II.—THE SUBSTANTIALITY OF LIFE.

I.

It will be my endeavour in the following pages to demonstrate the substantiality of life; to render evident the actual existence of an identical, indivisible, perdurable, and self-sustaining substance, of which the transient phenomena, arising in consciousness, are but inherent affections. I wish, experientially, to reinstate the underlying entity, dissipated by Berkeley and Hume.

I have to set about this ambitious task in a rather humiliating manner, namely, by first assuming everything which I eventually hope to establish. I am, however, determined not to conceal any part of my working-apparatus; and do, therefore, openly presuppose as existing, and ready for action, the entire human individuality with all its faculties, assisted too by every available means of sense-extension.

This express postulation of the whole thing under discussion will probably be considered a *petitio principii* of the most glaring kind. But, without its full admission, I confess I cannot proceed a single step towards my aim. My consolation is, that, in starting with so bold and sweeping an advantage, I am only strictly adhering to the common usage of all sciences. For no philosopher will deny that, in the investigation of even the most elementary physical or mental event, it is always the feeling, thinking, and manipulating human being that constitutes the sole realising agent. Known, or unknown to the observer, it is his own matured sensibility and sentience, that actually furnish the colour and standard of any quality or value, which he may have objectively ascertained.

Indeed, whether we are viewing present phenomena of mechanical impact or chemical activity, or imagining primeval geological evolutions, or forecasting developments of the future, the great postulate, tacitly underlying all our observations and speculations, is the pre-existence and unimpaired efficiency of the complete human individual. These things are so, were so, will be so; but only when realised by beings like ourselves. The nebular hypothesis, the atomic theory, the ultimate chemical element are—as every philosopher is well aware—hypothetical facts conceived in no other form and material than that of specific human feelings, and they can, therefore, be true only when we add: “Thus these legitimately surmised realities would appear to spectators of our kind”.

Our organised lives form the broad, steady and indispensable ontological basis of all impressions and ideas, of all actual con-

nexions and fulfilments whatever. We cannot outsoar our nature. We cannot eliminate any part of ourselves. Our whole individuality is present in every inquiry; and it is always some peculiar group of our own aroused faculties that we are contemplating in any kind of investigation.

It is true that in the framing of our metaphysical schemes, we have from time immemorial been striving to transcend the sphere of our personal endowments. But it needs only sufficient candour to become aware that in all these attempts we have merely objectified, as groundwork of our cosmological constructions, sometimes one and sometimes another set of our own vital activities, and have then endeavoured to complete the totality of existence by identifying with this particular portion of ourselves all that was first left behind of our naturally indivisible being. Sometimes the whole, and sometimes only a part, of our sensations are thus hypostatized as primordial elements of the entire universe. At other times, it is the thinking or reasoning energy that is made to account for everything. Then the will. Then some special emotional affection. Or, again, a potentiality of all these subjective factors. Never anything but detached faculties of our own being, and with no other result than the transfiguration of the cosmos into a distortedly projected semblance of our personal abilities.

Philosophical systems become very transparent when viewed from this organic standpoint. As authority or custom may happen to incline us, we play fast and loose with the various potentialities of our organisation, extolling and depreciating them in turns. A special importance and dignity, however, necessarily attaches to that portion of our nature, which is conceived as the causative source of the rest. Therefrom the whole conduct of life receives its characteristic tinge. For it will not fail essentially to influence the bent of our strivings, whether we attribute effective priority and controlling supremacy to the senses or to the intellect, to the sensualised or to the intellectualised appetites. A system of ethics can be scientifically grounded only on a correct knowledge of vitality. With what uncertain feelings of propriety has humanity been wavering between the extremes of organised capacities, now for a little while getting into the wholesome and fruitful mean, and then again consuming itself in wasteful lust, or stagnating in sterile precepts!

