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JOURNAL OF  
THE TRANSACTIONS  
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1921.

623RD ORDINARY GENERAL MEETING,  
HELD IN COMMITTEE ROOM B, THE CENTRAL HALL,  
WESTMINSTER, S.W., ON MONDAY, DECEMBER 6th, 1920,  
AT 4.30 P.M.

LIEUT.-COLONEL HOPE BIDDULPH, D.S.O., IN THE CHAIR.

The Minutes of the previous meeting were read, confirmed and signed.

The HON. SECRETARY announced that the following Members and Associates had been elected since the last meeting in June:—

*Members.*—Sir James H. Cory, Bart., M.P., Alfred C. Cross Esq., Kenneth S. Maurice Smith, Esq., J. Hoskin, Esq., K.C., LL.D.

*Associates.*—H. J. Peirce, Esq., the Rev. A. E. Williams, the Rev. W. L. Armitage, the Rev. C. J. Bailey, the Right Rev. Bishop of Calcutta, H. M. Messenger, Esq., W. E. Dyer, Esq., W. S. Ainslie, Esq., Alex Wills, Esq., Alfred W. Gray, Esq., W. A. J. Giles, Esq., the Ven. Archdeacon O. G. Dobbs, M.A., the Rev. Dr. J. T. Marshall, Dr. A. E. Cope, the Rev. J. A. Brunberg, Dr. Margaret Boileau, Edward C. de Segundo, Esq., J. S. Edwards, Esq., the Rev. Harry C. Green, J. S. M. Jack, Esq., and Miss A. C. Carpmael.

*Foreign Corresponding Members.*—The Right Rev. Bishop of Honan, and the Right Rev. Bishop of Bendigo.

The CHAIRMAN then called upon Dr. David Anderson-Berry to read his paper on "Human Psychology—Experimentally Considered."

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*HUMAN PSYCHOLOGY—EXPERIMENTALLY CONSIDERED.* By DAVID ANDERSON-BERRY, M.D., LL.D., F.R.S. (Edin.), F.S.A. (Scot.).

**P**SYCHOLOGY (Gr. *Psuche*, mind; *logos*, theory), literally *the Science of Mind*.

*Science* is knowledge systematized.

*Knowledge* is of two kinds: (1) Knowledge *a priori*, that is the apprehension of self-evident principles and facts. (2) Knowledge *a posteriori*, that is the knowledge of facts of perception, internal and external.

Knowledge of the first class is called *necessary* because its objects cannot be conceived as non-existing or existing in any way different from or opposite to what we apprehended them to be; whereas knowledge of the second class is denominated *contingent* as we are capable of conceiving their non-existence or their existing in a different form.

Try the experiment. Take the great reality *Space*. You will find that you cannot conceive its non-existence or apprehend it as being different from what it is. Take the realities of *Self* and *Body*, and you will find that you can conceive their ceasing to exist or existing in a different form from what they do.

Pure sciences such as mathematics are built on knowledge of

the former kind—self-evident principles and facts. The Mixed sciences are built on self-evident principles, principles known to have universal and necessary validity, and on facts of internal and external perception known with equal certainty to be real but with *contingent* knowledge. That is the first point I would gravely emphasize, because herein lies the germ of all the errors that have been or can be made ; as we shall see hereafter.

Now for a moment consider the way in which we systematize knowledge. It is by *Induction* and *Deduction*. There is an erroneous maxim that says, In *Induction* we argue from the particular to the general, whilst in *Deduction* we argue from the general to the particular. I say “erroneous,” for in reasoning from the particular to the general we make a false inference wherein the conclusion is broader than the premise ; whilst reasoning from the general to the particular, as Mr. Mill says, involves the vicious error of *petitio principii*.

What ought we to do, then ? Begin with a principle or axiom. Under such a principle facts are induced and arranged. This is *Induction*. From such principles and the facts induced and arranged under them conclusions are deduced. This is *Deduction*.

Permit me to illustrate this by a simple illustration. “ Things equal to the same thing are equal to one another,” is the principle. A and B are each equal to C, are the facts. This is *Induction*. Therefore A and B are equal to one another. This is *Deduction*.

So much for *Science* or *Knowledge systematized*. We come next to the field to be explored. The MIND. Some would say, *the Soul* ; but that term holds a theological bias. Others, the *Mind* ; but that connotes the dualistic antagonism between *Mind* and *Matter*. And in this conflict we are not yet ready to take sides. Still others, *the Consciousness* ; but in that there is the taint of begging the question. Perhaps the best term is EXPERIENCE, meaning thereby the process of becoming expert by experiment.

This brings me to the limitation in my title “ EXPERIMENTALLY considered.”

*I do not pose as an expert in this subject, although many are the experiments I have made on myself and on others.* This course of procedure dates back many more years than I care to number to my clinical studies in the great *St. Anne* asylum in Paris and under the direction of the famous *Charcot* at the *Salpêtrière* who honoured me by calling me “ friend ” ! In spite of all these years of experience garnered from the great field of personal and other-personal experiment I confess to being but a neophyte

in this vast and mysterious subject. What I say to you I say in all humility. I can show you some of my experiments, for their subject is at hand—the Mind. That being so you can verify them if you wish. And if you disagree with my conclusions, as very likely you will, the very disagreement may prove to be an incentive to fresh thought that brings new light. When I was a boy, in a bedroom where I visited there hung a card under the gas jet with this inscription beautifully embroidered on it, *Scratch my Back!* Of course when one turned the card to do so one found it covered with sandpaper on which to scratch a match. Well, if by friction between us light springs up in the darkness, in the gross darkness, that covers large parts of this field, my work, feeble and contemptible perchance though it may seem, will not have failed in the main part of its endeavour.

