of mind. *True* axioms or general principles may be few, but it is self-contradiction to say there are none,

for that is to say—it is true, that there is no truth—a clear falsity in words.

We have the three things presented before us as soon as we have reached years of maturity, each distinct from the other two—mind, matter, and language or action ; and the proper act of the rational man is to study their relations, and not to say, with the ignorant savage, that all is theological ; or, with the presumptuous rationalist, that all is metaphysical ; or, with the fool, that all is material and positive, and that there is no God ! We must combine all three—mind, matter, and language—into one consistent universe ; for that is the proper act of a rational being placed in the centre of such a wonderful creation, partially subject to his body and soul, and wholly subject to his free *spirit* to examine and judge intellectually.

For example, although it may be very reasonable to reject miracles and demoniac agency as the common and ordinary explanation of all the early facts of human history—although it may be very reasonable to search for the physical facts, which helped in the production, or limited the production, of human events—yet to deny the possibility of miracles and demoniac agency altogether, has no foundation either in fact or reason ; and merely amounts to the denial of the existence of mind altogether, or to the denial of the existence of any minds but those of God and living men ! This is the mere insanity, of illogical, self-contradictory, positive materialism.

Why are we to leave this immense empty gulf between the helpless, imperfect, impotent spirit and mind of man, and the all-powerful mind of the one supreme Creator ? No reason can be given for such an irrational conclusion

as that there are no angels and no devils, so utterly contrary to all the analogies of nature; and thus a belief in a hierarchy of minds, of angels and devils, seems to me the only rational conclusion from purely rational principles. There must be a twofold hierarchy of minds—from God, through legions of angels, to a good man; and from a good man down to legions of demons.

For example, what possible reason can there be for any one who believes in the ordinary facts of Grecian history disbelieving in the fact of the oracle at Delphi? And, if there was an oracle at Delphi, can any reasonable man disbelieve the historical fact that it pronounced Socrates "the wisest of men"? or can we disbelieve the fact that Socrates himself believed that he had a demon or familiar spirit whom he could consult, and by which he did, in fact, constantly regulate his conduct, and whose voices he thought he could hear and distinguish, and to whom he attributed the salvation of his life after the battle of Delium, by the voice telling him by which road to fly, and which forbid him to deliberate, as to how he should defend himself on his final trial at Athens! If there was no such a being as the demon of the oracle at Delphi, then each priestess was a rogue; and if there was no such being as the demon of Socrates, then, of course, Socrates was either rogue or fool or enthusiast! But the existence of the oracle, the responses it issued on many occasions, the belief of Socrates himself, and his sometimes, as he thought, successful, and sometimes, as he thought, unsuccessful, attempts to consult his demon, are facts in history just as certain as the existence of Socrates himself.

Plato may be a romance, and Xenophon a forgery, and all Grecian history, in the days of Socrates, a myth;

but till they are shown to be such, rational men must accept such things as facts to be explained—the fact of the existence of the oracle at Delphi; the fact that it pronounced Socrates the wisest of mortals; the fact that Socrates said and believed that he had a familiar spirit, whom he had often consulted, and whose voices he thought he could hear, and said that he had heard; the fact that he tried to cogitate and prepare, before his trial, his last defence for his life, and that on that occasion, as he said, that his demon “expressed its displeasure,” or in fact failed him; and he, being left to his own devices, adopted that most injudicious defence, which mocked his judges, and so contributed to his condemnation! It is impossible to read Plato’s *Theages* or his account of the calm rebuke of Socrates to his young disciple, questioning the existence of the demon whom Socrates consulted, or Xenophon’s account of what passed between Hermogenes and Socrates, and doubt the *belief* of Socrates himself in his demon—in the voices which came from his demon, and whose warnings he said he had so often heard, and which, he thought, had contributed to make him the wisest of mankind—it is impossible, to believe that all these sensible and reasonable people were engaged in some foolish, enthusiastic, or other conspiracy to deceive mankind.

But the belief of Socrates and Plato and Xenophon, does not bind our belief. Certainly not! Nor does the general belief of the Greeks in the oracle of Delphi bind our belief. But the belief of the Greeks and the belief of Socrates are quite as much historical facts as the reign of King James over England, or the burning of witches in the days of Bacon.

They are facts to be explained. The positive philo-

sopher offers his explanation, which is, that though the belief existed, there was no foundation for it but the *infantile ignorance* of Socrates, and the *fraud* of the priestess at Delphi and her accomplices! and to support his solution he appeals to *modern* experience, or denies the existence of mind altogether, or says, "Well, if there be a Creator, He has wholly withdrawn from all interference with the laws of matter, and never at any time permitted angels or demons to interfere with the course, of human affairs, or of any man's mind!" Socrates, forsooth, was an enthusiast, and deceived himself, and was also deceived by the priestess of Apollo and her confederates; and though Plato reports the experience of Socrates correctly, and evidently believed like his master, yet the reason and experience of Socrates and Plato, of Athens and of Delphi, are set aside by the reason and NON-experience of Comte and Strauss and Buckle, and of Paris and London! But how can *non*-experience set aside experience? And are the thoughts and logic and philosophy of Comte or Mill and Buckle in any way superior to the thoughts and logic and philosophy of Socrates and Plato? Will the verbiage of the "*philosophie positive*" out-reason the condensed reason of Plato's republic? But authority is out of the question when the question is not of faith but of reason!

If we admit, therefore, the existence of Mind as a thing and class of things, distinct from matter (and to deny it, is to deny the constant internal opinion and experience of all mankind in general), then it is absurd and unreasonable to set aside the calm and dignified reason and experience of Socrates and Plato for the empty verbiage and *non*-experience of positive philosophy; and though it may not suit the objects of the

hierarchy of evil spirits to exhibit themselves or their powers, as they did in the days of Socrates, by oracles and by voices exciting the worship and reverence of mankind to themselves and those they inspired—and although the progress of Christianity has put to flight some open exhibitions of demoniac power over man, and the powers of darkness may have lost some of their terrors, yet the demon who taught Socrates and Plato the false doctrine that “*Virtue is a kind of knowledge*” may still make secret verbal suggestions to the human mind, and strive to reach his end, rather by secret subtlety over man’s intellect than by open exhibition of material force and power!

But, it will be said, “Do you want us to believe in witches and witchcraft, and in demons and all demoniac possession, and in Saint Dunstan catching the devil’s nose with a pair of tongs, and all the rest of the well-authenticated miraculous history of the last three thousand years, down to the last apparition of our Lady of Salsette?” I answer, that I want you to exercise your reason, and not to rush hastily from one foolish extreme into the opposite folly—both equally stupid and irrational. I want you to believe that there are spiritual influences and spiritual powers beyond and superior to all we can know of matter and of man, and neither to be feared nor despised by the God-fearing man—Spirits, powers of light and powers of darkness, without which man’s state on earth is, and must ever remain, an inexplicable and irrational enigma. For evil exists, and God is not the author of evil—that is a clear contradiction! And man, as God’s creation, will not explain the evil that exists upon earth; nor can we reasonably suppose either that the first man was the first good being

who fell into evil, nor that the first man was created evil by God. And superstition and fanaticism with the false reasoning of Socrates and others, may be all equally the inventions, and due to the suggestion, of evil spirits more powerful than unassisted man,—than man unassisted by God!

In fact, I think it wholly unreasonable to disbelieve in the twofold hierarchy of good and evil spirits; and I think it more reasonable to believe, not only in the hierarchy of good and evil spirits, but that in the age of Buddha, six hundred years before Christ, the devil began to anticipate the intention of the God of love to pour His holy spirit without measure on a man, Jesus, who, being thus equal with God, should die as a man for the world, in order, by the greatness of His love, to constrain men to yield up their powers unto God; and, therefore, as I conceive Satan anticipating the life and death of Jesus, may have inspired the intellect of Socrates to take such a course as might lead to his own death for blasphemy against the gods of Greece, so as if possible to inspire the human *intellect* to set itself above and in opposition to the God of *love*, or in substitution for love. The intellect of Socrates is still the leading intellect of profane wisdom, and he is still the chief leader admired by the votaries of reason, and is now placed in opposition to and comparison with Christ Himself; and one of the last strongholds of Satan is the calm reason and dignified intellect of Socrates, whom, for my part, I believe to have been inspired to take the course he did by Satan himself, and that the demon of Socrates was the great arch-enemy of mankind. There is nothing impossible or incredible in this; which merely supposes voices whispered into the ear of Socrates.

But, in fact, a miraculous suspension of the ordinary laws of matter for one or a few occasions is always *possible* on the lowest principles of mechanism; but its *credibility* depends on different principles. If all truth be founded on our own general experience and induction, then it is certain that what is contrary to our general experience, and therefore to all our induction, is contrary to truth. And as every individual miracle is necessarily contrary to *general* experience and all induction, then it is quite certain, upon such principles, that every miracle is contrary to truth; and no amount of historical or other testimony could ever possibly establish one solitary miracle, even to ourselves. Our own solitary experience even, of one single instance which we cannot repeat, ought to be set aside as contrary to general induction.

This style of argument has troubled many weak souls in many ages and times, and is now taught as philosophy at our universities; but nothing is more fundamentally false on the general principles of reason. No truth whatever can be founded on induction; and the constant observation and experience of ten thousand years before, and of ten thousand years after, would not justify us in positively denying one single event, however contrary to such uniform experience for twenty thousand years.

Even if the universe were a mere piece of mechanism, governed by the invariable laws of solid matter and of numbers; by the ordinary laws of mechanics, the maker of the machine is able to introduce a solid material stop at the beginning, which will permit a law to prevail for any number of millions of times, then produce one single exception, and then allow the old law to prevail

again invariably for ever and ever to the end of the machine. So that, according to the most grovelling laws of human machinery, the sun might stand still for twelve hours or for twenty-four, or a man might be born of a virgin once in five thousand years or five million years, and never such another event take place either before or since!

So also the maker of the machine could and might introduce certain stops at the beginning which would occasion any certain number of violations of a law at irregular intervals, within a certain period of the machine's work, and yet never before or afterwards, during the existence of the machine, in anywise interfere with the operation of the general law. So that a single miracle or any series of miracles might, on the merest mechanical and physical principles of solid matter, occur in violation of the general laws of nature in a certain age, and never again occur, either before or afterwards, through countless ages of time!

All this, I say, is evident to every man of competent mathematical and mechanical instruction, on the coarsest principles of material and mechanical necessity; and *is* true of nature, if we assume the universe to be a mere material machine, made by a maker. To deny this merely exhibits the mathematical and mechanical incapacity of the reasoner, his intellectual incompetence to discuss the question not only as a philosopher but as a mechanic! But in truth, machinery is but a coarse method of effecting the will of an imperfect mind, which can only act according to laws superior to itself, and thus according to laws which limit its powers. But the act of a machine is, in all respects, the act of its maker and director.

However many mechanical contrivances may have been interposed or caused to exist between him and the result, the machine and all its productions are the productions of its maker; and these mechanical views of a universe governed by invariable laws, or what is called "the universal reign of law," are only hazy, confused, and ignorant methods of striving to hide the denial of the existence of minds or spirits inferior to God, but yet possessed of *free will* and of certain powers over matter, and capable within their limits of suspending the ordinary laws of material nature.

In fact, the universal reign of unchangeable law is merely another logical form of materialism, and is an attempt to deny the existence of Mind or Spirit with free will, and to make out the universe to be a large self-regulating mill, and the Miller departed to a far country, and altogether indifferent to its fate, and responsible for all hitches; which of course are not to be deemed evils, or produced by any inferior free spirits, like devils or men, but designed obstructions, intended by the Creator Himself to produce ultimately a more *useful* kind of web! Such is the stupid but popular philosophy of the day.

But wisdom is justified even of her mechanical children; and no man possessed of a competent knowledge of mathematics and mechanics can suppose it antecedently impossible for an all-powerful Creator to construct a machine which should at a certain time, on one, two, or more occasions, as He had originally arranged, stop the earth for a day, or raise a dead man to life, or make a few loaves and fishes swell into sufficient food to give a solid meal to five or seven thousand persons, and the like never again to occur during the continuance of

that machine. There is, and can be, no sort or kind of antecedent impossibility whatever, in the question of miracles, even on pure mechanical and materialistic principles.

Those, therefore, who admit the existence of matter only, and its universal laws, and their Maker, are guilty of a mechanical self-contradiction, if they deny *a priori*, the possibility of any one or more miracles—violations of all previous and succeeding laws—occurring in any age, or within any space or time. If they only possessed sufficient mechanical and mathematical science they would know better, and perceive their self-contradiction or violation of the necessary laws of mechanical Truth.

There can be no law to prevent a machinist introducing a stop into his machine from the beginning which no looker-on at the results could ever detect from its visible working for millions of ages! Every framer of an equation can introduce a constant which is a limit; and a prime number which is itself a miracle may turn up at any time unforeseen by all except by Him who knoweth all things, and all prime numbers to infinity. The *possibility* of miracles is therefore certain on the strictest mechanical and logical principles—on the lowest principles of rational materialism. If we admit the existence and intelligence of God the Creator, we must admit His superiority to men, matter, and to the ordinary laws of matter which have been created and framed by Himself.

Mr Babbage, to whose writings I am indebted for this view of miracles, has told us in his Chapter on Miracles* that, on the mechanical principle of machinery, of wheels, and cogs, and stops, &c., of solid

* Passages from Life, &c., p. 387.

matter, a calculating engine could be framed in which it would be possible so to set it, that it should proceed, "1st, For any given time according to any given law; 2d, That at the termination of that time it should cease to act according to that law, and should commence according to any other given law that might be devised, and then continue to act according to this new law for any other given period; 3d, That this succession of a new law coming in and continuing during any devised time, and then giving place to other new laws in endless but known succession, might be continued indefinitely." He applied this to explain, according to law, the successive creations of life as developed in vast epochs of geological time. And he also tells us that it was not necessary that these laws should be all different—

"But the same law might, when the machine was set, be ordered to reappear after any desired interval; and such a change of law might be ordered to take place only on one or any limited number of occasions, and the old law might be restored, and continue for ever after.

"Thus, we might suppose an observer, watching the machine, to see a known law continually fulfilled until after a lengthened period, when a new law has been appointed to come in. This new law might, after a single instance, cease, and the first law might again be restored, and continue for another interval, when the second new law might again govern the machine as before for a single instance, and then give place to the original law. . . . Thus, that one or more men, at given times, should be restored to life, may be as much a consequence of the law of existence appointed for man at his creation as the appearance or reappearance of the isolated cases of apparent exception in the arithmetical machine."

"But the workings of machines run parallel to those of intellect. The analytical engine might be so set that, at definite periods known only to its maker, a certain lever might become movable during the calculation then making. The consequence of moving it might be to cause the then existing law to be violated for one

or more times, after which the original law would resume its reign. Of course, the maker might confide this fact to the person owning the engine, who would thus be gifted with the power of prophecy if he foretold the event, or of working a miracle at the proper time if he withheld his knowledge from those around him until the moment of its taking place.