Considering then, that the earnestness of our aims will always be directed towards the fostering of what we believe to be the embodiment of the truest potent reality, would it not be wise, once for all, ungrudgingly to acknowledge the position actually occupied in nature by the complete and indivisible human or-

ganisation? For, is not this individual and monadic totality, in fact, everywhere the really substantiating agent, the creative power whose subtle and intricate modes of normal reaction constitute the whole universe of experience called nature? And is not at all times the value of any other thing rigorously determined in every respect by the actual efficiency of the appreciating agent, by his realising qualifications then and there?

The individual human organisation forms, indeed, the actual incorporation and potential medium of all fulfilment. Whenever this truth becomes adequately established and understood, it will impart an incalculable impetus to existence, will bring designedly about, "whereof our nerves are scant," "more life and fuller". For, to recognise how in our transitory frame, by means immeasurably transcending the reach of personal volition, there has become embodied the life-worthiness of the illimitable past, is to receive the wealth of our being as a sacred trust, and to own a binding mission to labour for a progressive future.

But it is easy to profess a faith, hard to give it a solid foundation. The philosophical arbitrariness of thus dogmatically constituting ourselves the pre-endowed and realising centre of the world, lies, on the one hand, in the difficulty of accounting under this assumption for our own origin and development, on the other hand, in the difficulty of reaching, from such a focal position of mere subjective consistency, any kind of reality outside our own mind.

It must, however, be remembered that these two perplexities have irrepressibly confronted systematic thought, from whatever side it may have attempted to assimilate nature. The former difficulty has generally been allayed by traditional beliefs or hap-hazard conjectures. The latter has formed the main puzzle and theme of philosophy ever since Parmenides and Zeno first directed the attention of thinkers to the strange incongruity obtaining between the ideally completed world permanently resting in mind, and the fragmentary world transiently and incoherently figured by the senses.

Meditative reflection necessarily leads to the discovery of a disposition of ideas ever tending towards all-embracing unity and repose. Direct observation, on the contrary, is beset by a rush of phenomena ever moving through inexhaustible kaleidoscopic constellations.

In the world of thought-conception, the fundamental relation between ideas appears to be one of graduated co-inherence, of involuted union; any detached notion forming an integral part of a pre-existing and wider totality. In the world of sense-perception the fundamental relation between phenomena seems

to be one of more or less orderly sequence and change, a regulated passage from one state into another.

In the realm of ideal or logical subsistence, things are, even through discursive reasoning, more and more adequately recognised to be what they are for all times. In the realm of physical or phenomenal display, existences are perceived continually to cease to be what they were, and to become something entirely different.

To which of the two orders then belongs genuine reality? To the ideal, to the physical, or to both? And how are these so disparate, and yet so intimately interblending worlds to be reconciled, to be comprehended as co-operant parts of one and the same totality?

This is the great dilemma of the immutable and the flowing order that has perplexed philosophers for more than 2000 years, and we also, in spite of so many baffled attempts, are still persevering in the endeavour to gain access to the secret. From "ideal realism," *i.e.*, the projection into transindividual and autonomous existence of the logical order, to "empirical realism," *i.e.*, the projection into transindividual and autonomous existence of the physical order, every imaginable combination has been essayed. But, however contradictory to each other these sundry philosophical constructions may be, they have one and all received their cue in direct continuity from the Eleatic antinomy. This one idealistic *aperçu* has undeniably formed the fertile source of all our systems. The atomic systems, the sceptical systems, the Socratic systems of antiquity avowedly take their rise from this same unquenchable fountain-head of doubt. And it would be unpardonable in us who owe to ancient Greece almost our entire culture, not generously to acknowledge also the philosophical inheritance which it has bequeathed to us, and which it seems to me we have not yet succeeded in very essentially improving.