EXPERIMENT I.—To divide the universe into two parts psychologically.

Concentrate your minds on *I myself* and at once the opposite *Not I* comes into view. Thus the universe is divided into the *Ego* and *Non-Ego*, the *Self* and *Not Self*, the *Me* and the *Not Me*.

This is a basic fact, the fact of Personal Identity and all that it entails. It is this that makes Psychology in the first place an individualistic science as compared with all other sciences which are universalistic.

Before we go further let me suggest to you what seems to me a fair definition of a *power* or *faculty*.

“Knowledge implies a subject possessed of the power or capacity to know, and an object so correlated to this faculty, that when the proper conditions are fulfilled, knowledge of said object necessarily arises, in consequence of that reciprocal relation.”

Here is the subject, *I*, and the object *Not I*, what faculty or power or capacity do *I* possess that when the proper conditions are fulfilled knowledge of the *Not I* necessarily arises? I reply, the faculty of *Sense* or *Sense-consciousness*.

Again, asking the same question when *I* is both subject and object, the answer is *Consciousness* or *Self-consciousness*.

Here, then, are two primary faculties of the Mind. There is another, that faculty or power I call *Reason*, or the organ of implied knowledge.

The primary faculties of the Intelligence, then, are three. (1) *Self-consciousness*, or the organ of subjective knowledge by which the facts or phenomena of the Mind are directly, immediately or intuitively perceived. (2) *Sense*, or the organ of objective

knowledge by which the facts or phenomena called *physical* are perceived. And (3) *Reason*, or the organ of original implied knowledge, which apprehends the realities implied by the facts or phenomena presented to the Intelligence by the two other faculties.

In other words, from the facts presented by *Self-consciousness* and *Sense* Reason apprehends *Substance*, *Causes*, and *Laws*, which are implied by these facts. For instance, what do we know of *Time*?

EXPERIMENT II.—Try and apprehend *Time*. Has it any phenomena such as extension and form, or feeling, willing, knowing?

It is true we may speak of something as in the middle of the week, but that has not the same meaning as if we spoke of it as in the middle of the field or room. But we can perceive events as succeeding each other, and thus time as the place of events as space is the place of bodies. In other words, *succession implies Time*, and thus we directly, immediately or intuitively apprehend Time by that power I have ventured to denominate *Reason*.

Once more, take *Substance*. We have many theories as to the nature of substance; and I only wish I could dwell on our theories as to *molecules*, *atoms*, *negative corpuscles*, *knots in the ether*, etc., but if you study the subject you will see that none of these theories and hypotheses are built on the facts and phenomena supplied to the intelligence by the senses, by the direct observation of these bodies. No man has ever seen an *Atom*, but no thinker doubts its existence. Why? I venture to reply, Because through his *Reason* Substance (*sub*, beneath; and *stare*, to stand) is apprehended, for phenomena imply substance, and is apprehended with the same certainty as phenomena are perceived by faculties of sense and self-consciousness. That being so we cannot doubt its existence or else we must proclaim (as Sir William Hamilton said) "consciousness to be a liar from the beginning" and thus put an end to all science.

Naturally different phenomena imply different substances, although some may be common to both, hence the maxim, *It is not all gold that glitters!* How much more certain must we be, then, if no phenomena are (not one little phenomenon even) common to both. Now our *Sense* gives us as phenomena perceived *form*, *extension*, *colour*, etc; and our *Self-consciousness*, the phenomena of *feeling*, *willing*, *knowing*. These are two entirely different classes of phenomena. Therefore the substances implied by them must be entirely different. We call the

substance implied by the former *Matter*, and that by the latter *Spirit*.

*There are thus four great realities in the Universe—Matter, Spirit, Space, Time.*

Consequently there are four psychologies possible—four, no more, no less.

(1) *Materialism*, by which matter is proclaimed the only substance, and mind but a secretion of the brain as bile is of the liver.

(2) *Idealism*, by which spirit is proclaimed the only substance. Of *Idealism* we have four principal forms. (a) *Ideal Dualism (Immanuel Kant)*. Here we have spirit divided into two, first that which produces the *noumena* or what appears to be the world without, and that which produces the *phenomena* or the world within, with *space* and *time* as frameworks produced by the mind for the noumena and phenomena. (b) *Subjective Idealism (Johann Gottlieb Fichte)*. Fichte took away the external object which he denied. The mind was everything. Thus the advocates of this system in the German Universities used to close a lecture by saying "Having completed our generation of the universe, to-morrow, gentlemen, we will generate God." (c) *Pantheism (Freidrich Wilhelm Joseph Schelling)*. Kant, to account for sensation, postulated an unknown entity exterior to the Ego. Fichte found the cause of sensation in some unknown and unconscious and spontaneous activities within the mind, and thus deduced Nature exclusively from the Ego. For this subjective and finite Ego, Schelling substituted an objective and infinite Ego which he called the Absolute. All the struggles, the sorrows, the sins and the sufferings of the world is the Absolute and infinite coming to consciousness in the Conditioned and finite. This is *Pantheism* or the All is God.

Still the Mind driven on in its search for Unity arrives at (d) *Pure Idealism (George Wilhelm Freidrich Hegel)*. This is the system that has as its basic fact the formula "Being and Knowing must be one and identical." And if you wish to learn how Hegel brings it about so that the mind bows before this formula and perceives Being and Knowing to be One and Identical, read Hutchinson Stirling's *Secret of Hegel* from beginning to end. The Thinker is gone. The object of knowledge is gone. Thought alone is left, alone is real.