“Such is the analogy between the construction of machinery and the occurrence of miracles.”*

The fact is, that on the coarsest mechanical principles of considering the universe as an ordinary machine known to its maker, and left to work itself down, *a miracle must be always possible.*

Mr Babbage gives a further illustration, which I think may be developed much further than he has explained it, even as far as to show the possibility at least of a prophet saying, with true and visible effect, “in the sight of Israel,—‘Sun, stand thou still upon Gibeon, and thou, moon, in the valley of Ajalon,’ and the sun stood still, and the moon stayed until the people had avenged themselves on their enemies. So the sun stood still in the midst of heaven, and hastened not to go down for a whole day; and there was no day like that before it or after it.”† “Vengeance is mine, saith the Lord;” and men are but insects, to fulfil His decrees.

But Mr Babbage says:—

“A further illustration may be taken from geometry. Curves are represented by equations. In certain curves there are portions, such as ovals, disconnected from the rest of the curve. By properly assigning the values of the constants, these ovals may be reduced to single points. These singular points may exist on the branch of a curve, or may be entirely isolated from it; yet these points fulfil, by their positions, the law of the curve, as perfectly as any of those which, by their juxtaposition and continuity, form

* Passages from Life, &c., p. 390.

† Joshua x. 11-14.

any of its branches. Miracles, therefore, are not the breach of established laws, but are the very circumstances that indicate the existence of far higher laws, which, at the appointed time, produce their preintended effects."*

In short, every miracle, in place of terrifying, should lead us, in humble confidence in God and in His providence, to step aside as Moses did, and examine the fact like sensible men, with reverence and attention.

But, for example, in order to understand the laws discovered by Kepler and Newton of the earth going in an ellipse round the sun, we must conceive the centre of gravity of the earth attached to the centre of gravity of the sun by an elastic spoke of a wheel, or radius-vector, or elastic string, sometimes shorter and sometimes longer, attaching the earth to the sun, so that when the earth moves fast it was short, and when it goes slow it was long, so as to fulfil the law of equal spaces in equal times; for the earth is sometimes fast and sometimes slow, as compared with the sidereal clock.

Now any man can understand and appreciate this fact, that the earth, to use and apply a well-known illustration, is to the sun just as a pea is to a globe two feet in diameter—or as a mere pin's head to a cab-wheel or a barrel—so that what seems a very mighty and very extraordinary thing to the pea or pin's head may only be a very trifling thing indeed, to the wheel or barrel. Suppose now, for example, that the centre of gravity of the wheel, or barrel, were only moved round the breadth of a pea; that would matter very little to those animals, if any, who happened to live on the wheel, or barrel; whilst the same movement, to those animalculæ who

* Passages from *Life, &c.*, p. 391.

might live on the pea, might seem a very great change, if affected by the movement—a very wonderful and miraculous alteration!

Now the centre of gravity of the earth follows the centre of gravity of the sun, as if attached to it by this elastic cord, and goes round it in an ellipse so nearly like a circle that if it were drawn on this page, the reader would not be able to detect, by his eyesight alone, that it was not a circle. Now suppose that the centre of gravity of the sun were to move and make a small circle in twenty-four hours, then most certainly, so far as we know at present the mechanism of the heavens, the earth would in its orbit also make a precisely similar circle in the same twenty-four hours, and would return to its old orbit again as soon as the centre of gravity of the sun returned to its original position. And if the reader thinks that the small loop in the earth's orbit is not or might not be strictly and mathematically in every point an ellipse round the centre of gravity of the sun, he does not yet understand the mathematics of curves, nor the composition of motions!

But I say that the effect of such a slight movement in the centre of gravity of the sun, if it revolved so slightly as I have described—that is, just as it were the movement of a cab-wheel moving a pea's breadth—if the sun so moved in twenty-four hours, properly adjusted to the earth's diurnal rotation—I say the effect on the earth might or would be to make that day upon the earth twenty-four hours in place of twelve, and the night twenty-four hours in place of twelve; for the same face of the earth might be constantly turned to the sun for the whole twenty-four hours, if the movement of the

centre of gravity of the sun were adjusted in proper relation to the earth's daily rotation.

Nor would such a movement have any other effect on the earth itself, so far as we know, beyond making the one day twelve hours longer, and the one night twelve hours longer than usual, except only the effects possible on the trade-winds and the tides, and on the currents of the atmosphere and ocean—not appreciable away from the ocean. And I say further, that the apparent effects on any particular point of the earth's surface (let us say in Judea) might easily be, to make the sun apparently stand still in the heavens over Gibeon, and the moon apparently stand still in the valley of Ajalon.

With the utmost respect for the reader, I say that if he doubts the possibility of such an event (on the assumed hypothesis of the centre of gravity of the sun making this small revolution in twenty-four hours) he has not yet properly understood the discoveries of Kepler and Newton, or the effect on a curve of altering the constants of its equation! Every point of such a loop in the earth's orbit might and would still be mathematically part of an ellipse round the centre of gravity of the sun, and would mathematically, be precisely similar to all the rest of the earth's orbit; and no change whatever might have taken place upon the earth itself, so far as we know, except in the tides and currents of the atmosphere and ocean, which would be quite inappreciable in the land of Judea.

The simple fact is, that we know nothing at present of the *proper* motions in space of the sun and fixed stars, though the time seems fast approaching that we shall know more, if it be true, as alleged, that the spectrum analysis has been applied to measure the motion of the

dog-star Sirius, and has shown it to be travelling more than twice as fast as the earth in its orbit.

It is at present becoming more and more certain, that the sun, with all its planets, is travelling through space, possibly round some distinct centre; and as we know nothing whatever of the movement of the sun in its course, it is idle to speculate on the possibility of its centre of gravity making a revolution so trifling as that of a few thousand miles in twenty-four hours. But the thing is quite possible, so far as we know; and in such a case, if the revolution was duly arranged in proper relations with the earth's daily motion on its axis, the sun might appear to stand still in the heavens for the period of a whole day.

And the same cause which might make the sun appear to stand still might or would make the moon also appear to stand still; for it would not in any way alter the relations of the sun, moon, and earth, which, by the ordinary law of the compositions of motions, would still appear and be at the same distances from each other; and if the sun stood still, the moon also would appear to stand still. And if any man doubts the possibility of this, I can only here say that he has not properly studied the laws of equations, and the laws of the composition of motions; or pretends to a knowledge, which he does not possess.

Although, therefore, the materialist or positivist can be refuted on this subject, on his own materialistic principles, and is, in fact, on this, as on other subjects, utterly self-contradictory, according both to the laws of logic and of mechanics; and in fact, while admitting the universe to be a machine, he yet at the same time denies to it the ordinary laws of mechanics; yet his funda-

mental error, we say, is in denying the existence of that supra-sensual world of spirits, which are by their creation free, and at liberty to choose good or evil; and are, within the limits assigned to them, capable of resisting even the will of Him who made them. The fundamental error is, the denying the existence of the spiritual world.

If we are Deists, and believe in a Creator of this wonderful universe as a Being possessed of intelligence; or if we believe at all, as rational creatures must, who look at the world around them, we must believe in an intelligent First Cause. If our own intelligence forces us to believe in the power and wisdom and goodness of God the Creator, who made such a universe of beauty and utility as this is; and we hesitate about the origin of evil and of all the misery on earth, and are perhaps inclined to attribute it to ignorance and defects of intelligence in man, which will hereafter disappear; we are guilty of self-contradiction in supposing that, the evil and misery that exist are the creation of a Being, or the results of creation by a Being, all-good, all-wise, and all-powerful? The two notions are self-contradictory! God cannot be the author of evil; and reason alone would necessarily lead us to a species of Manicheeism, or a belief in a dual Godhead—a principle of good and a principle of evil—light and darkness—Ormuzd and Ahriman contending with each other—the doctrine of Zoroaster; the worship of Light and fear of Darkness.

But if we say, yet there is a principle of good even in things evil, and the good will work out the evil, yet how came the evil there upon Deistical principles? Why did not an all-powerful, wise, and good God make all things perfect from the first? Nothing explains this, except the Christian principle that "God is love;" that

His Spirit is love; and the revelation of Christ—that as such Spirit, God loves and desires worship in spirit and in truth. Yet the fear of God, is the beginning of wisdom!

The question of the origin of evil, which has appeared and still appears to many so difficult and mysterious and inexplicable, appears to my mind, in one sense, soluble by a very few simple considerations. Free will or liberty is the origin of evil—not the free will of man alone but the free will of all spirits. *Free will* is the essential characteristic of all mind or spirit, just as *necessity* is the essential characteristic of all body and matter.

It is a contradiction in the nature of things to suppose pure mind or spirit without free will; and it is a like contradiction in things to suppose matter not subject to necessity! God cannot work contradictions; He cannot create and uncreate at the same time; He cannot be the author both of order and confusion. A mind would not be a mind if it did not possess free will. A spirit would not be a spirit if it were not free. It is absurd and self-contradictory to say or think, that God created evil, or even that He, properly speaking, permits evil. He bears and forbears, and is long-suffering towards evil. He loves the evil-doer while punishing his deeds; but the free spirits that God has created, have themselves created all the evil that exists.

To create a spirit with a bias towards good is to create a spirit which is not properly a spirit—a spirit which is not free; a spirit which could not possibly worship in spirit or in truth. But God seeks such unbiassed worshippers! and of necessity to avoid a contradiction, God must create free spirits.

The first occasion on which Jesus is reported, to have openly announced Himself as the Messiah, He proclaimed this great truth—Dusty, and wayworn, and thirsty, and tired, He sat by the side of a well of *water*, that type of the Holy Spirit, and said to a guilty woman, “I that speak unto thee am He—the Messiah.”—“God is a spirit! and they who worship Him must worship Him in spirit and in truth.”—“The Father seeketh such to worship Him.” But if God created a spirit with a bias to the truth, or to things good, such a spirit could not possibly worship in spirit and in truth. Its worship would be necessarily biassed and mechanical, good or bad, according to its original bias. But if the intention of God is to overcome evil with good; to constrain by the greatness of His own love, not a poor biassed machine, but a free and noble spirit, to love Him and to worship Him in spirit and in truth, with all its heart, its soul, its intelligence, its strength—then a biassed spirit would contradict that intention.

The truth of a spirit with a bias, and not perfectly free, would not be its own but its maker’s truth—a mechanical truth—the truth of a machine working in its appointed groove; and however good, and beautiful, and useful, perhaps, its truth might be, yet it would not be spiritual truth, but mechanical truth—material truth—in comparison with pure mind, utterly worthless and contemptible. For a pure spirit must be a free and a true spirit, and must have freely chosen its objects of worship—its truth, and goodness, and beauty—must have chosen them of its own free will, and wholly unbiassed by any force but love, which has no material force, and yet is spiritually the greatest force of all, for God is Love.

There is no difference in principle between a man for some sixty years violating the laws of God, and visibly preventing the good from prevailing on earth—a fact which all or most men will from history readily admit to be possible—and a devil for six thousand years invisibly violating the laws of God, and so delaying the accomplishment of God's good intentions amongst mankind. The one is visible, the other invisible; but both are equally *credible* and certain.

Now, if the origin of evil be free will, then the contest against evil, can only be effectually carried on by man, by his submitting his will to the will of God, as a little child submits to a tender parent, in full love and confidence. The *fear* of God is the *beginning* of wisdom; and its full fruition is that child-like *love*, which casteth out fear!

Matter is the type of mind, and the human body is the type of the human soul, and the human soul is the type of Spirit. The matters, that have least matter in their composition, like the imponderable fluids or gases, of which light, heat, and electricity are the chief phenomena, are those which have the greatest and most extraordinary powers, and yet are wholly independent of gravity or weight. The less the weight of the matter is in nature, the greater is the power which it possesses. And so, I think, the body is the type of the soul; and the nourishment of the body is the type of the nourishment of the soul; and the life of the body is the type of the life of the soul; and the deadness of the body the type of the deadness of the soul.

A child enters into this world, and its body must first breathe with its lungs the air, the atmosphere, the breath, the spirit of heaven. Its breathing is a

burning or combustion—a fire which preserves its animal heat, which is the life of the body; so the Spirit of God is the true life of the soul. With its lungs the child imbibes oxygen, and with its stomach it imbibes liquids and solids, the three forms of matter—solid, liquid, and aëriform. The solids must become liquids in order to nourish the body, and the liquids must be mixed with the blood, impregnated by the air in the lungs, before they can be converted into living muscles and tendons, and give force and power to the body. But the gases of evaporating spirits and ethers, and possibly of all liquids, quickly pass through the animal tissues, and stimulate or nourish the nerves—just as water and wine give immediate relief to great exhaustion by their vapours, as I conceive, penetrating the tissue of the body. The analogy might be carried further; but the ponderable and visible Body is the credible type of the imponderable and invisible soul; and the invisible soul is the material type of the immortal Spirit.

But the *possible* merges or is lost in the credible, and the *credible* merges and is lost in symbolic *truth*, which can be weighed or appreciated and understood, only by Spirit in the soul; nor is there anything unreasonable or incredible in supposing and believing that the first true birth, and constant nourishment, of the soul, only begins and continues or grows with the in-breathing of the Holy Spirit of God—that the combined visible and invisible act and action of—being born of water and the Spirit—where water is the type of the Holy Spirit, and its appointed sign and symbol, chosen by Christ Himself, may be the operative symbol intended by God to impress the souls of all mankind with the

idea of that mental purity required for worship in spirit and in truth, combined with the seeking first the kingdom of God to be duly and effectually exercised over the soul—using as its first petition, “Thy kingdom come.”

So long as the soul continues to breathe the Spirit of God its life continues, and “God is in us of a truth.” And our spiritual meat and drink should be to do the will of our Father in Heaven after the pattern of our great exemplar, who said, “My meat is to do the will of Him who sent me, and to finish His work.” The in-breathing of the Holy Spirit through the words of Christ, and the very eating of the flesh and drinking of the blood of Christ Himself through His own appointed symbols—for He said, “My flesh is meat indeed, and My blood is drink indeed;—*My words*, they are spirit, they are life:—It is the spirit that quickeneth, the flesh profiteth nothing”—Here, and here alone, it is at least possible and entirely credible, that there may be found the true nourishment of the soul upon earth by the appointed signs, the symbols, the words of Christ Himself, appointed and given to us for the inward strengthening and nourishment of the soul in its voluntary approaches towards God—ever more ready to give than we are to ask. Such ideas of the *reality* and powers of Divine symbols are entirely possible and credible on abstract principles of reason to him who believes in God and in the body, soul, and spirit of man.

But the only origin of evil, as I conceive, is free will, and the contest with evil can only be effectually carried on by submitting and subjecting our own wills to the will of God; not in our own *strength*, but by seeking the promised aid and assistance of the Holy Spirit, to

be sought for in the words, signs, and symbols given to us by Christ Himself, used and applied not in the *letter* but in the *spirit*.