Is not the problem of the relation and intercommunication of the thinking and the extended substance, of the intelligible and the sensible world, which has formed the subject-matter of philosophy since Descartes, merely a revival of essentially the same puzzle concerning reality? Even the Critical Philosophy, with its copious appliances and minute distinctions, has it not after all only elaborately fortified the Eleatic position by deepening the gulf between the foreign influences underlying the chaos of appearances arising within our sensibility, and the transcendental subsistence of their conceptual transfigurations? Kant's great effort to reconcile through reason the intelligible and the sensible world has proved a failure like all former attempts. In the system of

critical idealism, the conceptual order mentally fashioned and qualified resides as infallible actuality, as ideal and undeviating object, in a general superindividual consciousness. But where, on the other hand, do we find sustained the reality of the affecting powers, of the things outside consciousness? What can it avail passionately to denounce as mystical and fantastic previous forms of idealism, and peremptorily to decree by dint of reason the existence and efficiency of an outside world, when there is no imaginable way left open by which external influences can at all specifically qualify the passive and empty forms of sensibility—pure ideal time and space? And, besides, if the influences that are admitted somehow nevertheless to affect our sensibility are actually things-in-themselves, and if our intelligible Ego also belongs to that order; then, as all spontaneous and synthetical activity emanates from the intelligible Ego, is it not likely that under such conditions reason would indeed recognise the transcendent nature of things-in-themselves, would reconstruct from the incoherent data given to sensibility, by force of its own transcendently derived faculties, the eternal aspect of the intelligible world?

The transcendent oneness of subject and object, the identity of thought and being involving the existence and supreme reality of an absolute substance—the very doctrine enunciated by the Eleatic sages—certainly constitutes one of the only two philosophical positions that can at all be consistently occupied. Transcendentalism in any of its forms necessarily leads to this consummation.

But, before indulging in extreme prospective fulfilments we have first of all scientifically to secure a path that will not lead us astray in our search after true existence.

Starting then, as we anyhow must, from our own individuality, we find that, within us, by dint of the secret powers of our nature, there arises a series of phenomena, a complex phantasmagoria of things and events, in every respect the creation of those intrinsic powers. Nevertheless, in certain aspects, these mental phenomena seem most obviously to represent existences and occurrences, having subsistence in a region not occupied and governed by our own being. The problem, the supreme problem of the theory of knowledge, is either to prove that the reality of the world, which appears to subsist outside consciousness, is altogether an illusion; or, accurately, to demonstrate the mode of inter-dependence and inter-communication, unifying not only the two seemingly heterogeneous spheres of mind itself, but unifying, moreover, the powers inherent in mind with the forces extrinsically influencing the same.

It is a plain and incontestable truth, that all we know, and

all we can know, of things is simply what may become revealed of them vicariously and sympathetically as affections of our own being. Our own sensibility is the foundation of all our supposed knowledge of an external world, and our consciousness can be composed of nothing but our own feelings. It is therefore quite clear that conscious sensations can only result from the action of powers already belonging to ourselves, already forming part of our constituted individuality. Thus the whole universe, of which we become aware, resolves itself into a congeries of subjectively sustained and combined ideal states. It forms a creation in mind, mysteriously accomplished and upheld. And, however fleeting in all its time-manifestations, it nevertheless symbolises some enduring presence. What then can be the true nature of the comprising and sustaining something, fragmentarily revealed in the desultory flashes of conscious life?

We cannot wonder at the suasion of logical conceptions, at the preponderance and supreme reality so often and so emphatically assigned to the ideal world, when we consider that all qualities predicated of any subject whatever are always recollected as an incorporated part of our mental being, and are, moreover, on due consideration, found to form, from the very beginning, a subjective group of affections, momentarily singled out from the boundless possessions of ideality, and somehow projected and consolidated into the semblance of outside subsistence. Intrinsically and ideally are shaped, qualified, discriminated, and unified all phenomena, all influences that affect the senses, that outwardly or inwardly modify sensibility.

It cannot be denied that, when thus realised in its inclusive or ratiocinative aspect, the universe, established in mind, opens to the reflecting subject an insight into an organic enchainment and essential communion of all phenomenal affections. Deep inwardly beyond the fretted screen of temporal occurrences are truly recognised the eternal ideas that sustain the scattered and perishable manifold. And it would be strange, indeed, if the fervent soul, exulting in this inalienable wealth of widest thought and emotion, were not to feel the limitations of its own individuality melting into infinity; if its whole being, amplified and completed, did not seem in blissful consummation to be merging into the One-and-All.