\*When you have done this you will be ready to perceive how *Scepticism* in the history of the world's thought always follows, as *Materialism* precedes, *Idealism*.

(3) Scepticism. Its basic principle is "All our knowledge is mere appearance, and the realities existing behind all appearances are and for ever must be unknown." This is the attitude of the Agnostic, or to translate his Greek name into the commoner Latin, the Ignoramus.

David Hume, the prince of Sceptics, whose arguments, once his premises are granted, are considered invulnerable to attack and impossible to refute, writes: "Should it be asked me whether I sincerely assent to this argument which I seem to take such pains to inculcate, and whether I be really one of those sceptics who hold that all is uncertain, and that our judgment is not in any thing possessed of any measure of truth or falsehood, I should reply that this question is entirely superfluous, and that neither I nor any other person was ever sincerely and constantly of that opinion."

Why, Mr. Hume? Mr. Hume answers: "Nature, by an absolute and uncontrollable necessity, has determined us to judge as well as to breathe and feed; nor can we any more forbear viewing certain objects in a stronger and fuller light upon account of their necessary connection with a present impression, than we can hinder ourselves from thinking as long as we are awake, or seeing surrounding bodies when we turn our eyes toward them in broad sunshine. Whoever has taken pains to refute the cavils of this total scepticism has really disputed without an antagonist, and endeavoured by arguments to establish a faculty which Nature has antecedently implanted in the mind and rendered unavoidable."

And once again: "Nature is always too strong for principle. And, though a Sceptic may throw himself or others into a momentary amazement and confusion by his profound reasonings, the first and most trivial event in life will put to flight all his doubts and scruples and leave him the same, in every point of action and speculation, with the philosophers of every other sect, or with those who never concerned themselves in any philosophical researches."

What is the fundamental error that lies behind these systems?

Let me put it in Sir Conan Doyle's words in respect to Spiritism what this fundamental error is. He writes, "the agnostic attitude, which is the ideal starting-point for the truly scientific mind." That is to say, if we put out one eye of our intelligence, either *Sense* or *Self-consciousness*, so that we can only apprehend *Spirit* or *Matter* to be the one or only substance, or better still all our eyes, so that we voluntarily put ourselves in the position



of the man who closes both eyes and says, "Now I begin to see!" we are on the high road to the discovery of all the mysteries of life and death and future destiny.

(4) Realism. This is what I denominate the attitude of the thinker towards the world and himself. Matter, spirit, time, space, are to him the four great realities. He accepts them with the facts, attributes, phenomena, laws and principles, accompanying them as the truth.

I would add here that this is the philosophy of the Bible. Our Lord Jesus Christ, whose teaching is truth without any admixture with error, tells us that "God is spirit." The first verse of the Bible affirms the truth of Realism. "In the beginning" (*time*) "God" (*spirit*) "created the heaven and the earth" (*matter and space*).

You may say that all this is more metaphysics than psychology, but please remember what Mrs. Browning says poetically (and Ernst Haeckel says aggressively),

"A wider metaphysics would not harm our physics."

And Aristotle two thousand years ago wrote that they who forsake the nature of things or axiomatic first truths will not and cannot find anything surer on which to build.

Having dealt with the primary faculties of the mind let me just mention the secondary ones. These are four in number.

(1) The *Understanding* or conception forming faculty. From the elements given by the three primary faculties the Understanding builds up conceptions or notions, particular and general.

(2) The *Judgment* or logical faculty. It affirms the relations existing between conceptions or notions. Its declarations are of two classes, intuitive and deduced. Where we have the subject implying the predicate there we have an intuitive and necessary judgment. For instance, body implies space; succession, time; phenomena, substance; events, a cause: and, things equal to the same thing are equal to one another.

Where we find that the subject does not imply the predicate but the relationship between them is directly and immediately perceived, the declaration is a contingent judgment. When the relation is discerned not immediately but through other judgments, we have an inferred or derivative judgment.

(3) The *Memory* or Recollection. This is the associating faculty.

(4) The *Imagination*. This is the blending power by which the elements of thought given by all the other faculties are formed

into conceptions which do not correspond to realities as they are in themselves, but into ideas of the sublime, the beautiful, the grotesque, the grand, etc.

EXPERIMENT III.—*Concentrate your mind for a moment on yourself and you find that you are conscious of "I myself" apart even from the body.*

*Thus I know that there is a co-ordinating presiding power somewhere within me. I am I. I am one!*

When I was a student at the University of Edinburgh we of the Natural History class had the freedom of the magnificent Museum of Science and Art adjoining.

I remember standing before the case where the material constituents of a man were graphically displayed. A flask of water and a handful of dirt, with the intimation that (roughly speaking) 75 per cent. is water, and 25 per cent. are solids. Or, to take a human weighing 12 stone, the water weighs 9 stone, and the solids weigh 3. And that, the materialist says, is all!

That reminds me of the tale of the one-legged stork, or what the fool answered Hamlet when he asked, "Who is to be buried here?"

"One that was a woman!

But, rest her *soul*, she is dead."

Socrates, the wisest of the Greeks, knew better. Plato relates his saying on the eve of his death: "You may bury me if you can catch me"; and "Do not call this poor body Socrates. . . . I would not have you sorrow at my hard lot, or say at the interment 'Thus we lay out Socrates'; or 'Thus we follow him to the grave and bury him.' Be of good cheer: say you are burying my body only."