All this presents little difficulty to any true Christian. But let us beware! There is one sin which hath never forgiveness, neither in this world, neither in the world to come; and that is, "the speaking a *word* against the Holy Ghost"—the blasphemy which confounds the outward sign or symbol with the Holy Spirit itself, of which it is a sign—the abusing and the degrading of the very symbols given by the Divine Spirit, into objects of superstition, into idolatry, and blasphemy—that seems to me, speaking and using the very words which the Holy Spirit itself has given, against the Holy Ghost Himself. Thus, when we take the words, the signs, and symbols—the outward visible signs only—and say, Behold these! they are divine! these! they are God! and thus confound the outward visible forms and symbols with the inward spirit itself symbolised—the Holy Spirit—God Himself—that seems to me the most dreadful of all errors—idolatry or blasphemy.

Is not this speaking the very words of the Spirit against the Spirit Himself? We reason in our hearts with the very signs, and symbols, given by the Holy Ghost Himself, and convert them into filthy idols, to be worshipped in place of God, and producing blasphemy against the Holy Spirit; by making not only the words of God of none effect, but by making them the very instruments of Satan himself for the destruction of souls. I say, therefore, let us beware! for this is to reason in our own hearts with divine symbols and outward forms, and to speak blasphemy against the Holy Spirit in His own signs and symbols, and thereby

to confound the *letter* of our own outward symbols, and ceremonies, with the Holy *Spirit*—with God Himself.

Prayer, secret prayer to God, is perhaps the only source of sufficient spiritual force to escape such dangers; and as it is the appointed means for our obtaining that Holy Spirit which the Father has promised to give to them that ask Him—"If ye, being evil, know how to give good gifts to your children, how much more shall the Heavenly Father give the Holy Spirit to them who ask Him"—so it seems the only means of guarding ourselves from abusing those holy symbols which He has Himself ordained in the Church, which He has founded.

But it seems to me clear and manifest that, if God seeks worshippers *in spirit and in truth*, then it was a matter of necessity that He should create spirits perfectly free to choose the good or the evil at their pleasure, for the freedom of the will is clearly essential for worship in spirit and in truth. And God, by desiring such worship, has laid such necessity on Himself to create free spirits; and the restraints of a material body or material soul do not in any way prevent the freedom, of the will—or of the spirit—any more than a current interferes with a man's swimming. It interferes with his progress, but not with his efforts. So the spirit may be willing, though the flesh is weak, and our will is free, though our actions are limited.

But man's free will is a different question from the origin of evil, which we may reasonably suppose to be caused in the beginning by the acts of one or more of those inferior spirits, created by God, free to choose either the evil or the good. Some or one of these, as men do every day, may have converted the very powers bestowed by the goodness of God to the promotion of

evil. The powers of such evil minds may possibly, and credibly, exceed anything we have any conception of, and the Devil may be very well able to say to every man, in and by temptations, according to his natural capacity, "All the kingdoms of this world, and the glory of them, will I give unto thee, if thou wilt fall down and worship me."

And if the Devil can foresee the course of human affairs for much less than six hundred years, he can certainly make this promise, and could fulfil it, although still subject to God's laws. And yet he may have no power over the humblest worshipper of God in spirit and in truth. He may be able to bestow riches and power and honour and worldly prosperity on him who is willing wilfully to deny the truth, which he knows in his heart, or to follow the paths of worldly utility and expediency against his better conscience—and if it were not so, bad men could not acquire worldly success; but his powers are limited in this world and its affairs, and the time of his end on earth is drawing nigh.

But the man who thinks that his efforts on behalf of the good or the true should be rewarded with worldly honour or power is evidently in truth setting this world above the next, and loving it more than God and His cause, and forgets that his poverty, obscurity, and worldly misery may be one of the very instruments of God Himself for the promotion of God's own ends.

The notion, in fact, of making the best of both worlds, and of doing good, *from the motive* and for the purpose of obtaining worldly rewards, is in fact inconsistent with God's true kingdom, in the heart; which kingdom is not of this world, but is "*within us*," and is not material but mental and spiritual. Such ethics are

the ethics of utility and expediency—the worldly ethics of the Body, and not the spiritual ethics of the Soul.

Liberty therefore, the freedom of created spirits, is the true source and origin of evil! Without liberty there could not possibly be worship in spirit and in truth; for spirit necessarily implies freedom, and truth necessarily implies wisdom. If God did not create free intelligence—the spirit free, or capable of liberty, and intelligent, or capable of truth and wisdom—He could not possibly have those worshippers in spirit and in truth; which Christ declared that God desires or seeks. And evil, therefore, as I conceive, is caused, not by God, but by the free spirits which God no doubt created pure, but some of whom have fallen from their first estate of purity!

Matter is the limit and restriction which God has placed upon spirit; and true faith renders all spirits (so long as the faith is true) independent of matter and all its laws, for its laws do not exist to the truly faithful, so far as spirit is concerned. Spirit is free from the laws of matter, which only apply to matter, and not to spirit. But the union of matter and spirit in one person, limits the powers of the spirit, but does not in any wise interfere, with spiritual freedom within those limits.

If we had faith as a grain of mustard-seed, it is perfectly *possible*, according to all that we know of matter, that we could violate all the laws of worldly matter, and command a mountain to depart and be cast into the sea, and that it would obey us. But faith in matter is opposed to faith in mind; and while we have bodies, and exist on earth, we cannot deprive ourselves altogether, of faith in matter, which is part of ourselves, for it involves faith in our own material existence, and it

is self-contradiction of our own bodily existence, to deny the existence of matter.

But nothing that we know or ever can know of matter can ever render it absurd, or impossible, to think that the matter which might be condensed into a grain of mustard-seed, or into a pin's head, might not be capable of expanding beyond the limits of the universe of light, and be as superior to the powers of the known imponderables — light, heat, electricity, and magnetism — as they themselves are superior to material weight or gravity, or as a stroke of lightning is superior to the blow of a hammer ! There is nothing absurd or inconsistent with all we know of matter, in supposing that *human faith* may be a matter, as superior to electricity as electricity is superior to gravity, which can only produce a species of contact, but leaves matter itself still impenetrable or unpenetrated. Thus, whilst electricity can enter and penetrate between the particles of matters themselves, so human faith perhaps might be conceived to be a matter, which could penetrate between soul and body, between ponderable matter and electrical matter, or between soul and spirit, and able to separate all matter into its original elements — just as electricity penetrates the mass of solids, and can divide water, or any compound matter, into its component simples.

There is nothing absurd, even in a materialistic point of view, in such a materialistic conception of human faith as being a diffused matter, as superior to the laws of imponderable matter, as electricity itself is superior to the laws of gravity and to some of the laws of chemistry, or chemical affinity ; and the possession of the weight of one grain of human faith or such matter might make a man master of the world.

At present, the imponderable fluids or fluid, of light, heat, electricity, and magnetism, possess no appreciable matter that we can measure ; and yet they are, or it is, the most powerful and penetrating of all matters, and are therefore the best types of pure mind or spirit. Why should not the human soul be organised electricity—and human faith itself, a matter, infinitely more powerful than electricity ?

We know as a matter of physiological fact, that the human mind or will can send a current of electricity through the bodily muscles which will enable those muscles to bear a strain which, immediately after death, would tear them asunder—that is, the human will shows itself superior to the laws of cohesion and gravity in its own person, and in its own bodily and material organisation. That alone is a miracle, a suspension of the ordinary laws of ponderable matter in the human body by the will of the human mind !

Fanaticism, enthusiasm, the spirit of party, of sect, of nation, are but the miraculous government of matter by mind ; and they have often set at naught and violated some of the ordinary laws of matter and of human organisation and life. He is but a poor ignorant philosopher and statesman who ignores these things, and thinks that mind is wholly subject either to the laws of matter or the laws of life and organisation. When the proper moment and motive come, spirit is superior to them all, and can set all material calculations at defiance, and can set aside all the laws of ponderable matter !

It is only materialistic ignorance, or want of faith in mind, which can ever doubt these truths. Those who take to the sword shall perish by the sword, whenever the advent of some *principle* of mind greater than that

which led to the adoption of the sword shall make its appearance upon earth! While *mental* principles are equal, God is like gravity on the side of the great battalions; but when the *mental* principles are *not* equal, then the great battalions will find God not on their side, and one man can drive a thousand before him! And “nothing shall be impossible to him that believeth.”

But when roused by falsehood and fraud, or wrong and oppression, we rely no longer upon any arm of the flesh, but trust ourselves to God alone, and feel our faith and our power increased, we may well call to mind the words of him who first took to the sword on behalf of his Master, and nevertheless, only a few hours afterwards, denied Him thrice, yet lived to write words which should be engraved on every Christian’s heart, “Submit yourselves to every ordinance of man for the Lord’s sake,”* &c.

Now, the simple truth is, that the laws of induction, which are the laws of observation and experiment, do not apply to the suprasensual world—to the world of spirits! It is confounding matter and spirit to say or think so. It is logical confusion; it is asking that the invisible and insensible shall be at the same time visible and sensible. Matter is visible and sensible, and open to observation and experiment which may be repeated; and the laws of induction give us very good rule-of-thumb guesses as to its nature and properties from time to time. But spirit is wholly invisible and insensible—incomprehensible—and not open to observation or experiment in general, but only to individual and special intuitive *imperience*, from which no general induction can possibly be drawn for any human being other than

* 1 Pet. ii. 13-20.

the individual himself who has possessed such special intuitive *im*perience, affecting Emotion, not Intellect.

What is spiritual can only be spiritually discerned ; it cannot, from its nature, be subjected to any general observation or experiment by others than the individual himself. If I was to say that an angel descended last night into my bedroom, and spoke to me, in the form of a dove, or man, what can any other man say to disprove it? If we ourselves have never *im*perieced spiritual power or spiritual weakness, spiritual sympathies or spiritual antipathies—either wilful power in ourselves over other men's actions, or involuntary submission in ourselves to others, or to their influence—then no possible observation or experiment can exhibit to us the wills or spirits of other men in spiritual action, or any other spirit than the spirit which men or mankind exhibit in their history and their actions, the spirit of man—humanity and inhumanity. By our own want of faith in mind and spirit we are self-condemned to be materialists, or, in modern language, rationalists. But notwithstanding, spirit does exist, and in ourselves.

The fact is, also, that if inductive philosophers believed in their own doctrine of truth being established by induction, from numbers of instances they are bound to believe and accept the grossest forms of witchcraft, of apparitions, and of miracles, of the most offensive and absurd description, happening in all ages of the world ! The inductive philosopher, in fact, has, on his own principles, no satisfactory answer to make to such language as the following :—

“Those that can believe that all histories, up till 250 years ago, are romances ; that all the wise and learned up till that time had agreed to juggle mankind into a common belief of ungrounded

fables ; that the sound senses of multitudes of men may deceive them ; that human laws are built on chimæras ; that the gravest and wisest judges of the most civilised nations, up till that late period, have been murderers, and the sagest persons fools or designing impostors—those that can believe this heap of absurdities are either more credulous than those whose credulity they reprehend, or else they have some extraordinary evidence of their own persuasion—viz., that it is absurd or impossible that there should be a witch or apparition ! ” *

How does the present fact render the past impossible or incredible ? We perceive no demon now, therefore Socrates did not ; we hear no voices now, therefore Socrates could not hear some, though he himself, in the simplest possible language, tells you the occasions on which he did hear, and also the occasions on which he did not hear, his familiar guide, instructor, and friend ! But, in fact, this is not reason, but merely wilful dogmatic presumption, that spirits do not exist.

The materialist, the purely inductive philosopher, the rationalist of the present age, are in a state of logical self-contradiction and confusion on this subject of miracles. How can the materialist deny to the Almighty the ordinary powers of the mechanist over solid material mechanism ? Or how can the *inductive* philosopher deny the obvious and necessary induction from all the miracles, in all ages, recorded in the 25,000 lives of saints contained in the Bollandist collection, for example, besides all those of the Bible and of antiquity, because he himself has never experienced a miracle or an apparition ? This is not induction, this is not even rationalism, but it is mere irrationality, logical folly, and dogmatic presumption ; or else it is that

* Glanvil's *Sadducismus Triumphatus*, p. 4, quoted. Lecky's *Rationalism*, p. 128.

judicial blindness which necessarily follows the adoption of false fundamental principles. But the *deductive* philosopher can proceed, if needful, to sift the wheat from the rubbish, the truth from the superstition, and try every alleged miracle, not only as a question of evidence but of spiritual intention, by the mental laws of truth and goodness. When, therefore, it is thought and said that—

“ Having once recognised that the condition of the material universe, at any one moment, is simply the result of everything which has happened at all preceding moments, and that the most trivial disturbance would so violate the general scheme as to render anarchy inevitable, and that to sever from the total mass even the minutest fragment would, by dislocating the structure, bury the whole in one common ruin, we, thus admitting the exquisite adjustment of the different parts, and discerning, too, in the very beauty and completeness of the design, the best proof that it has never been tampered with by the Divine Architect who called it into being, in whose omniscience both the plan, and the issue of the plan, resided with such clearness and unerring certainty that not a stone in that superb and symmetrical edifice has been touched since the foundation of the edifice was laid, are, by ascending to this pitch and elevation of thought, most assuredly advancing towards that far higher step which it will remain for our posterity to take, and which will raise their view to so commanding a height as to insure the utter rejection of those old and eminently irreligious dogmas of supernatural interference with the affairs of life which superstition has invented, and ignorance has bequeathed, and the present acceptance of which betokens the yet early condition of our knowledge, the penury of our intellectual resources, and the inveteracy of the prejudices in which we are still immersed,” *

the plain answer to all this is, that the poverty of intellect and the prejudice are rather with the rationalist historian who is plainly ignorant of mechanics ; and does not, or cannot, see that on the coarsest principles of mechanical Law, a stop introduced by the maker into the machine

* Buckle, *Hist. Civ.*, ii. 489-90.

at the beginning might provide, for example, that once, and only once, during the whole duration of mankind, through countless ages of time, a virgin might conceive and bear a son, and such an event never before or afterwards take place during the thousands or millions of years that man might have to dwell upon earth; or, to proceed with our coarse mechanical answer to a stupid mechanical misconception, answering according to the folly—that other original stops, so introduced, might provide, that such a man, so born of a virgin might, by the breath of his mouth, perform all recorded miracles, and remain in the grave for three days and then rise from the dead—and then rise with his body to Heaven; and, as matter has no known limits, the very body with which he died and rose again might be converted, by organic chemistry, into a gas or vapour as much more refined and powerful than electricity, as electricity is more refined and powerful than a piece of clay—so refined as to penetrate the whole world and universe, being, after forty days, on chemical principles, sent back, purified by its vibration or career and orbit to and from heaven, to dwell and remain permanently as Spiritualised ether, throughout the universe, and upon earth, capable of combining, in some organic chemistry, with the very hearts and souls of faithful believers, thereby forming a new and more perfect organic creation with the human heart and soul; which combination might endow the soul with more extraordinary powers during life on earth, and might ultimately reascend with such faithful souls, by organo-chemical attraction, to heaven, after their bodies had perished in the grave!!

Foolish as such a materialistic answer, to a foolish materialistic objection, may be, and really is; yet neither

mechanics nor chemistry forbid the possibility of such miracles, either on the Christmas-day of the year 4004, or on the Easter Sunday and Day of Pentecost of the year 4037, or thenceforth, and now continually operating according to the pre-established laws of the human organism. There is, in fact, on materialistic principles, nothing either irrational or impossible in such a mechanical and chemical conception of the great miraculous events in Christian history, and of the continuing miraculous operation of the Christian sacraments. And such a diffused and etherealised body of our Lord might now be ready, even on the coarsest chemical principles, always to unite, as orthodox Christians believe that it does *spiritually* unite with, and strengthen the hearts of the faithful who duly present themselves to receive its symbols with earnest and thorough faith. We know nothing either in mechanics or in chemistry which forbids the *possibility* of such miraculous events according to some laws superior to any yet discovered by man!

And the "penury of intellectual resources, and the inveteracies of prejudice," do not fall on or immerse the rational Christian, but rather fall upon and immerse the unchristian historian who has attempted to argue upon a subject which, evidently, he had only half considered; and has presumed to dogmatise upon matters of which both he and we know nothing whatever. We may reasonably, as materialists, believe all that even the most superstitious Christian theologians have ever required as being according to, and not inconsistent with, any one known mechanical, chemical, or physical principle of matter.

But such objections to Christian miracles and to

Christian doctrines, as well as the above answer to them, are only the coarsest *materialism*—entirely inconsistent with the existence of *spirit*, and with the existence of the free will of a self-examining and self-governing mind. We may answer a fool according to his folly lest he be wise in his own conceit; and the “universal reign” of such laws of matter, as man is able to discover, is the very height of philosophic folly; but certainly does not, on materialistic principles, preclude the existence of higher laws than any yet discovered. To the earnest and sincere Christian, such questions are not matters of reason but matters of faith—*spiritual* faith, consistent with all logical and mental and physical reasoning, which no reason is able to overthrow, and which the history of the gradual diffusion of Christianity, and the gradual adoption of Christian principles, tend to strengthen and establish, as the stream of Christianity spreads and widens over the whole world. But we cannot confound matter with mind, or breath or ether with Spirit, or the Symbol with the Reality, either in the visible or in the invisible universe.

CHAPTER XX.

JESUS AND SOCRATES.

ABOUT six hundred years before the birth of Christ, four celebrated systems of virtue and of religion or no-religion were introduced upon earth, and they may, for the sake of arrangement, be identified with four celebrated men who appeared in four distant centres of civilisation—Buddha in India, Confucius in China, Zoroaster in Persia, and Socrates in Greece. The first still numbers more disciples than any other religion on earth, and to the last—the Rationalism of Socrates, may be well traced the chief intellectual opposition which Christianity meets with in the present age, or probably which it has ever, in any age, met with, since the time of the apostles. *Asceticism* and self-mortification, with the worship of a false Trinity and a man-God, makes the Buddhist; *Materialism*, and the golden rule of doing to others as we would be done by, and the worship of our ancestors, mark the disciples of Confucius; *Pantheism*, virtue and the worship of nature, mark the disciples of Zoroaster; and pure *Rationalism*, and a recognition or easy worship of the gods of our country, and the doctrine that virtue is a species of *truth*, characterise the disciples of Socrates and the civilisation of Greece.

In fact, we may consider Socrates as the mere cul-

mination of Grecian Reason; and as Pythagoras and Buddha, and Confucius and Zoroaster were, or were nearly, contemporaries—we may very properly say that, *asceticism* in India, *materialism* in China, *pantheism* in Persia, and *rationalism* in Europe, all took their rise, or commenced upon earth, about the sixth century, before the birth and death of Jesus Christ! If man were a being altogether subject to some fixed and unchangeable law, these four varieties of human virtue could not possibly have grown up and been developed all in the same age in such different and distinct centres of civilisation. The law of man, if man had a law wholly binding him in any way, must have produced in the same age resemblances, and not such great varieties, in general results. But what men can be supposed more different than the Indian faqueer hanging to a hook fastened through the muscles of the back—the unbelieving and world-easy Chinese,—the moral and sun-worshipping Parsee,—and the philosophic European rationalist, Christian or unchristian,—atheist, pantheist, rationalist, or formalist—all different and all false!

In my opinion, these four false systems were all the inventions of Satan, the great enemy of mankind, the adversary of the simple truth as it is in Jesus Christ. Satan may be, as I conceive, an Evil Being capable of looking forward and prognosticating earthly events some six hundred years, and of anticipating within some such limit the wisdom and intentions of God. And the power to influence the course of events upon earth, subject to certain laws, and the power of inspiring mankind are, as I conceive, within the limits of his powers. In the age of Isaiah, B.C. 740, at least, the mysteries of the Gospel may

have been anticipated by Satan; and the nature and existence of Buddhism shows, in my opinion, that Satan can anticipate the course of worldly events six hundred years. For, as St Paul wrote, "Without controversy, great is the mystery of godliness—*God manifest* in the flesh—justified in the spirit—seen of angels—preached unto the Gentiles—received up into glory;" or as Isaiah had previously said—"Behold, a virgin shall conceive, and shall bear a son, and shall call his name Immanuel, or *God with us!*" Satan may have expected the birth of a Divine Being. But if, during the age of Socrates, such an evil being could have anticipated the death of our Lord for blasphemy, he might possibly be able to inspire Socrates with profound wisdom, and have power to bring about the death of Socrates in a good old age of seventy years for blasphemy, to operate as a counterweight to the voluntary sacrifice of Jesus Christ.

This is what I think did happen and is now happening as to Socrates. We have the ancient facts related to us in the simplest possible terms by the immediate friends and followers of Socrates himself; and we have the present influence of Socratic principles, as rationalism in opposition to Christianity, before our eyes. The demon of Delphi pronounced Socrates the wisest of mankind; and Socrates himself, in the most earnest words, declares his own inspiration by a demon. But that demon, whom he consulted on all occasions, and whose "voices" he heard, and to whom or to whose "voices" he was indebted for his life, though his counsel was sought by Socrates as usual, yet his reason and prudence abandoned him on his last trial, and his demon allowed Socrates, or inspired him secretly, to make that most injudicious defence, and that ironical argument as

to his proper punishment, which certainly led up to and caused his death for blasphemy.

The wisdom of Socrates certainly abandoned him on his last trial, and thus the most wise and pious of heathens, the honest politician, the earnest patriot, the unpaid and unselfish teacher of morality and virtue—of that virtue which is identified with knowledge and wisdom and mere intellect—became by his death, on a charge for blasphemy against the heathen gods, the human parallel of Jesus ; and Socrates is now held up to our admiration by the rationalist as not only Christ's equal but His superior. It was so amongst the rational opponents of early Christianity, and it is so now. The name "Socratic men" may still well describe both the rationalist Sadducee within the Church of Christ on earth, as well as the rationalist infidel without.*

Of course, the modern Sadducees,—whether nominally Christian or not, who deny the existence of angels and devils ; who, contrary to the whole analogy of nature and the whole history of man, suppose that man's *spirit*

* Ever since the days of Clement of Alexandria, who died A.D. 212, and said, "God is the cause of all good things, and He probably gave philosophy to the Greeks before the Lord Himself came in order to call them to His service ; for philosophy acted the part of a school-master to the Greeks, as the Mosaic law did to the Jews, for the purpose of bringing men to Christ"—this opinion, of heathen wisdom coming from God, has greatly prevailed amongst the most learned Christians. But I think it wholly false ; and believe that Satan was the real author of Grecian philosophy, as well as of all the grosser superstitions which the world has ever seen ! In the present age Christian rationalism and materialism are more dangerous than Christian Buddhism and Pantheism—Satan can assume the form of an angel of light and virtue, and did so, as I think, in Buddha, Confucius, Zoroaster, and Socrates. But the days of Christian Buddhism and Pantheism seem to have ended ; but rationalism and materialism have still some future !

is the only evil spirit in existence (if he has a spirit, and not merely an organised body like the lower animals)—such reasoners, deny the possibility of the question I am considering—viz., who inspired Socrates? But those who do admit the possible existence of good and bad Spirits superior to mankind must hold one of three opinions.

1st, Assuming that the argument of Bishop Butler is sufficient to justify a rational belief in some revelation or communication from God to man, we must either believe some divine revelation in the Bible as Christians do, or else, 2d, that all good men in all ages were true forerunners and successors of Christ, and all inspired by the same God who inspired Jesus—that one true and only God—who, as they think, was equally worshipped by Abraham and Moses, by Buddha, Confucius, Zoroaster, and Socrates; by Plato, by Jesus, and St Paul! Either Jesus was inspired, as the Scriptures relate, or all good and wise men are inspired by God, or, 3d, there is no revelation. The second and third are probably the most prevalent opinions of those modern Socratic rationalists who do not avow a wish to break off from or part with Christianity, but merely wish to dilute it with Socratic principles—patriotism, submission to the laws of our country, outward conformity to established religion, combined with more active performance of the duties of citizenship—the general inculcation, or worship of human reason, or of man—or the *grand être* of humanity, and other doctrines which they found upon reason, but cannot find amongst the doctrines of Jesus—together with the extirpation of all Christian enthusiasm.

In fact and truth, they would rather substitute the utility and virtue of Confucius, combined with the

patriotism and rationalism of Socrates, in place of the enthusiastic moral doctrines of Jesus and His apostles.

They would rather leave out love, and substitute truth; they would rather leave out the heart, the kingdom of God within us, and the seeking after His righteousness, as a desire of love; and substitute in their place the kingdom of man, and that calm virtue which is a kind of *wisdom*, as Socrates taught, and the doing good to others, as Confucius recommended. They prefer this cool kind of reasonable virtue, as a religion, to Christianity and its spiritual principles.

We must remember, however, that as a matter of historical fact, all the worship of ONE Supreme Being, all the unitarianism which now exists upon earth, may be historically traced to the two sons of Abraham—to Christianity and Mohammedanism, to Isaac and Ishmael.

The idolatry of the whole world, as well as the frequent idolatry of Jewish and Christian peoples, is also a very remarkable fact; the tendency of the human race to gross idolatry in every age must not be forgotten. Abraham and Moses, and their descendants and followers, have done something to preserve alive the worship of the one Supreme Being; but what have Buddha and Confucius, or Zoroaster or Socrates done? Is not Abraham still the father of all the faithful—of all those on earth who, either in outward forms or by inward spirit, profess to worship the one true God and Father of us all? Certainly there is no pretence for saying that history records, that any single people or tongue or nation have ever adopted or established the worship of one God except the Jews, Christians, and Mohammedans, who trace their religion or national descent, and their moral history, to the two sons of Abraham.

Christians are Jews by adoption—by ingrafting, as St Paul says. “He is not a Jew who is one outwardly, but he who is one inwardly, by circumcision of the heart; in the spirit, and not in the letter; whose praise is not of men, but of God!” This St Paul says to the Romans. But Jesus Himself said, “I am not sent but unto the lost sheep of the house of Israel.” It is only, therefore, as being *inwardly Jews*, and circumcised in spirit, that we can claim to be Christians at all, unless we deny Christ’s own words and St Paul’s paraphrase and explanation of them. Our title to be Christians, therefore, is only by and through Judaism; and Christians are spiritual Jews, not by Jewish ceremonies and forms outwardly, but by Christ’s forms and spirit inwardly.*

Now, when we attempt to compare the fate of Jesus with that of Socrates, and to estimate their principles, we find that Jesus was sacrificed by the combination of three parties or three principles—the chief priests, the Sadducees, and the politician or political governor—priests, infidels, and political utilitarians, considering expediency in reference to the mob—hypocrisy, infidelity, and political utility—“lest the Romans come and take away our place and nation.” Socrates was sacrificed by pure democracy alone—by a superstitious democracy acting lawfully. A popular tribunal of more than 500 members deliberately and formally and lawfully condemned Socrates to death; but perhaps you will say, that it was for his blasphemy of many demons, by his teaching and advocacy of one supreme God, superior to them all! Yet he mingled the worship of

* We have the Jews amongst us, still a very peculiar people—worthy citizens, puzzling to the politician. They support their own paupers, and neither enlist in the army nor are found in the poor-house!

all indiscriminately ; and the last act of Socrates was to request the sacrifice of a cock to Æsculapius.

It is the mingling of light and darkness that is now, most dangerous to truth. As long as terror answered his purpose, Satan used terror and signs and wonders and portents, and demoniac agency of terrible kinds ; but the religion of Christ, as the great civiliser of modern nations, has already relieved mankind from these terrors of darkness, and has made us free. The contest has ceased to be one of emotion—of spiritual terrors, but has become one of reason and intellectual ambiguity.

Xenophon records, what he had heard from Hermogenes himself, that when Hermogenes remarked to Socrates that he ought to consider what defence he should make at his approaching trial, and remonstrated with him on his neglecting to prepare for it, Socrates replied :—

“‘But, by Jupiter, Hermogenes, when I was proceeding a while ago to study my address to the judges, the dæmon testified *disapprobation*.’ ‘You say what is strange,’ rejoined Hermogenes.’ ‘And do you think it strange,’ said Socrates, ‘that it should seem better to the Divinity that I should now close my life ? Do you not know that down to the present time I would not admit to any man that *he has lived either better or with more pleasure than myself* ? For I consider that those live best who study best to become as good as possible ; and that those live with most pleasure who feel the most assurance that they are daily growing better and better. This *assurance* I have felt to the present day to be the case with respect to myself ; and associating with other men, and comparing myself with others, I have always retained this opinion respecting myself ; but not only I, but my friends also maintain a similar feeling with regard to me, not because they love me (for those who love others may be thus affected towards the objects of their love), but because they think that while they associated with me they became greatly advanced in virtue. If I shall live a longer period, perhaps I shall be des-

tined to sustain the evils of old age,* to find my eyesight and hearing weakened, to feel my intellect impaired, to become less apt to learn, and more forgetful, and, in fine, to grow inferior to others in all those qualities in which I was once superior to them. If I should be insensible to all this deterioration, life would not be worth retaining ; and if I should feel it, how could I live otherwise than with less profit, and with less comfort ? If I am to die unjustly, my death will be a disgrace to those who unjustly kill me ; for if injustice be a disgrace, must it not be a disgrace to do anything unjustly ? But what disgrace will it be to me that others could not decide or act justly with regard to me ?

“Of the men who have lived before me, I see that the estimation left amongst posterity with regard to such as have done wrong, and such as have suffered wrong, is by no means similar ; and I know that I also, *if I now die, shall obtain from mankind far different consideration* from that which they will pay to those who take my life ; for I know that they will always bear witness to me that I have never wronged any man, or rendered any man less virtuous, but that I have always endeavoured to make those better who conversed with me.’ Such discourse he held with Hermogenes and with others.”†

Now, of Socrates himself I am not speaking, and do not wish to speak, except with the deepest respect, for having lived and died righteously, according to the light which was in him ; and we, as Gentiles, have no reason to doubt but that “of a truth God is no respecter of persons, and in every nation he that feareth Him [under any form], and worketh righteousness, is acceptable to Him,” and will meet with a just judgment. But of the Spirit which directed Socrates I can and will speak as certainly a lying and deceiving spirit, though assuming the form of almost an angel of light ; for I say the spirit of Socrates is the spirit of reason and self-pride, instead of the spirit of humility and faith. But all mankind are now perfectly free to examine and judge

* Socrates was seventy years old at the time of his death.