Let us turn to the contemplation of our bodies for a moment. The morphological unit is the *cell*; and seeing the amount of water we may well call the cells of our bodies aquatic cells!

Cienkowski made some interesting observations on the *Vampyrella Spirogyræ*.

This is a minute red tinged aquatic cell without any apparent limiting membrane, and quite structureless. This minute blob of protoplasm will take only one kind of food, a particular variety of algæ, the Spirogyræ. He describes how this minute cell creeps along the Confervæ until it meets with its prey. He never saw it attack any other kind of algæ, in fact, it rejected Vaucheriæ and Œdogoniæ put in its way. From his observations Cienkowski writes: "The behaviour of these monads in their

search after food and in their method of absorbing it is so remarkable, that one can hardly avoid the conclusion that the acts are those of conscious beings."

From his remarkable observations on the *Arcellæ* Engelmann writes: "It cannot be denied that these facts point to psychical processes in the protoplasm." Any of you who have worked out the opsonic index in a consumptive patient will agree with me that the actions of the white corpuscles of the blood lead us to the same conclusion. Take also the cells of the body that have specialized. Some will select the nitrogenous waste products in the blood and remove them. Others will select the materials that are needed to make up the fluid that is required for the nutrition of the young of the species. Think also of the newly discovered secretions, *hormones*, which, secreted by one set of cells, are required for the stimulus that will enable other sets of cells to secrete their substances in right proportions and due quantities.

The more one studies these cell actions the less one finds the mechanical hypothesis adequate and the more one is led to declare that psychical powers and phenomena are required to explain life and its processes even when these seem most material.

The functions and powers of the body may be divided into two classes, the *vegetative* and the *organic*. The former functions are those of assimilation, reproduction, growth, etc. The governing principle here is adaptation—adaptation to the body's environment and to the various relationships that arise.

The latter, that is, the organic, are the faculties or instruments (Gr. *organon*, an implement) by which that environment becomes known; or, in other words, the mediating powers between the world of matter and the world of mind. The energizing principle here is Motion.

As my kind friend, Sir David Ferrier, writes: "That the brain is the organ of the mind, and that mental operations are possible only in and through the brain, is now so thoroughly well-established and recognized, that we may, without further question, start from this as an ultimate fact. But how is it that molecular changes in the brain-cells coincide with modifications of consciousness; how, for instance, the vibrations of light falling on the retina excite the modification of consciousness termed a visual sensation, is a problem that cannot be solved. We may succeed in determining the exact nature of the molecular changes which occur in the brain-cells when a sensation is experienced; but

this will not bring us one whit nearer the explanation of the ultimate nature of that which constitutes the sensation. The one is objective, and the other subjective; and neither can be explained in terms of the other. We cannot say that they are identical, or even that one passes into the other, but only, as Laycock expresses it, that the two are correlated." (*Functions of the Brain*, pp. 255, 256.)

EXPERIMENT IV.—If you like to try it—*Press the point of a pin into your finger. You feel a pain.*

What causes that pain? The point stimulates the little bulbous bodies in which the sensory nerve fibres end and sets up changes, movements, waves, vibrations, what you like, in the nerve substance. This molecular movement runs up at the rate of 100 feet per second the sensory nerve; the posterior part of the spinal cord; and so on until it reaches the Rolandic area of the brain. It ends there—in cells.

Now we can prevent that pain by (1) poisoning the sensory nerve endings by certain drugs known as local anæsthetics; (2) by dividing the sensory nerve or injuring the spine; (3) by poisoning the brain-cells by drugs known as general anæsthetics. But we can go further, for (4) by hypnotism we can prevent the pain being felt without interfering with the brain-cells; that is to say, without interfering with the sufferer's consciousness. Permit me to suppose that this interference takes place just where mind and matter meet.

And may I not do so since McDougall in his explanation of Hypnotism in the *Encyclopædia Britannica*, 11th Ed., writes thus of the theory of *mental dissociation* which he thinks is the best explanation of hypnotism: "Suppose now that all the nervous connexions between the multitudinous dispositions of the cerebrum are by some means rendered less effective, that the association-paths are partially blocked or functionally depressed; the result will be that, while the most intimate connexions, those between dispositions of any one system remain functional or permeable, the weaker less intimate connexions, those between dispositions belonging to different systems, will be practically abolished for the time being; each system of dispositions will then function more or less as an isolated system, and its activity will no longer be subject to the depressing or inhibiting influence of other systems; therefore each system, on being excited in any way, will tend to its end with more than normal force, being freed from all interferences; that is to say, each idea or system of

ideas will tend to work itself out and to realize itself in action immediately, without suffering the opposition of antagonistic ideas which, in the normal state of the brain, might altogether prevent its realization in action."

Is that so? Well, if it is so I judge I may suppose that by *mental dissociation* is meant what I said, interference where spirit and matter, mind and brain-cell, meet.

Again, being in the quotation vein, I quote from Bain in his book *Mind and Body*: "Extension is but the first of a long series of properties all present in matter, all absent in mind. Inertia cannot belong to a pleasure, a pain, an idea, as experienced in the consciousness. Inertia is accompanied with Gravity, a peculiarly material quality. So colour is a truly material property; it cannot attach to a feeling, properly so called, a pleasure or a pain. These three properties are the basis of matter; to them are superadded Form, Motion, Position, and a host of other properties expressed in terms of these, Attractions and Repulsions, Hardness and Elasticity, Cohesion and Crystallization. Mental states and bodily states cannot be compared."