† Memoir, book iv. cap. 8.

between them—between the demon of Socrates and the spirit of Jesus.

But if any one thinks there is less reason on the side of Jesus than on the side of Socrates, he must attempt to prove his position; and that he can never do, and certainly has not yet done. If Socrates taught us to die calmly through reason, Jesus taught us the same lesson through faith; but true reason can only be founded on true faith.

Now, the spirit of Socrates appears to me exactly what Jesus warned us to beware of—"the leaven of the Pharisees and the leaven of Herod,"—"I thank Thee, O God, that I am not as other men are," or, as Socrates says, "I will not admit that any man has lived better than myself;" and that spirit of the human governor of men which Herod showed when he killed John Baptist for his oath's sake and those that sat at meat with him, or Pilate showed when he washed his hands before the multitude, and delivered an innocent man to the death of the cross, because "a tumult was made," which he thought might be appeased by letting a mob have their own way in doing murder on innocence. So Socrates, partly in the same spirit, refused to fly when escape was offered him, and preferred to gratify that pride of martyrdom which says, "I know that if I now die I shall obtain *from men* far different consideration than those who now take my life." Which principle is quite different from that command of Jesus, "When they persecute you in this city, flee ye to another."

Thus we find humility and faith on the one side, and reason and pride on the other. And so the demon helped Socrates to prefer the admiration of the *grand être d'humanité*, as Comte would say, to the personal humility of

flying from evil men. But by taking the cup to aid in his own death, rather than disobey the law, which law he was wise enough to perceive and declare unjust, Socrates died in pride of reason rather than in humility of faith. Thus Socrates obeyed his demon, or the spirit which was permitted to inspire him. But the spirit of Socrates was itself, in its very faith, guilty of unreason; for his demon being the spirit of reason, yet inconsistently forbade Socrates to use reason, or even to meditate on what was reasonable in the preparation of his defence. But the spirit of faith, on the contrary, is consistent in saying, Rely upon faith, and when you are brought before rulers and princes for my sake, take no thought how or what ye shall speak; for it is not ye that speak, but the Spirit of your Father which speaketh in you.

The spirit of faith is entirely consistent with itself in so directing; but the spirit of reason, in so directing Socrates, was altogether inconsistent with reason itself.

But it may be said, How can that be right advice from Jesus, and wrong advice from the demon of Socrates? The circumstances of the two cases are alike, and the advice given is alike, and the practice is alike,—how can the spirit of Jesus be right, and the demon of Socrates be wrong?

The answer is, that two different principles are at issue—the spirit of faith and the demon of reason; and the first is logically consistent, and the second is self-contradictory; and it merely shows that reason must be built on faith, and not faith upon reason.

There are times in every man's life when he has to choose, either to act rightly in faith, not seeing the

reason, or to take the course of apparent utility and expediency—to choose between the courage and the course which are founded on humility and conscience, and the courage and course which are founded on pride and utilitarian reasoning or expediency.

We cannot reconcile the doctrines of Socrates and Jesus; though they both taught immortality and claimed inspiration by the Divinity.

To deny the possibility of all inspiration, *à priori*, is not philosophy, but is to start with a dogmatic prejudice inconsistent with and contradicted by facts. There never was a man less enthusiastic, or less likely to invent a lie about his demon, than Socrates. Enthusiasm and self-deception may be suggested to account for the claim of Jesus to inspiration, and there is a certain plausibility in the suggestion, founded on the language of Jesus, which is the language of faith. But there is no plausibility whatever in making the same suggestion for the great master of Grecian reason; for his language is throughout, the language of the calmest Reason.

Of the doctrines of Jesus, and of the manner and circumstances of His death, there can be, in my opinion, no more reasonable doubt, or less doubt, than there can be of the doctrines of Socrates, and the manner and circumstances of the death of Socrates.* But both were

* I assume the authenticity and historical character of the four evangelists just as I assume the same of Plato and Xenophon. In my opinion, but for the great importance of the issue, the authenticity of John would never have been attacked. The internal evidence of the fourth Gospel appears to my mind conclusive against the *possibility* of its being a romance or a forgery subsequent in date to the synoptical Gospels. Being certainly later in date, no forger or romancer could possibly, to my mind, in writing the fourth Gospel, have departed so far and so widely from the previous Gospels, and in so many minute and

teachers of morality and religion, and both died for their opinions as blasphemers. Were they both inspired by God, or neither of them? or was Jesus inspired by God and Socrates by the devil? Neither wrote a book. Both taught openly and orally much that is good and religious and moral and true; and what they said has been, with much care and particularity, preserved to us by their own immediate and faithful disciples and followers—by men who had either heard themselves the words spoken, or had received them from those who had heard them; and who had no possible or conceivable motive for deceiving the world or anybody on the subject.

Both taught the worship of a Supreme Being, but Socrates mingled with that, the worship of inferior divinities and founded all on the reason of man; the other founded all on faith,—the faith of children in a Father. Both died under a charge or accusation for blasphemy; the one partly through the jealousy of the chief priests and democratic violence of the Jews calling out,

needless particulars, without any apparent purpose. For example, the inventing *Malchus* as the name of the high-priest's servant, whose ear Peter cut off—the particular way in which Peter denied his Master, and stood at the door of the palace without, and how he was brought in by the "other disciple," and the different persons to whom he made the denial, as compared with the synoptical Gospels on the same story; such particulars, so minute and different, afford to my mind conclusive evidence that no forger or romancer in the second or third century ever wrote the fourth Gospel. But circumstantial evidence of the trifling kind I have referred to is the most reliable, and it is conclusive, until it can be explained away. This is independent of the whole moral doctrine of the Gospel, which may strike different minds differently. But who can suppose a romancer or forger, in the second or third century, inventing these trifling differences with the synoptics at hand? It is contrary to reason, and tends to defeat the supposed object of either forger or romancer, and therefore is incredible.

“Crucify Him, crucify Him!” combined with the political expediency of the Roman and Jewish governors; the other, possibly but in a very remote manner through the jealousy of the sophists who taught reasoning for money, but more immediately through the democratic anger and superstitious hostility of a public assembly of more than five hundred Athenians, who had by the laws of Athens the legal right and power to judge and condemn Socrates on that charge of blasphemy!

The parallel is without doubt a very remarkable one, and both are at least very remarkable men; for it is impossible to conceive a finer exhibition of mere human *intellect* and honest virtue prosecuting the study and teaching of reason and rationalism, than that of Socrates teaching and preaching, without pay or reward, the doctrines of pure Reason; and of Virtue, as a form or species of reason; and the fulfilment of and obedience to all civil duties, and the complete submission to the laws of his country, as exhibited in his teaching, and by his life and by his death.

Nor is it possible to conceive a finer exhibition of faith and love, and of humility and tenderness, towards the poor and the ignorant and the needy, but without the least tincture of patriotism, or Judaical legality, or narrowness of thought or action, than is exhibited in the life and death of Jesus of Nazareth, teaching righteousness and denouncing hypocrisy, infidelity, worldliness, and expediency during the three years of which alone we have any authentic account relating to his life.

The active principles of the one were reason, utility, and the pride of man; those of the other were faith, love, and the humility of a little child. The one worshipped intellect, the other love. The one refused to

escape from death, even when escape was offered him after his condemnation, and died, in obedience to the laws of his country, by his own hand taking the cup of poison proffered by the law, and calmly reasoning with his friends, and was smiling and witty, and thoroughly intellectual down to the last hour. The other, indeed, died without resistance or reviling, like a lamb led to the slaughter, yet in perfect possession of his manhood, saying to his judge on earth, "Every one that is of the TRUTH heareth my VOICE," to which the judge, as we know, replied, "What is truth?" a question which Jesus left then unanswered, and which remains unanswered to the present hour; except that Jesus said, "I am the Way—the TRUTH—the Life."

But if we attempt to pursue the parallel between Jesus and Socrates to their teaching and doctrines, we are soon landed in inextricable difficulty. The doctrine of Socrates is of the world, and adapted to the world; but the doctrine of Jesus is not of the world, nor adapted to the world as it exists at present. We may indeed render unto Cæsar the things that are Cæsar's, but the world is not yet prepared, if stricken on the right cheek, to offer the left; nor if sued at law for our coat, to surrender our cloak also; nor to resist not the evil; nor are we prepared to love our enemies, nor to bless those who curse us, nor to do good to those who spitefully use us. If Christianity consist of all the doctrines of Christ, we may still, like the learned Hindoo, well ask, "Where are the Christians?" The civilisation of Christianity is still so far ahead of all Christian nations; that we may well hope for future progress.

But Socrates appeared inspired to maintain, throughout his life, that *knowledge* is both truth and virtue—

whence it follows that sin is merely ignorance; a doctrine which remains in dispute in every age since passed, and down to the present hour. Is ignorance of the truth the true origin of evil, and is philosophy its cure? Socrates would answer in the affirmative, or his reason tends to that. Jesus did not answer His judge, but acted His reply to the question, "What is truth?" by dying, having said, "I am the truth"—"If ye continue in My word, ye shall know the truth, and the truth shall make you free,"—free from sin and ignorance and evil.

The charges against Socrates were three:—

1. Contempt of the established religion.
2. The introduction of new divinities.
3. The corruption of the young.

According to Diogenes Laertius, the sentence of condemnation was carried by a majority consisting of 281 votes. "Socrates says himself, 'Had but *three* votes only fallen differently, I should have been acquitted;' and his accusers would probably have had to pay the penalty of 1000 drachmas for an unsustained prosecution!" But when asked what punishment he desired and deserved, Socrates "so exasperated his jurors by his irony in asking, instead of a slight punishment, that he should be openly rewarded with the highest honours of the State—that of a maintenance at the public expense in the Prytaneum,"—that eighty additional votes were given in favour of the sentence of death.

Thus Socrates died, full of years (he was seventy), and in full possession of his mental powers; and Plato records in the 'Phædo' the calm philosophical conversations of the last few hours of his life on the immortality of the soul. He refused to escape when an escape had been prepared

for him by his friends, and calmly received and swallowed the cup of poison in obedience to the laws of his country, and submitted to the bigotry and injustice of his countrymen, proud of his human reason; but in fact obeying "the divine monitor," by which, as he said in the first Alcibiades, "I am accustomed to regulate my actions" even in the choice of friends and associates.

During one of his last conversations, Socrates gravely rebuked one of his followers for doubting the reality of his spirit or demon, to whose presages or warnings he had habitually referred his conduct.

"This monitor," he said in his apology, "I have had from my boyhood—a voice which warns and restrains me constantly from what I am about to do, but never urges me on to do."

But the very remarkable fact, already mentioned, is worthy of notice, that Socrates observed to Hermogenes, that he "had essayed twice to consider what he should say in his defence against the accusation which lost him his life, and twice had he been *prevented* by those secret divine intimations which he interpreted as a *voice* addressed to him on each occasion, forbidding the preparation of his defence." Thus Socrates, the very hero of *Reason*, may be said to have died a victim to *Faith* in his demon, who forbade a reasonable preparation of that defence, which by influencing three votes out of 556 would have saved his life.

Thus calmly dying by the decree of a superstitious democratic assembly, and exhibiting an example of virtue in life and nobleness in death, almost unsurpassed, Socrates has been, ever since Christianity spread in the world, the greatest encouragement of

those votaries of piety and virtue, who set up reason in opposition to that simple faith, that only true faith, which must be founded not on reason but on love! For, as Christians, we must love God, not because it is reasonable, else it were not love but logic, but because He first loved us, and gave Himself for us; that we, being sinners in His sight, might be redeemed from the just punishment of our sins!

Independently of all revelation, however, concerning the existence of the powers of darkness, how is it possible for any reasonable man to deny the existence of the Demon of Socrates and to suppose Socrates a self-deceived enthusiast? It is quite contrary to all the analogies of the universe to suppose that man is the only evil spirit or mind in creation. An evil man, for the gratification of a few moments' pleasure, purposely leading the innocent into what he well knows to be evil, and to produce misery, is not the only devil; and what difference in principle is there, between an evil man for sixty years, and a devil for 6000 years, violating God's laws and delaying the accomplishment of God's designs amongst mankind? We behold the one, and may well believe the other.

Before the coming of Christ it may possibly and probably have been the design of Satan to obtain idolatrous worship and influence on earth by terror and open exhibitions of his power, by demoniac influence of divers visible and sensible kinds. Whereas, since the sending on earth of the spirit of love and submission and faith, the holy spirit of God Himself, such exhibitions may either be impossible, or they may be restrained by laws of which we know nothing, or, in the opinion of Satan, they may be impolitic, and unsuited to the age of the

world for the promotion of idolatry and error. And he may find it easier to propagate evil amongst mankind by those false religions and false doctrines and systems of which Socrates, Confucius, Zoroaster, and Buddha were the chief or original high-priests—the four false principles of moral reason,—of moral materialism,—of the moral religion of nature, and lastly the moral religion of personal asceticism, self-mortification, and external observances, all which are inconsistent with the faith of a little child in God as its Father as taught by Jesus Christ. “Except ye be converted, and become as little children, ye shall not enter into the kingdom of heaven.”

When it is argued that the open demoniac agency which is supposed to have existed up to the age of Christ *must* be a delusion—mere human error—or it would still exist, and, therefore, that all such stories are to be discredited, as a rational man in the present age discredits such stories if reported of the next village or street; I answer, that follows by no means. Satan and the devil's powers may have been either curtailed and diminished, or he may prefer deceiving by falsehood to terrifying and governing men by open display of power. Devils not only may exist, but may vary from age to age both in their powers and display of power.

But the fact remains, that it is quite consistent with the highest reason and with analogy to believe in a hierarchy of evil spirits who may take and find pleasure in the deception of the race of mankind, just as an evil man takes pleasure in the deception of youth and innocence, and in leading them to what he knows in his heart must ruin them! But yet it gives him pleasure to make them as evil as himself, by courses leading to

their own ultimate misery, as he well knows from his own experience. But to suppose that man is the only devil is on principle absurd, and quite contrary to abstract reason and to the whole analogy of the universe and of nature. It is not unreasonable to believe in the existence and powers of evil spirits; but it is unreasonable for a man, who believes in God, to fear them!

If then there be, as there must be, in order to account for the existence of evil, a hierarchy of evil spirits, greatly more powerful than man, their plans and practices for misleading mankind may have greatly changed since the introduction of Christianity. It may now be their design to recommend the religion of pure reason and rationalism, of which the foundations were laid by the inspiration and death of Socrates under the express influence and direction of the demon who guided him; or the religion of materialism and utility, of which the foundation was laid by Confucius, and by the revelation to him by anticipation of the doctrine of Christ, "Do unto others as you should wish they should do unto you." Satan may surely promote virtue which leads to spiritual pride, and forgetfulness of God, and prevents that child-like humility which Christ makes the essential preliminary for entrance into His kingdom.

Or it may now be the plan of the devil to encourage Pantheism, and a kind of worship of light and life, the powers of nature in its most beautiful material form, but abstracted from all petty idols and oracles such as a Christian Zoroaster might have taught; or some species of formalism and ritualism with outward observances and the doctrines of self-mortification, such as a Christian Buddhism might approve; or the devil may seek to

combine with this, all or part of some religion of "*Altruisme*," or of modern philosophic self-denial and pretended living for others, with a worship of humanity, as the only *Etre suprême*, "under the form of a woman of thirty, with a child in her arms," such as Auguste Comte offers to us; or in fact any religion of outward forms and symbols, rather than the religion of the heart taught by the humble carpenter of Nazareth, the despised peasant of a despised race—a man who could exclaim such unreason as this, "I thank thee, O Father, Lord of heaven and earth, because Thou hast hid these things from the wise and prudent, and hast revealed them unto babes! Even so, Father, for so it seemed good in Thy sight!" and yet could say of himself, "he that depiseth me, depiseth Him that sent me."

Observe the contrast between the wisdom of all philosophy and the truths of that religion which requires a man to be born again, of water and of the spirit in outward form and inward grace from above, and to become as a little child, or else denies him entrance into the kingdom of heaven! Except a man be born again, and from above, entrance is by Jesus denied him into the kingdom of God! Human wisdom and human prudence are as nothing. Ye must become babes, and be a new creation, and be new born by the Spirit of God, or the very entrance into God's kingdom is shut against you by Jesus Christ! This is too humbling to the pride of reason, and Socratic and utilitarian Christians reject it; and Christian Pantheists and Christian Buddhists explain it away, and convert it into æsthetic and elegant naturalism, or mere outward formalism.

This, in fact, is the fundamental distinction between the wisdom that is of God and that which is of man!

We see, nowadays, Christians who profess belief in God, and in the divine mission of Jesus Christ as part of a grand system of Pantheism; but are ashamed to avow their belief in the existence of the devil and of demons and demoniac possession, as revealed in Scripture; and endeavour to explain away all evidence of demoniac agency in the history of the world and in the history of their own religion, as if the whole must be necessarily false. Two false principles are at work within their minds—1st, That experience is the source of truth! 2d, That their non-experience, and the non-experience of modern times, can overrule the experience of former ages. Both principles are false. Truth is ideal, truth is of the mind! and no truth is or ever can be derived from or founded on experience, for we experience no ideas, and we experience no minds, except only such internal suggestions, if they can be called experience, which are individual *im*periences, unknown to all other men; and then, indeed, we may experience, not only mind, but words, ideas, and suggestions, not of truth—but of the devil, devilish!

But experience, in its ordinary sense, as capable of repetition by ourselves and others, is not the source of any truth, but is the test of utility and expediency; and the non-experience of the whole world cannot overrule the *im*perience of our own individual souls; and the non-experience of modern ages cannot overrule the experience of former times.

The power which demons and oracles and signs and wonders exerted in the world is a fact; and it is not possible for reason either to overthrow the fact of the powers of Satan, or to overturn the true explanation of the fact of the greater power, or at least the greater visibility of

the power of Satan in former times, as compared with our own—a fact, which has accompanied, and possibly, or probably, has arisen from Christianity. And those who think the contrary are defective either in sound logic or in true philosophy, or in both! For it is simply absurd, to think of Socrates as a fanatic or enthusiast professing to hear voices from boyhood which he did not hear.

The religion of Jesus, therefore, differs from that of Socrates and all other votaries of reason, down to the worshippers of the *Etre suprême* of humanity, in this fundamental point, that we can consistently and logically found reason on faith; but we cannot found faith upon reason, and even Socrates himself founded his own reason upon faith in his demon. And Socrates in and by his death, and the way in which it was brought about, gave a practical refutation of the doctrine that reason should be supreme, and was thus logically inconsistent with himself.

The religion of Christ begins with God—the one God, the Alpha and Omega, the First and the Last—God blessed for ever, the Creator of all things, even of those evil minds that are devoted to evil, and who withdraw themselves from God and from His light. “No man can come to me,” said Jesus, “except the Father which hath sent me draw him.” But this God is a Father; and, said Jesus, “if ye, being evil, know how to give good gifts to your children, how much more shall your heavenly Father give the Holy Spirit to them that ask Him?” The invitation, therefore, is general, not to consult your reason or your priest, but to pray in faith to God.

But the doctrine of Jesus was and is, that “Except ye

be born of water and the Spirit, ye cannot enter into the kingdom of God." "Marvel not that I said unto thee, Ye must be born from above." The *external form* or symbol of admission to Christianity, must and will extend over and govern the whole world, and within that outward name and form all divine truth must arise amongst mankind. But by spirit must be meant that *internal spirit*, the inward essence of all truth, that Holy Spirit which is God Himself, who, in His own good pleasure, in His own good time, will give that Holy Spirit to all who ask Him, and who worship Him in spirit and in truth. But God is not only a Spirit, and must be worshipped by the true worshippers in spirit and in truth, but God is love, said the beloved disciple, and the true worshipper must love God, not because his reason so tells him, but because God first loved him, and has saved him from his sins through Jesus Christ. This has been in all ages and in all churches the true civilising influence of Christianity.

But I say that virtue is not based on truth, as Socrates supposed, but truth is based on virtue! Virtue is not a species or form of truth, but truth is a species or form of virtue! The demon who inspired Socrates with his notions of truth and virtue was not the spirit of truth, but was the spirit of error and falsehood.

It is clear to any one who will think honestly that truth is only a form or species of virtue, and that virtue is not a species or form of truth. Justice or conscientiousness is the virtue which enables us to see the truth. Justice and mercy and love and veneration are all virtues, but are not based on truth, but, on the contrary, truth is based on justice of mind—*i. e.*, conscientiousness—in judging conflicting statements. This error

of Socrates, that virtue is based on truth, and is a species of human knowledge, lies at the foundation of all the confusion that exists on moral subjects.

We cannot too strongly fix it constantly in our minds that virtue is not based on truth, but that truth is based on virtue. The moral is not based on the intellectual; but, on the contrary, the truth of intellect is based on the moral. The kingdom of God, the moral kingdom, is within us; and we must seek *first* the kingdom of God, and if we are humble enough, sufficient intellectual truth may and will be given to us. "If any man," said Jesus, "is willing to do God's will he shall know of the doctrine."

But the question of the existence of a moral sense in the human mind, bestowed on it by nature or God, has often been much confused by confounding and confusing the moral and intellectual departments of the soul. A sense or capacity is intellectually blind; but yet, on its own subjects, is not the less a natural sense bestowed upon us by God—a sense with its own proper objects and subjects for its enjoyment or its disgust, for its gratification or the reverse.

We have, for example, a sense of colour; but it is matter of *custom* and of education whether black or white shall be the symbol of mental sorrow or grief. Europeans think the first and the Chinese the last; but it would surely be a very silly conclusion from this difference to say that man has no natural sense either of black or white, or of colour, or of mental pain, sorrow, or grief.

We have a physical sense of colour and a mental sense of grief when our affections are violated or wounded, but our senses are by nature intellectually blind. We may have a natural sense of justice, that we should seek

justice and do it; but that moral sense may be, and no doubt is, intellectually blind by nature as to what is justice; and our intellects do not know by nature what true justice really demands, and must seek it by a very long and difficult intellectual process, but always and throughout feeling and exercising our sense of justice.

The most odious tyrants and persecutors that have ever lived have been men possessing a strong sense of justice and of right, blinded by an evil conscience, feeling and thinking and fully persuaded that all their evil deeds were entirely right and just and proper, both in the sight of a just God and of just men, and generally on the principles of utility, expediency, and the greatest happiness of the greatest number.

The greatest perversions of justice recorded in history have been done from a perverted *sense* of justice, and by men of the highest honour and virtue and integrity in matters not connected with their blinded conscience. Jesus alone explains this—"If the light that is in thee be darkness, how great is that darkness!"—an intellect corrupted by Satan.

They thought they were doing God service; they thought they were promoting the greatest happiness of the greatest number; which last was in fact the actuating principle of Hildebrand and Dominic, when they thought that by persecuting and burning a few heretics they would secure the mass of mankind from moral and religious contagion on this earth, and from eternal unhappiness hereafter. They thought they were killing the few, as a matter of just and wise expediency and utility, to secure the greatest happiness of all the rest of mankind to all future ages!—Robespierre thought the same.

The *abuse* of any sense proves its existence just as well as its *use*. It has always been to our senses of right, of justice, of benevolence, of veneration for all that is thought to be divine and true and holy and conscientious, and always to expediency and utility, in their highest worldly sense of promoting the greatest happiness of the greatest number of mankind, that the most atrocious religious, political, and social crimes, ever committed, have always appealed during their progress, and for their promotion and justification amongst men—from the earliest crimes and persecutions down to the latest!

Christ himself died partly a victim to the same false doctrine; "It is expedient that one man should die for the people, and that the whole nation perish not," said Caiaphas—a mere sacrifice of justice in the case of one for the true happiness of all the rest. "If we leave him alone, all men will believe on him," and there will be a rebellion; "and the Romans will come and take away our place and nation," said the chief priests and Pharisees! The sacrificing this one deluder of the people will save all from destruction. Cæsar Borgia himself would have equally justified himself by an appeal to the moral sense, to the blinded moral sense, that his designs were politically useful and necessary; and that it was expedient to deceive and poison a few leading individuals, and so avoid wars and battles, in which, without doubt, far greater numbers would have perished or been slain, and much greater misery would have been inflicted on a much greater number.

All persecutors, and all wicked men in all ages have, as readily as good and moral men, appealed to the moral sense, though perverted and blinded, of course, by wicked

intellectual principles of morality—by the principles of rational utility and worldly expediency. They always have insisted that their Deeds were either a just vengeance for crimes which the law afforded no adequate or efficient means of properly judging, or otherwise punishing; or that they were justified in their evil deeds by that highest rule of moral expediency, the avoiding the lesser of two evils—*i.e.*, seeking the greatest happiness of the greatest number by doing only a little injustice to the few or to the one. In their hearts, all bold and great criminals have so excused themselves; and petty criminals have excused themselves by the principle of utility!—Only a little wrong, of no great consequence to the victims, but of much greater utility to those who are to benefit by the wicked deed!—This has been their language in all ages.

The sense or capacity to know right from wrong and good from 'evil is, in fact, acknowledged and appealed to by all men, good and bad; and even the moralists themselves who deny its existence are quite as ready as any others to appeal to its influence when and wherever they can quote it as being on their side; as, for example, in the proposed abolition of the punishment of death, or the establishment of universal equality. "It is *better* to save life than to destroy it." "Equality is equity" and *just*. Thus the doctrines of utility and expediency, and the principle of seeking the greatest happiness of the greatest number of men upon earth, appear to me some of the vilest falsehoods that ever were palmed off upon the darkened conscience of mankind, and they are founded on the Socratic principle that virtue is a species of knowledge attainable by Reason. But Socrates in this was inconsistent with

himself, and believed in a moral sense of justice and goodness to be discovered by reason; while Jesus taught that it must be enlightened by God.

Every crime that has ever been committed amongst men has always been justified to the perpetrator's conscience when he contemplated the doing of it by these false principles; viz., it will be on the whole more useful; it is on the whole most expedient; and it will on the whole produce greater happiness, and to a greater number of more worthy men, than if it is left undone. One or a few may suffer just a little, but what is that to the glorious prospects of unlimited happiness, and the great utility to many, ourselves possibly, of course, included, if we are happily fortunate in all the circumstances, and finally succeed—and if not, then we die; but we intended well—to benefit the poor and needy and miserable, to repair the injustice of the rich, to substitute equality, or some approach to it, amongst men,—and that is equity even in the sight of God, if there be a God. But then God!—He knows our hard case, and the injustice and oppression we have suffered at the hands of the great and the rich in all ages; and He has left us all free to right ourselves as well as we can with our own right hands and our strong will, and our true intelligence superior to the social and political and religious prejudices around us.

If the crime be a great one, it is national, and for the true interests of the many; if it be a petty one, yet it is then for the poor, who are the many, and it is only helping to equalise the gross injustice of law or society. And if it be a private crime on the individual—murder, incest, or adultery—it is clearly individual and private, and will never be found out, and does not affect

general utility or expediency, or the greatest happiness of the greatest number, in any appreciable degree ; and if it does, then it adds to the ultimate number of the happy ; or only one man is killed or robbed, and his inheritance or the plunder will benefit many, who will have jointly far greater happiness than he alone could ever enjoy.

There is no crime under heaven that cannot be justified by the principles of worldly utility, apparent expediency, and the greatest happiness of the greatest number of men upon earth — developed by human reason. But hereafter? and not upon earth? Pugh! The utilitarian moralist can know nothing of that, especially if all truth be founded on induction from what we see and feel here—here on earth ; and must not our reason be guided by visible experience? In fact, if the plunder or inheritance is to be divided and enjoyed, as they always may be, by more than one, every theft and murder not found out (and of course, by the calculus of probabilities they never are expected to be found out) is both useful, expedient, and adds to the sum of the human happiness of the greater number! And every great political crime has always avowedly been committed in the interests or for the promotion, of utility, expediency, and the greatest happiness of the greatest number. Thus these principles may be used to justify every social and political crime.

The fact that the perpetrator generally intends, or hopes to share in, that increase of utility and happiness, does not affect the question, for he is one of the greatest number ; and if his share should prove, as he, perhaps, hopes, the lion's share ; he can always propose to rectify that at leisure in a long future career of worldly

prosperity, and so exhibit and prove the noble motives of his noble crime. But utilitarian morality must always proceed on such practical principles of worldly individual conduct, and must leave the future to rectify the future, when, and if, further material adjustment is required on earth!

But Socrates is in no respect responsible for the later development of Rationalism. He is only responsible for the fundamental principle on which they are based; viz., that wisdom and virtue are the same, and that the evidence of what men know is what they do—principles which sap the very foundation of moral responsibility.

Now my conclusion is, and this, at least, is certainly true, that about 400 to 600 years before the first advent of Christ, four celebrated principles of religion and philosophy were started in this world by four most celebrated men in four distinct centres of ancient civilisation:—the religion of reason by Socrates—rationalism; the religion or no religion of materialism and utility by Confucius; the worship of nature or light, the great power of visible nature—*i.e.*, pantheism and virtue—by Zoroaster; and the religion of self-mortification, and the worship of an incarnate God, by Buddha! Every false religion may be, I think, reduced to these four: pharisaism or self-righteous mortifications; materialism and deism; idealism and pantheism; and rationalism or the pride of reason! and all these four seem to have been introduced into the world, in India, China, and Persia, and Greece, some 400 to 600 years or so before the birth of Christ. And in various shapes these four false principles have all more or less corrupted Christianity, and still do corrupt it, and still oppose themselves to the simplicity and humility of Gospel truth,

founded on love of God. Not the least dangerous of the four in the present day is the admirable nobility and purity and calmness of the example of Socrates, and the dignified pride of pure reason or rationalism not perceiving, or not acknowledging, the fundamental truth, that all *reason* must be built upon *faith*, and that no true faith can be founded on reason. But by the controlling will and providence of God, Socrates was, no doubt, compelled to acknowledge openly the existence and assistance of the Demon by whom he was guided! and thus exhibited the inconsistency of his own principle in and by his own faith.