And Professor Tyndall: "Molecular groupings and molecular motions explain nothing; the passage from the physics of the brain to the corresponding facts of consciousness is unthinkable: and if love were known to be associated with a right-handed spiral motion of the molecules of the brain, and hate with a left-handed, we should remain as ignorant as before as to the cause of the motion."

Here we are left then with your pain. We have traced it from its source in the finger to its destination in the Rolandic area of the brain, and we are left there with its being still a motion amidst molecules. But what you feel is not a motion but actual pain. It may be merely a pin-prick, still, as Tyndall says, the passage from motion in the molecules to pain in the mind is unthinkable. On the one hand there is something that moves; on the other there is something that feels. These are, they must be, different substances. True, Bain combines the two by saying that the phenomena of matter and the attributes of mind are but the two sides of one substance. That is to say, two irreconcilably antagonistic sets of phenomena and attributes belong to one substance.

There is, then, no truth in what we saw to be a principle, necessary and universal, to wit, *phenomena imply substance!* and, consequently, *different phenomena imply different substances.*

But we agreed that it is true, so Professor Bain is wrong. As Professor Tyndall truly says, "It is no explanation to say that the objective and subjective effects are two sides of one and the same phenomenon. Why should the phenomenon have two sides? This is the very core of the difficulty. There are plenty of molecular motions which do not exhibit this two-sidedness. Does water think or feel when it forms into frost-ferns on a window-pane? If not, why should the molecular motion of the brain be yoked to this mysterious companion—consciousness?"

The doctrine of materialism, namely automatism, claims for "the growing province of matter and causation" that it will carry "the concomitant gradual banishment from all the regions of human thought of what we call spirit and spontaneity." Leibnitz taught that the chain of physical causation is not influenced by the human mind; that the chain of mental causation is equally unaffected by matter: and that the two chains are mutually independent although in correspondence—the two parallel series are like two unconnected clocks so constructed that when one points to the hour the other strikes it—but that this harmony is one pre-established by the Creator. Thus Malebranche, with his "We see all things in God," says: "It is He who retains together the objective and subjective worlds, which, in themselves, are separate and apart." The materialist agrees in their separation but holds that whilst the material series is independent the mental is dependent, and drops the notion of a pre-established harmony. Man is a conscious automaton.

Not so the Realist, at least so I venture to think. Brought face to face with the hieroglyphical inscriptions of Egypt and the cuneiform ones of Assyria the mind of man was long baffled in its attempts to read their meaning, but succeeded. Matter spoke to Mind. Here we have two substances face to face, matter and spirit. The phenomena presented by the former are molecular motions caused by the pressure of that pin, or by the etheric vibrations caused by these lights, or the waves in the air caused by my voice. The attributes of the latter are feeling, willing, knowing.

Consequently because of its nature it feels the vibrations and knows the pain as it wills to do. Interference with the willing (as by hypnotism) breaks the chain between feeling and knowing: to put facts immaterial into language belonging to the material. Granted that mind is of an independent substance possessing these attributes, then to me the phenomenon known as telepathy is simple to understand. For instance, my son and I on a winter's

evening would sit beside the fire on opposite sides of the hearth. One of us would take whatever coppers happened to be in his pocket, and choosing one would concentrate his mind on the date stamped thereon. The other would give that date correctly.

It was a modest little experiment, but I relate it because there can be no doubt as to the *bona fides* which have been questioned in the case of more striking ones. Mind spoke to Mind.

EXPERIMENT V (AND LAST).—Please concentrate your minds on yourselves.

Look back to the dawn of consciousness. Many things have happened to you since then, many strange experiences perhaps, but they are like beads strung on one cord, they all happened to and were felt by you. Personal Identity is that cord. Now here is the more difficult part, and I am ready to admit that we may not agree. Look forward to the moment of your departure from this world. I have often in this manner stood there, and I have never felt that at that moment I might cease to exist as the *I* or *Ego*. I have tried but in vain to conceive of this mysterious self within that feels, wills, knows, sinking into nothingness. It has survived so many shocks that the longer I live the more I become assured that oblivion, and that for ever, is not its goal. As I say, you may not agree with me, but there it is ; one at least feels it.

I wish to turn your attention in this experiment to the beginning of your existence. A minute cell or ovum ; a still more minute (so minute that three million would not fill a cubic millimetre) sperm-cell : these two unite and the germ cell begins to split up into two, then four, and so on, until is built up that organism I know as myself. What is evolved must first be involved. From that conjunction comes not only a man, any man, but *the* man with physical and mental characteristics and traits that mark him out distinctly as the son of his parents, and the product of a long line of ancestors. Thus Professor Huxley, after describing the development of a living creature from an egg, adds these remarkable words : “ After watching the process hour by hour, one is almost involuntarily possessed by the notion that some more subtle aid to vision than an achromatic would show the hidden artist with his plan before him.” To illustrate this power let me recall to your mind the Habsburg chin which, handed down, marked at last the most ill-fated of the Bourbons.