Jesus, then, and the religion taught by Jesus, does not appear to me, therefore, properly contrasted with Socrates, or with the reasonable religious piety which Socrates taught; but seems to me rather the central point of TRUTH, between the reason of Socrates and the materialism of Confucius on the one hand, and the pantheism of Zoroaster and the asceticism, or self-mortification of Buddha on the other! A reasonable piety, ending in materialism, seems to me contrasted with a pantheism ending in some kind of self-mortification—the religion of Socrates, ending in utility in this world, as one extreme,—and the religion of the Hindoo fakeer, hanging on a hook by the muscles of the back, ending in happiness in the next world, as the other limit, seem to me the two extremes of rational and natural religion according to every philosophical view of religion.

The religion of Jesus—that is, the Revelation that “God is a spirit, and they who worship Him must worship Him in Spirit and in Truth,” and can only come to Him through the truth and spirit of Jesus—stands midway between the two, respecting the one,

and pitying the other. So it has stood, and so it must stand, until the end! equally removed from the mere reason of the rationalist, and from the self-immolation of the fanatic, yet combining all that is true or useful in the principles of both.

The time is at hand. It is already evident that a few years, or hundreds of years, must make "the kingdoms of this world the kingdoms of our Lord, and of His Christ." "Nevertheless, when the Son of Man cometh, shall He find faith on the earth?" or will He only find a form of godliness without the spirit thereof?

All other civilisations of the world are decaying, and expiring and fleeing away before the civilisation founded on the words of Christ. It has come about, hitherto, strangely but surely, and is surely progressing, for Christ's words are still humanising and civilising the most civilised nations of the globe; and the more truly Christian they become, the more powerful they are. Christian morality exalteth the nations that adopt it, and that keep Christ's words. It was not a probable thing when the peasant of Nazareth uttered these words to the Jews of Jerusalem who believed on Him, "If ye continue in my word, ye shall know the truth, and the truth shall make you free," yet, it has come to pass, to a great extent, and is coming to pass, more and more, every day and hour. The future career of Christianity, and of Christian nations, is certainly greater than anything which has yet taken place. It is but a question of time—Christ must, in outward name, ultimately govern the whole world; and even those who want faith seem mentally compelled to work for that consummation.

CHAPTER XXI.

THE HOLY TRINITY.

DESCARTES, the founder of modern mathematics, said that the existence of God was as certain as any mathematical problem. St Paul more logically said, "Before a man can come to God he must first believe that *He is*, and that he is a rewarder of them that seek him."

We must first have faith in the existence of God, and in the action of God—His possible relations to ourselves—before we can have any religion whatever; and we must first have faith in *existence* and in *action* before we can even think, or move our minds, or reason at all; for all reason must be founded on some faith.

We drink in faith with our mother's milk—faith in *matter*; and it is often the only faith we retain to the end, for it often, as amongst the materialists, extinguishes all other faith. But as we grow in stature and wisdom, we drink in faith in *mind*; and as we begin to reason with ourselves and others, we drink faith in *language*, but doubt of its force and meaning!

Descartes well said, that those who asserted that "there could be nothing in the intellect which was not first in the senses,"—which was the mediæval form of the modern dogma that "all ideas are derived from experience,"—"must, to be consistent, deny the existence of God and spirit," neither of which is part of our sensible Experience.

But God, we may say, is only good, and the good is what is pleasant or *useful*; and spirit is only breath or air, and that in action is human life; and light is the only source of *life*! And so we can make *utility* our God, and physical *life* our mind, and matter a "possibility," and mind a "*flux*"—a series of thoughts about wheat and rice, interrupted by stupid superstitious obstructions about virtue and vice.

The ingenious capacity of man to make words to darken counsel and hide the truth is infinite and unlimited.

We, however, have been reasoning for men who believe in their *bodies*, and in their *minds*, and in their *words*; and in all *three* as wholly distinct from each other. But for those sceptics who call the first—their bodies—either permanent or dubious "possibilities;" and the second—their minds—fluctuating "series," which may cease to be either a flux or a series by ceasing to flow, we have to fall back on *words* or language. A *word* we must assume, call it what you please—God, thought, cognition, knowledge, truth, thinking, reasoning, philosophy—whatever thing or thought they choose to talk about; one word is sufficient for our argument—thought or knowledge. If there be a thought at all, there must be an object and a subject, and the relation between them, one, two, three; a thing, a thought of it, and a word for it; which last is our name for the thought of the thing. The ego, the non-ego, and the action or passion, or both combined in one, which the combination and action of the two necessarily supposes to exist—all three must exist in every cognition—the sensible, the insensible, the symbolic.

The very (1) possibility, (2) the doubt, and (3) the

doubt of the possibility, or the possibility of the doubt—these three must exist even to the very greatest sceptic who doubts everything. They may be all called possibilities, or all called doubts, or all called words, or all called thoughts, or all called things; but if the man thinks or speaks at all, he is of necessity involved in these three—the factors of his thought or thinking—and these three are one in himself individually when he begins to speak, and out of himself when he speaks of them generalised in others, as being involved in the words he uses.

And whether his assertion is negative or affirmative, it is all the same. There is the thing denied, the thing denying, and the verbal expression of the denial, as well as the thing affirmed, the thing affirming, and the verbal expression of the affirmation. Every expressed conception of man's mind whatever, never-ceasingly involves these *three factors*, whether of thought, of knowledge, or doubt—the object, the subject, the *traject*—which third is only the *word* that passes from man to man, or mind to mind, the intellectual bridge, the logical symbol or connection, the relation which is needful to complete the general conception, if common to more minds than one. But, at all times and in every place, in every human being, these *three* are *one*. They are *three* to every man who thinks, and they are *one* to every man who thinks. They are the three factors of his every thought.

The object, without ceasing to be itself, must yet pass into, or act upon, or become, the subject; the subject must pass out to, or act upon, or become, the object; and the action or passion, or both combined, between them, must be expressed, and perceived, and acknow-

ledged in the word, which is the relation or connection between the two, and which is created by the subject to express the object, or the relation, or union, or effect of the combination between the subject and object, and which, the word, always is at the same time objective and subjective and verbal.

Put it how you can, they are three and they are one—three factors of one conception—three conceptions co-operating in every thought—three things, each distinct and essential to thought, and yet such that they, as a trinity, co-exist together in unity, or are considered both as a unity and yet as a trinity in every cognition.

If we start with the assumption or admission of *one* unknown existence, which we suppose to be, and call thought or *knowledge*, the nature and truth of which we are all to try and discover by means of our intellect and reason, then we have abundantly shown that the nature and constitution of man's mind or reason is such that the very first rational step forces, as it were, *à priori* by deduction, from the very nature of the thing supposed, and from that assumption of thought or knowledge as possibly existing in the human mind, and that there follows, this necessary or never-ceasing result or conclusion—that this *unknown* existence which we are in search of cannot be thought of or conceived without self-contradiction, except as a UNIT compounded of THREE factors, themselves units—not parts, but *factors*, of the so-called thing thought or knowledge which we profess to be searching for. These *three* distinct things or thoughts or words, whatever we please to call them, are not added together in our first conception of thought or knowledge, but are independent *factors* of that knowledge, complicating or compounding the one thought

or thing which we have assumed to be properly called *knowledge* or thought in the mind.

It is not the mere *addition* of mind, thing, and word, as three things that produces or compounds thought or knowledge in our supposed first conception. Our addition or enumeration of them as three is a subsequent operation. Our numbering of them, or reducing them to number, is an operation wholly subsequent to our first conception of the three, as object, subject, and *traject*, or thing, thought, and word.

It is some necessary active interconnection, some mutual complication and combination, some action and reaction together, of the three distinct things, or *units*, as we are bound to call them, that produces and compounds our first unit, our first cognition, our first conception of knowledge or of thought—the thing, the mind, the word, all complicated into one, yet all distinct from each other.

So long as we are, and remain, ignorant of the true nature of these three distinct things, which we may call a thing, a mind, and a word, we can only properly take and assume the same symbol or sign for each *one*. We call that symbol *unity*; and being by supposition wholly ignorant of the true nature of the original existence, as well as of the true nature of the three component factors thereof, except only that the mind of man forces him to recognise them as *three*, and as distinct factors producing the *first conception*. Then the very first symbolic form of human thought and knowledge, as *one* conception, necessarily becomes the logical and mathematical TRUTH—

UNITY into UNITY into UNITY is and equals UNITY.

This, then, is the first possible formula, and only true conception, which the human mind can make of indefinite thought or KNOWLEDGE—a *unity* of *three* distinct unities complicated or multiplied together—the *thing* knowing, *the thing* known, and *the thing* called knowledge; which is at once both the thing known and is the thing knowing, and is the action or passion between them, the symbol operating to produce and embody the knowledge.

It is not *number* in general, or “the unity of the synthesis of the many fold”—to use Kantian phraseology—but it is “the unity of the synthesis of a three fold,” that we find in our first conception. The *first manifold* which the human mind can possibly conceive or build up together is the *three* fold in the *first* cognition.

This form of human thought is not assumed, but deduced and proved, from the very nature of the human mind in thinking. It applies to every possible human conception whatever. No one who speaks can deny it, without self-contradiction in words, open and manifest. This is the first *form*, therefore, which any knowledge assumes in the human mind, beginning at the true beginning, of supposing man wholly ignorant, but assuming that some knowledge or *thing* exists for the human mind to conceive, discover, and contemplate, in order to satisfy the restless craving of the human intellect. And this is true whether the object be without or within the mind, or the mind within or without the object.

The beginning and the end, the first and the last, the only true conception of the human mind in action, is as

a unity in trinity, a trinity in unity. There is not only no absurdity or contradiction in this view of knowledge and of truth, but the constitution of the human mind necessarily—*i. e.*, never-ceasingly—compels and requires the admission of this logical truth as its first step. It is not that no other can be said to be conceivable, but that any other conception becomes self-contradictory. The dogmatic materialist and the dogmatic idealist both profess to conceive a form of knowledge compounded of two factors instead of three. But each must contradict himself in stating his conception. The one denies the existence of his own body, the other denies the existence of his own mind. The one denies the body which proclaims the knowledge, and the other denies the mind which understands and possesses it, and both confuse and obscure the words which contain the knowledge. The conceptualist, or object + subject philosopher supposes an action and passion without a result; and the *word* which expresses and unites both object and subject, which is at once objective and subjective, and embodies the knowledge, is by him wholly omitted.

This, however, I submit, is that logical, that verbal Trinity which has been dimly seen by many great philosophers, from Plato downwards, who have never held it fast as a fundamental metaphysical truth and fact. But the logical is very different from the objective and subjective trinity when we attempt to apply this doctrine to man's *conception* of the Deity. The necessary admission of this great fundamental truth of the human mind can be thus, however, demonstrated intellectually to all who will admit the most obvious existences—mind, matter, and language; and who will not, logically and mentally, contradict themselves. And it

is also demonstrated to all those who profess to believe in any truth or any knowledge whatever, as consisting of an object to be known, a subject to know it, and a verbal expression or word to embody the knowledge.

Let self-puzzled or word-puzzled philosophers dwell on the fact that, no knowledge can exist in the human intellect which does not admit this doctrine of a trinity in unity as a fundamental truth, and that every intellect which denies it is clearly self-contradictory. They must deny either the thing, the thought, or the word which they have at first admitted. Men can always find reasons for not believing what they do not love or like, but honest intellect must admit it—this trinity in unity, this unity in trinity—as the first and last, the beginning and the end, of human knowledge.

There is, we assert, neither absurdity nor inconsistency in the idea of three equal units being our mental factors of one unit, wholly undistinguishable from either or each of its factors—it is a logical and mathematical Truth. But it is also a Moral Truth.

Every arithmetician knows that the necessary laws of number require it; and plain reason confutes the errors of scepticism, and shows that this trinal symmetry in unity is the fundamental law of the human mind, the dimmed image of its Maker. Every conception of the human mind implies it. Every cognition is a trinity in unity, a unity in trinity—three units the factors of one unit—three things the factors of one thing. This threefold exists in the first human conception and in the last; and it is the fundamental condition of all human knowledge and all human thought—of every human conception, about which man can speak and reason.

Now, when we proceed to apply this logical and mathematical doctrine to man's knowledge of his Maker—to God, as man ought to conceive Him to exist as an Object of knowledge—we find that the pure intellectual conception and the pure moral conception are wholly different and incommensurable. The heart, or active will of man, the seat of Emotion, is wholly different from his Intellect, the seat of mental perception, and both are different from his moral Sentiment or principles. But man cannot reason in truth correctly without confessing in words and signs logically the greatest of all revealed truths, as a truth of the human intellect, that every human cognition is a trinity in unity, a unity in trinity; and if every cognition is such, then, of course, logically, the cognition of God is such. But this is logic. This is a mere cold intellectual conception, and not necessarily connected with the emotions or sentiments. We must try and get out of the sphere of human conceptions into the sphere of real existence.

It may be, and is, clear to the intellect, and not to be gainsaid or denied intellectually, that if, as Theists, we admit the real existence of one God, a God of *self-knowledge*, then, as the self-knowledge of man is a trinity in unity, that Being, whose unity we admit as Theists, must be, according to every human conception, a trinity in unity, a unity in trinity; because, according to the constitution of man's mind, any other human conception of a God of self-knowledge must and would be self-contradictory, and would deny the original admission of the nature of self-knowledge and of God. I say that men who use the words GOD, KNOWLEDGE, PERSON, FACTOR, must either logically contradict them-

selves, or admit the truth, the verbal truth, of unity in trinity, and trinity in unity, as applied by Christians to the real existence and nature of a God of self-knowledge. For all self-knowledge, according to man's intellectual nature, does of necessity imply THREE distinct things, factors of one thing,—how combined we know not, even in the least knowledge we possess. The object, the subject, and the word are combined as factors in our least cognition. But how they are combined, or how they produce cognition, we know not, even in the least cognition. And, of course, we are infinitely more incapable of knowing their nature and relations in reference to our knowledge of the nature of the *First Cause* of all things.

Each man feels and knows in his own mind the clear distinction between emotion, intellect, and will—the three factors of the human mind, which we each perceive in ourselves. Each of these has a distinct mental activity, a life of its own, and is in itself a MIND. The calm intellect, the strong emotion, the resolute will, are all different, and cannot, even in man, be confounded together, though they all three exist together more or less in each of us, and in every earnest action. They are factors of the human mind, each distinct; and each by itself is mental or a mind. But how they are combined into ONE human mind we do not know.

But when we venture to think or speak of the real internal nature of that one supreme God in whose image we are made, and concerning His emotions, intellect, and will (if we can apply such language to God), then His nature must be infinitely more incomprehensible to man than man's nature is to himself. The Deity becomes wholly and altogether incomprehensible, and we

can only speak or reason about man's conception or cognition of the infinite and absolute ONE.