I would close now in the words of others :—

“ There is in man a littleness which dwarfs and cramps all that is strong and noble in him ; but there is also a grandeur hard to

understand except as the image in a warped and tiny mirror of a grandeur elsewhere existing, over which such limits have no sway. Man has a *Will* so weak as to be drawn aside from the right by the most unworthy allurements, daunted by the most despicable difficulties, palsied with ignoble sloth; yet capable of holding its own purpose and choice against the world. He has an *Intellect*, weak enough to be befooled by transparent fallacies and led astray at every step by prejudice and passion; yet powerful enough to measure the distances and motions of the stars, to track the invisible sound-waves and light-waves in their courses, and to win from Nature the key of empire. He has *Love*, which wastes itself among the dregs of life, or suffers selfishness to wither it at the root; but also which is able to lift him to the sublime height of self-sacrifice and is the inexhaustible fount of the deepest and purest happiness he knows or can imagine. He has *Conscience*—the sense of right and wrong—easily perverted, and which has by turns justified every crime and condemned every virtue; yet which nevertheless proclaims that right, not wrong—everlasting righteousness, not self-willed injustice—is the imperial law of the universe. I ask, Is the scale in which these attributes are seen in man their true scale? Is it reasonable to think so? Do they not assure us, as with a voice from the very depths of our being, that there must be a SUPREME WILL, irresistible, unswerving, pervading and controlling the universe; the source of all law, but a law to itself; guided unchangeably by infinite knowledge, absolute righteousness, perfect love?

“The teaching of Christianity is definite on these points. It encourages the hope that in a higher condition of existence our best aspirations shall be allowed a wider scope. There will be provision for increase of knowledge: for here ‘we know in part,’ but there shall ‘we know even as we are known.’ There will be assimilation of character to Him who is supremely good: for ‘the pure in heart shall see God.’ There will be limitless accessions to happiness: ‘blessed are the dead that die in the Lord.’ There will be abundant room for the exercise of our social sympathies, in ‘the general assembly and church of the first-born, which are written in heaven.’ There will be, what is pre-eminently congenial to the Christian heart, intimate fellowship with Christ Himself: for there ‘shall we ever be with the Lord.’ There will be eternal security and felicity: for ‘they go no more out.’”



For as the Apostle Paul tells us in his great song of triumph over death (1 Cor. xv.), we shall be possessed no longer of a "natural" or *psychical* body, one, as I have said, adapted to its present environment, but of a "spiritual body," a body fitted for the indwelling and use of the spirit—that substance of which I have said so much, but regenerated and fitted for dwelling with "God," Who "is spirit."

I close with the words of Thomas Carlyle: "I suppose it is a reaction from the reign of cant and hollow pretence, professing to believe what in fact they do not believe. And this is what we have got: all things from frog-spawn; the gospel of dirt the order of the day. The older I grow—and I now stand on the brink of eternity—the more comes back to me the sentence in the Catechism, which I learned when a child, and the fuller and deeper its meaning becomes—'What is the great end of man? To glorify God, and to enjoy Him for ever'" (*Thomas Carlyle*, November 4, 1876).

In the hour of death, after this life's whim,  
When the heart beats low, and the eyes grow dim,  
And pain has exhausted every limb—  
The lover of the LORD shall trust in Him.

When the will has forgotten the life-long aim,  
And the mind can only disgrace its fame,  
And a man is uncertain of his own name,  
The power of the LORD shall fill this frame.

When the last sigh is heaved, and the last tear shed,  
And the coffin is waiting beside the bed,  
And the widow and child forsake the dead—  
The angel of the LORD shall lift this head.

For even the purest delight may pall,  
And power must fail, and the pride must fall,  
And the love of the dearest friends grow small—  
But the glory of the LORD is all in all.

#### DISCUSSION.

Col. HOPE BIDDULPH, D.S.O. (*Chairman*), said: The subject of the paper is too profound for ordinary laymen, but I am glad to see that *realism* received such support from a scientist, when we were surrounded by a number of vain philosophies, and it was clear to most people that our eyes and senses were given us by the Almighty to use in these matters.

Professor H. LANGHORNE ORCHARD wrote: I wish to personally

thank the able author for his luminous paper, and to express the pleasure with which I have gone with him through those five fundamental Experiments.

The remarks (p. 13) on Induction and Deduction are of great value. So also is the definition (p. 14) of Reason as the "organ of implied knowledge."

Would it not, however, be better to define Psychology (p. 12) as the Science of Soul—Soul including both Mind and Emotions? The term "Mind," from the Sanscrit *Mena* = To *Know* (similarly Greek *νοῦς*, and Latin *mens*), seems confined to the Intellect.

I especially like Experiment V (pp. 24, 25). The paradox called "Man," when carefully studied, does undoubtedly conduct and guide us into the Divine Presence. "Come, let us worship, and bow down, and kneel before **THE LORD**, our Maker!"

Dr. SCHOFIELD remarked that it was impossible to criticize *in extenso* such an analytical paper, bristling with things new and old. He must, in the brief time at his disposal, confine himself to asking the learned lecturer some questions on six points in his interesting paper.

1. On p. 12 I observe  $\psi\nu\chi\eta$  (mind), which on p. 13 is called experience; but on p. 26 I find that a body equipped with  $\psi\nu\chi\eta$  is contrasted with a body equipped with  $\pi\nu\epsilon\delta\mu\alpha$ . Is there any distinction drawn between the two in the paper? Can "spirit" ( $\pi\nu\epsilon\delta\mu\alpha$ ) be called "experience," or only mind ( $\psi\nu\chi\eta$ )?

2. On p. 15 we read of two "middles" with different meanings. Does not, however, the middle or centre of successions in time mean the same as the middle or centre of extensions in space? Is there any difference in the meaning of the word "middle," whether it be the middle of a century or a field?

3. On page 16 we read: "There are thus four great realities in the Universe—Matter, Spirit (or force), Space, and Time. *Consequently* there are four psychologies possible—four, no more, no less." To me this insistence on "four" is a puzzle.

Why are there four and not five, as laid down by Herbert Spencer and generally accepted? and why is motion, universal and perpetual, excluded, when all five are found in Genesis i, 1 and 2? Mobility, not immobility, is the fundamental law of the Universe. Why, also, "*consequently*," when the four psychologies do not even correspond

with the four realities, but include "Scepticism" as the third psychology, and "Realism" as the fourth?

4. On p. 15 I read, "Phenomena imply substance." Is this not confined to *Physical* Phenomena? What, for instance, is the substance in pain, love, hate, etc., as shown on p. 22?

5. On p. 20 we read: "The functions and powers of the body may be divided into two classes, the vegetative and the organic."

But surely, the vegetative *are* organic? Why is the usual division into vegetative as anabolic and animal as katabolic ignored? and in your second division "organic," is not the energizing principle "life" rather than "motion"?

6. We read on p. 20 as approved that "mental operations are only possible through the brain"; but are not happiness, fellowship, etc., mental operations? and is it not shown (p. 25) that these are possible without the brain?

I trust I have not been too inquisitive, and cordially thank Dr. Anderson-Berry for his interesting paper.

Rev. J. J. B. COLES said that there were one or two points in the excellent paper just read in which he did not quite agree with the learned lecturer. On p.16 he says "there are thus four great realities in the Universe—Matter, Spirit, Space and Time, consequently there are four psychologies possible—four, no more, no less." Were there not five?

Would not "in the Solar System," or in this part of the Universe, be better than in the Universe as a whole?

Euclid's geometry, according to Professor Einstein's doctrine of Relativity, may be true and applicable within the limits of the Solar System, but not necessarily so throughout the vast Universe. "He that descended is the same that ascended far above all heavens that He might fill all things."

Christ, Who is the Image of the Invisible God, the Firstborn of all creation, cannot properly be included in Dr. Anderson-Berry's Four Great Realities.

It is true He is spirit, but He is more than spirit. The union of the human and Divine in the glorious Person of the Risen God-Man is, as we know, transcendently wonderful and inscrutable. Still, with all reverence we see that to contemplate adoringly the psychology of the Blessed Lord, as set forth in Holy Scripture,

is to go far beyond any system of human philosophy and human psychology.

In Him dwelleth all the fullness of the Godhead bodily. In Him the Relative and the Absolute meet.

And just as the human mind can distinguish between the Ego and the Non-Ego, and by so doing can transcend the use of mere philosophical terms, so a man in Christ Jesus sees that no human system of psychology can ever set forth that which is Reality indeed.

Mr. W. E. LESLIE said : On p. 12, Knowledge is divided into two classes, of which the first includes the knowledge of self-evident facts. Knowledge of the fact of self is placed in the second class, although it is self-evident.

On pp. 13 and 14 are suggested definitions of the terms Deduction, Induction, and Faculty. Each, however, contains the term to be defined, and is therefore invalid.

On p. 13 four terms for "the field to be explored" are mentioned. They are Mind, Soul, Consciousness, and Experience. Of these Mind and Experience are adopted, the latter at once, and the former a little further on. Experience is further defined as "the process of becoming expert by experiment." Since these terms are equal to the same thing they are equal to each other. But how can a process be a "substance" (mind) or possess a "faculty" ?

The major premiss of the syllogism that underlies the last paragraph on p. 15 is neither Every different phenomenon implies a different substance, nor Every different class of phenomena implies a different class of substances, for from either his minor premiss would give him many substances instead of the two which he seeks to establish. The argument must therefore be—

Every different class of phenomena implies a different substance ;  
 "form, extension, colour," and "feeling, willing, knowing"  
 are different classes of phenomena—

therefore they imply different substances.

If it could then be established that these were the only classes of phenomena, it would follow that the substances they imply were the only substances. The necessary major premiss is not self-evident and therefore requires proof. None is given, and I fear none is possible.

These defects appear to undermine the foundations of Dr. Anderson-Berry's thesis.

Mr. W. HOSTE said : I do not wish to make our lecturer responsible for Kant, but could he give a little light on the quotation on p. 16, where the philosopher is made to affirm that noumena are the equivalent of " what appears to be the world without," and phenomena that of " the world within " ? To one's lay mind this seems upside down, but I suppose the conclusions of an idealist would naturally appear so to an ordinary humdrum realist. On the previous page our lecturer speaks of " perceived form, extension, colour " as phenomena, and then in the next sentence of " the phenomena of feeling, willing, knowing," but surely this makes noumena and phenomena identical. How can " feeling, willing, knowing," be properly classed at all as phenomena ?

Then I noted, on top of p. 15, that Reason is placed among the primary faculties of the Mind, and " Judgment or logical faculty," on p. 18, among the secondary ones. From the description at the hands of the lecturer it is not quite clear to my mind how they differ.

With reference to the lecturer's remark on p. 22, " Colour cannot attach to a feeling," of course one is in complete agreement ; but is it not remarkable how in a popular sense colour is associated so closely with feeling ? For instance, pink attaches to optimism : we see things through rose spectacles ; green with jealousy ; black, of course, with gloom and sadness, though in China white is, we are told, the mourning colour, perhaps out of compliment to the conventional virtues of the defunct. Then grey is synonymous with monotony : we talk of a grey existence. Bright yellow is said to favour cheerfulness, and we are advised to paper our rooms in schemes of yellow if depression is to be avoided. And then there is the experience, unfortunately not uncommon—owing, I suppose, to ugly wall-papers and other things—of being "in the blues." Why "blues" rather than greens or reds ? Red, by the way, has another association. When a man sees " red," he is not supposed to be good company. How are we to account for the fact that colours and conditions of feeling are so closely linked in the popular mind ? The reference on p. 18 to metaphysics, reminds me in passing of the *bon mot* of a witty Frenchman I once heard in a hall on the Grand Boulevard in Paris. " When a man's audience," he said, " does not understand what he is driving at, that is philosophy ; when he doesn't understand himself, that is metaphysics."