But, nevertheless, the verbal, the logical truth of the trinity in unity, and unity in trinity, of the Godhead is, I say, strictly deducible from the two assumptions of God, and of knowledge such as may be possible for man to conceive and know ; if He be considered as an OBJECT to be known, a SUBJECT which can know it, and a SYMBOL which can express the knowledge.

It is the law and constitution of the human mind, and of human cognition ; and unless we verbally contradict ourselves, we can neither deny that to man's conception there are and *must be three* persons, factors, *units*, in the Godhead, nor that there are *three factors* in human knowledge.

Intellectually, the two doctrines rest upon the same fundamental fact, that man cannot conceive knowledge or self-knowledge except as the product of things, minds, and words. A thing, a mind, and a word—three things—are the necessary or never-ceasing factors of each and every human cognition and conception, and therefore of every true human cognition and conception of a God and of self-knowledge, and of that Being whom we term the God of self-knowledge—the Great and Living First Cause.

But men, of course, can verbally deny both truths ; but if they attempt to prove or sustain what they say, they must contradict themselves and call A and not-A by the same name. They may deny that knowledge is the product of things, minds, and words ; they may deny that self-knowledge is the product of object, subject, and thought, each indistinguishable in man's self-knowledge, and yet each intellectually distinct from the others ;

they may deny the trinity in unity, and unity in trinity of man's self-knowledge ; and may deny that the mind the object, and the mind the subject, and the mind thought of, are either not three or that they are not one ; but, nevertheless, they are both one and three in every clear and honest intellect which is unwilling to contradict itself—three *units* multiplied and forming one *unit*. They are three distinct thoughts and yet one distinct thought at one and the same time—three distinct things intellectually, and yet one thing actually. And there is no greater difficulty in conceiving three distinct Persons in one God, and each in Himself God, and yet no more three Gods than man's mind as an object and man's mind as a subject and man's mind as a thought, when engaged in thinking about itself, are three minds. They are not three distinct minds, but one mind thinking of itself, possessing a nature created in the image of God, and capable of self-reflection and self-examination and self-direction—three selfs in one self, all distinct and yet the same. This we all know and feel to be true and reasonable in ourselves ; and the Christian doctrine of three Persons in one God, each Person in Himself God, and yet not three Gods, is equally reasonable, and most certainly true ; and no man, without self-contradiction, can logically deny it. The factors of self-knowledge are *personæ* of self, or otherwise we must say that self is not-self.

But some may object, "You only prove that every conception is a unity in trinity, and thence you may deduce that the human conception of God is such, but not that God Himself is such ; and the same reasoning would go to show that the sun or moon is a unity in trinity because our conceptions of them are such !" But

this is to confound matter and spirit, and to confuse mind and body. A mind or spirit is a being of *self-knowledge*, a conception formed by reflection on the workings of our own minds in *self-reflection*, when we feel ourselves observing *ourselves*, and thinking thoughts embodying ourselves, our very spirit, in words—when we perceive that our own mind is an object, a subject, and a thought, action, or word; at the same time, one in three and three in one. But God is a Mind or Spirit!

And we say and conclude logically that God, in whose image we are made, must logically be such a Being to man's conception, and this quite independent of the special revelation given us by Christ. We may reject Christ's revelation, but we cannot logically reject this triune conception and form of God, if we accept the doctrine of God as a Spirit, in whose image man's spirit or mind has been created—without self-contradiction.

We may reject the revelation, but we cannot, without logical self-contradiction, deny that such a God must be, to man's most accurate conception, a Unity in Trinity, a Trinity in Unity, a self-regarding, self-directing Spirit, capable of developing His very spirit in a word, symbol, or outward character and person as the Great Exemplar of the God of Love, the express image of the Divine Father in all His thoughts, words, and deeds as a God of love! The fact that Christ is such a divine Being may of course be denied; but the reasonable and logical *possibility* of His being such cannot be denied without logical self-contradiction. But, then, we are not here concerned with theology, but logic and philosophy.*

* Mr Babbage is one who believes in God and in miracles, and we are indebted to him for the best refutation, on materialistic principles,

This truth of Trinity in Unity, of Unity in Trinity, as received by the Christian Church, is therefore a necessary, never - ceasing, and undeniable intellectual and logical truth; and every intellect which refuses to receive it is self-contradictory—in Logic!

But deep and mysterious as is the doctrine of the Trinity, and necessary as it is to the truthful inner convictions of the Christian, it is still only a *verbal* truth. No man can say more than that men must and ought so to think and speak of the Deity. No man, perhaps, would be so presumptuous as to say, or even to think, that he has attained any knowledge of the *real* nature of his Creator because he has learnt both from revelation

of the false notion of the impossibility of miracles (*ante*, p. 464); yet observe the juxtaposition of these three paragraphs:—

(1) “The Athanasian Creed is a direct contradiction in terms. If three *things* can be one *thing*, then the whole science of arithmetic is at once annihilated, and those wonderful laws which, as astronomers have shown, govern the solar system, are mere dreams. If, on the other hand, it is attempted to be shown that there may be some mystic sense in which three and one are the same *thing*, then all language, through which alone man can exert his reasoning faculty, becomes useless, because it contradicts itself, and is untrue.”

(2) “The great basis of virtue is *truth*—that is, the constant application of the same word to the same thing.”

(3) “The first element of accurate knowledge is *number*—the foundation and measure of all he knows of the *material* world.”—Babbage, *Autob.*, p. 404.

How strange it is to find such passages immediately following each other as above, and yet that such an able author should never have seen that there is nothing either absurd, mystic, mysterious, contradictory, or false in *three* numbers being *one* number, or three *units* being factors of one *unit*! The factors are all equal; and yet the product is arithmetically equal to, and no greater than, any one of them!

There is no mystery here to any one who knows number and arithmetic; and, on the contrary, it is logical and arithmetical truth, and number is the basis of truth.

Now if, as a psychological phenomenon, one thinks and asks one-

and from reason to speak and use certain words and symbols for the moral building up of his own thoughts or mind after the manner of the Bible, or in the words of trinitarian Christianity. The moral application of the doctrine is distinct from its intellectual perception. Man may gabble the words of the Church without the Holy Spirit having yet touched his heart. Nay, his intellect may be clear, and he may be able to reason and confute, and yet his will may be evil, and his heart unborn of the Holy Spirit, unregenerated, and reprobate in thought and mind; calling Christ "Lord, Lord," but not doing, or attempting to do, the things which He said, and worshipping the Father neither in spirit nor in truth! But the real nature of God in Himself remains, and must ever remain, wholly unknown, ex-

self, What could possibly prevent such a clear-headed author from seeing the truth, that the first paragraph above quoted is in direct logical contradiction to the last—*i. e.*, that "the first element of accurate knowledge is *number*," and that "if *three* things can be *one* thing, then the whole science of arithmetic is at once annihilated,"—that these are two propositions directly self-contradictory, according to arithmetic itself; because any three *numbers* may be and are one *number*, and three equal units as factors multiplied and complicated together, arithmetically, are only *one* unit; if, I say, we ask how the author was blinded to the truth, and wrote the above contradiction, I answer that it seems to me that it was in consequence of the Socratic doctrine contained in the middle paragraph—*viz.*, that the great basis of *virtue* in man is *truth*—*i. e.*, that virtue is a species of knowledge, as Socrates was inspired to maintain. This falsehood, that virtue is founded on truth, in place of truth being founded on virtue, aided and followed by the philosophical doctrine that *words* are the names of *things*, and not the names of our thoughts of things—*viz.*, that "truth is the constant application of the same word to the same thing," instead of to the same thought of the thing, shows clearly, from the immediate context of the "*material world*," that the author was evidently mixing up and confusing in his own mind the two things matter and mind, and so came, before his thought was completed, to think of *things* as only *material* things—but thoughts and words are also *things*.

cept in words, signs, and symbols. But the humble Christian will try to use the verbal truth in the way his Saviour and his Bible teach him. He will pray for the gift of the *Holy Spirit* to worship the *Father* in spirit and in truth, through and by the instruction of the *Son*. "If ye, being evil, know how to give good gifts to your children, how much more shall your heavenly Father give the Holy Spirit to them that ask Him?"

The intellectual conception and the moral conception of the Trinity in Unity are distinct and different just as the intellect of man differs from his moral sentiments and religious emotions. "No man cometh unto me except the Father draw him," said Jesus; and it requires an infinite Spirit to inscribe the true moral conception of the Trinity upon the fleshly tables of the human heart. But it is not only an intellectual but a moral truth that the first existence is to the human mind a Trinity—the Creator, the Redeemer, the Sanctifier—the three co-equal units in the first unity—the Father, the Spirit, and the Word of God, who is Christ the Lord, our great exemplar, the only true and perfect symbol of divine love!

When, therefore, a Jewish peasant coming forward as the long-foretold and long-promised Messiah publicly announced the doctrine, "I and my *Father* are *one*," "He who hath seen *me* hath seen the Father," and "the Father shall give you another Comforter, even the *Spirit*, of Truth: He dwelleth with you, and shall be in you, and ye shall know that I am in the Father, and ye in me, and I in you,"—He revealed a truth which, incomprehensible as it may be to man's mind, and altogether above reason, and not deducible thereby, concerning God and Man; is yet not only consistent with the highest

reason, but any other human conception of the Deity necessarily ends in self-contradiction, and is inconsistent with the very constitution of the human mind itself!

God is an OBJECT of worship, a Creator and Father. He is a SUBJECT, or mind or spirit, combining with, comforting, and supporting, or dwelling in and with all good minds; and He is also the divine WORD or symbol, the highest human exemplar, a man possessing the divine spirit "without measure," or, as the Church of Alexandria expressed it, "inferior to the Father as touching His manhood, but equal to the Father as touching His Godhead." The distinct personality of the SON and HOLY SPIRIT is a marvellous revelation, but it is consistent with the highest reason. The Trinity is not three relations of God to mankind, but three Persons in one Deity, or three Relations to Himself. And if any man argues that such a conception of the Deity is a conception of three Gods, we answer that he is as logically absurd and inconsistent as if he argued that the conception of human self-knowledge is a conception of three men or minds, and not, as we have shown it to be, a conception of one man or mind existing in three necessary minds in relation to himself—emotion, intellect, and will, as an *object*, a *subject*, and the *word* or thought—the necessary connection or relation or emotion between them—without which a man or mind as a being of self-knowledge cannot logically exist, or be rationally conceived by any thoughtful and careful human being. Thus are the deepest truths of revelation, which a child can apply to his own self-improvement, consistent with the highest reason on which a man can exercise his intellect.

The great first *Cause*, therefore, the first great existence, the Deity, the Godhead, is of necessity—*i. e.*, never-ceasingly, to the human mind, according to man's intellectual constitution, a Unity in Trinity, a Trinity in Unity; and any other conception of the Deity is self-contradictory. But the religious and emotional application of the doctrine of the Trinity, to the edification or building up of a Christian spirit in man, is of course altogether distinct and different from the logical and intellectual conception of that doctrine. We are not, in this work, in any wise concerned with the religious or emotional use of the doctrine.—That is properly the subject of moral sentiment in the Soul, and not of pure intellect or Philosophy, and to the latter we confine our argument.

Man has free choice, and free will, and can always refuse to believe either in mind or in any of its facts. He may even feel, like a fool, a pride in choosing wrong. If he were not given this freedom, he could not worship in spirit and in truth. His spirit would be bound, and his truth questionable. But Man cannot find any logical refuge, any intellectual shelter, which will stand the test of rational examination in denying this great revealed truth of the Trinity in Unity, the Unity in Trinity, of the first great Cause—of Him who is the author of all that truly exists except the actions of Evil Minds—those evil existences or evils which inferior but evil minds, have themselves created not by His divine permission, but in consequence of His creation of Free Will. The origin of evil for ever invites discussion.—Why has God permitted the existence of evil? But the difficulty is beyond man's solution, as it seems to me, except it be, as I believe, the consequence of

the creation of Free Will without which there could be no worship of God in Spirit and in Truth. But Man was not the first spirit created with free will to see the *Truth*, and choose the Evil—*i.e.*, the *Lie*; but like all origin, the origin of evil is insoluble to man, except, as merely moral, and intellectual speculation.

True Religion, however, is not Theology; it is neither logical nor intellectual; for religion is emotional, and sentimental, and practical. Though consistent with the highest reason and intellect; yet religion is properly confined to the emotions, the sentiments, the actions—deeds, not words! We cannot properly understand this till we have perceived and adopted the division of the *soul* into its three departments, or component minds—emotion—intellect—and will. The last is the governing sentiment which directs the whole soul, but is itself still subject to the *spirit*, by which a man chooses to govern himself, or to be governed!

The theological doctrine of the Trinity, has, therefore, only an indirect bearing upon the emotional and sentimental convictions of the soul; but without these last the whole question and doctrine become merely logical symbols, without religious thought or religious reality! But neither the love of God, nor the love of man, admit of any purely logical or intellectual definition; and the attempt to define or limit them logically or intellectually, is for the time death to the emotion or sentiment! *Love* perishes if we attempt to define or limit it by any symbolical Forms—*i.e.*, in the mere intellectual conception.

But nevertheless the purely intellectual perceptions of Truth and Beauty, in motion and form, may ultimately deepen and increase the warmth of the real

emotion and sentiment; and a man may become through his intellect, more ready, even to die, for either his love of God, or his love of man; and nowhere does the Bible exhibit more clearly the depths of its divine wisdom, than when it makes human love, the symbol or type of the most perfect union between God and man—when it elevates man into the friend or the spiritual equal of his God—or when it sums up the union of the human race with its divine Creator in the apocalyptic symbol of the marriage of the Lamb—“And he saith unto me, Write! Blessed are they which are called unto the marriage supper of the Lamb.”—Rev. xix. 9.

This, however, is not the place for any discussion beyond the bare intellectual or logical discussion of the doctrine of the Trinity; but this doctrine of the Christian Trinity seems the efficient cause of many of the real or affected doubts of the authenticity of those books of Scripture which mainly support it, especially the Gospel of St John; just as the doctrine of the resurrection is at the bottom of the doubts furbished up against divers books of Scripture by eyewitnesses of the fact. Men first determine with themselves, that the doctrine of the Trinity is absurd, and that miracles are impossible, and then they set to work to invent and throw doubts on those parts of Scripture which were written by eye and ear witnesses who heard Christ's words, and did eat and drink with Jesus after He rose from the dead, and who beheld His miracles, and the majesty of His human glory, full of power and grace and truth.

If the Existence of God and the Evidence of Christianity had been made so clear and free from all difficulty, that no man could possibly *doubt*, it is manifest that

the freedom of the human *spirit* would have been, to some extent, overthrown or interfered with, and worship in spirit and truth would have been, to that extent, impossible. But when once the necessary *existence* of Spirit is admitted, and the *possibility* of miracles perceived; and the self-contradiction of those who deny either, is made logically manifest; the objections to the Divine origin of Christianity, and to the Divine nature and character of its Author, as well as the objections to the Providential Records of its early History, become mere human cobwebs, which the first touch of the Divine Spirit will brush away for ever!

THE END.

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