Lieut.-Colonel MACKINLAY said: I rise with great pleasure to propose a vote of thanks to our learned lecturer.

I must confess that when I looked at the programme for the session I thought that though the first paper on the list would probably be valuable to read in the annual report, that it would not be likely to attract a large audience to hear such an abstruse subject discussed.

I was therefore agreeably surprised on entering the room to find a considerable number present; my surprise was increased when the paper was read, because all gave such good and sustained attention, though a good many of us are probably not very well acquainted with the subject.

It is a matter of congratulation to the Victoria Institute that the first paper of the session is a decided success, and I am sure we all agree in hearty thanks to Dr. Anderson-Berry. His humour, and good humour, which so well sustained him in bearing the severe assaults to which he was subjected have been most helpful in giving life and attractiveness to his paper.

#### AUTHOR'S REPLY.

Mr. Chairman, sir, before dealing with the criticisms made I would draw the attention of my inquisitors to a remark in italics on p. 13 (read on to p. 14), where I deny any omniscience. Alas, I desired friction, not dreaming of a friction which would produce sparks sufficient to light a fire that would consume me to ashes at the stake!

In reply to Mr. Coles, let me say that the dictionary *sub voce* Universe says "in a restricted sense, the earth." It is in that sense I use the word.

Mr. Leslie makes my brain whirl, yet because I do use the word *process* in defining Experience I cannot be held to use it as a synonym for that word, nor does his argument require that I should, for although a pound of tea is equal to a pound of coffee because both are equal to a pound of metal (called a weight), yet tea is not coffee. Where would experience be without a faculty? A blind man has no experience of sight, being without the faculty or power of vision.

I maintain that there are two classes of phenomena—see Bain,

quoted on p. 22, where they are called *properties*. And I know of no great thinker who denies the existence of these two, mental and physical, spiritual and material, although many question or deny what underlies them.

To Mr. Hoste I can only repeat Kant's words, "The things which we envisage are not that in themselves for which we take them, neither are their relations so constituted as they appear to us."

Reason is a primary faculty by which such realities as Time and Space are apprehended in the way I describe on p. 15. It is an organ of direct knowledge.

The *Judgment*, on the other hand, deals with conceptions formed for it by the *Understanding*. Quite a different matter.

To Dr. Schofield I would reply :

(1) I deprecated the theological bias on p. 13, and here it enters. Theologically I am a trichotomist. Man is a trinity in unity—Body, Soul and Spirit.

*Spirit* is that part that knows and allies him with the spiritual creation and gives him God-consciousness ; *Soul* is the seat of personality and gives him self-consciousness ; and *Body*, as the seat of the senses, allies him to the material creation and gives him world-consciousness. Fallen man broke away from God when his soul yielded to temptations presented to it through the body, and he died spiritually. Hence, the scriptural expression for the combination of body and soul uninfluenced by the spirit—a natural or psychical or soulish body.

But speaking from the standpoint of substance, Man is built up of only two, matter and spirit. Matter, that substance of which the body is made ; spirit, that substance of which soul and spirit are constituted. Let us not confound terms that speak of substance with those that speak of function.

(2) The difference ? Simply that between Space and Time or between what is matter of fact, the middle of a field, and that which is the fact of the matter, the middle of a century.

(3) There are four great realities in this world of ours, matter and spirit, time and space. The history of the world's thinking from the dawn of history, from the *Vedas* and *Vedantas*, through Thales, Parmenides, Zeno, Socrates, Plato, Duns Scotus, Thomas, Abelard, Descartes, Spinoza, to Spencer and Paul Bergson, is a history of Idealism that denies the existence of matter ; Materialism that

denies the existence of spirit ; Scepticism that either doubts or denies the existence of both : and Realism that affirms the existence of both spirit and matter.

And this history is the history of man's experience in the great realm of thought as to the nature of the MIND, what is it ? what can it do ? and what can't it do ? And the answers given enable us to say what the answerer's psychology will be before he utters another word. At least I believe so.

(4) The one class of phenomena implies the substance we call matter, the other class the substance we call spirit.

(5) Anabolic and katabolic are merely stages in the process of metabolism whereby the body is built up and maintained. They are vegetative processes.

As I said before, the body is the seat of the senses. These are the organs of world-consciousness. Hence my use of the term *organic*. This body has to be built up, maintained, etc. Hence my use of the term *vegetative*. Of course there must be organs by which these processes are carried on, but these are merely secondary to the first. Life governs all, but without motion our senses would be idle. Light, heat, sound, magnetism, and so on, are but modes of motion. Light is etheric movement, but it is material, for, as Einstein has shown, it is bent by the force of gravity. Motion is change of position. Change in position of what ? Matter. "Spirit (or force)" Dr. Schofield says, but not I. To say spirit is identical with force is simply materialism.

(6) I do not say that "mental processes are only possible through the brain."

But in man's case the seat of consciousness is in the brain, and injury to the brain often upsets his mental processes. The quotation is meant to show that there is a great gulf between modifications of matter and mental states.

*To know all is to forgive all !* The knowledge of my imperfections may incline you to the forgiveness of the shortcomings in my attempt at the elucidation of some of the difficulties that have puzzled the students of psychology from the earliest (of whom we have any records) down through the ages unto this present day.