But, on the other side, in their perceptual or phenomenal aspect, the contents of mind do not reveal themselves as co-inhering in one and the same indivisible and identical substratum of thought. On the contrary, thus viewed, ideas seem merely to constitute more or less collective remembrances of previous experience. They are, in fact, recognised as only representing groups of concrete sensations, held together by similarities ob-

taining between them, and they are found to be associated with each other by laws that originate in the phenomenal order, *i.e.*, in the coexistence and sequence of experienced affections. Our consciousness then discloses itself, as composed of nothing but the orderly appearance and reappearance of sensations and perceptions, inscrutably arising and incomprehensibly vanishing.

We have, no doubt, to admit a centripetal as well as a centrifugal view of nature. How are these two opposite orders connected with each other?

It is true, whatever way we may be looking, sound reasoning ends in shutting us up irresistibly and most thoroughly within the magic circle of our solitary mental subject. Nothing from outside can in its own essence and likeness penetrate this total isolation, or coerce to foreign modes of action the intrinsic proclivities of so private and specific an autonomy. But, even then, without the least direct reference to external influences, what a contrast between the two poles, or rather between the central and the peripheral capacities of our mental being! What divergent revelations of ideal reality are inevitably forced upon us by a mere change in the adjustment of our mental vision! By fixing our attention exclusively on the conceptual or central order we consistently become transcendentalists. I do not mean transcendentalists of the compromising or critical kind, but genuine transcendentalists, beholding the transphenomenal essence of things, the everlasting glory of archetypal being. By restricting our view to the perceptual or peripheral order we inextricably become sensational empiricists, receiving all our grounding knowledge in the form of sense-impressions, and being compelled, therefore, to adopt nominalistic idealism in which everything is phenomenal and evanescent.

In this idealistic dilemma, one question is uppermost with our practical sense: "In which direction may we eventually hope to burst through the secluding spell which wholly encompasses our individual microcosm?" Will it be through its centrifugal or through its centripetal activity that our mind will succeed in rationally establishing vital and fertile relations with the macrocosm of Otherness, with the great universe of non-coinciding actualities? We desire, designedly and unreservedly to open our being either to the central or to the peripheral influx—whichever way the creative tide may flood our existence with higher life.

However legitimately our reason may seem to imprison us within the narrow confines of pure individual idealism, our strongest instincts carry with them the conviction of outside powers influencing us all round. Our whole active nature, our emotional and our volitional propensities revolt against the dreamy

and illusionary self-seclusion imposed upon us by ratiocination. Irresistibly impelled, we rush out of self to grasp realities beyond. Our most urgent needs, and our most exalted desires, alike leap the bounds of self-sufficiency. Not only our immediate appetites crave appeasement through the appropriation of externalities, but our tenderest sympathies hasten to bestow on other lives the most precious and ideal worth of our own being, and our loftiest pleasures make us zealous to mould foreign existences into the perfect shape of ideal purpose.

Nevertheless, in thus attributing actuality to relations that common-sense unhesitatingly believes to subsist between ourselves and an outside nature, we are evidently altogether transgressing our power of rationally dealing with the data of consciousness. For, how can our reason, a pure mental faculty, under any solicitation whatever, be rendered competent to transplant subjectively inherent ideas into a foreign region of altruistic subsistence, whereby they become elevated to the transcendent dignity of self-consistent realities? This, however, is exactly the licence we have been indulging in, when we allowed our instinctive or conscious promptings to overreach the spell-bound circle of subjective idealism. For this purpose we had to assume as existent, on the one side, a bodily organisation or executive apparatus governed by our mind, but by no means coinciding with the same in its reality; on the other side, we had to postulate independent external existences in efficient interaction with ourselves. All these realistic feats were, no doubt, most fluently accomplished by us. But we shall have to admit that their philosophical justification remains to the present day the great unrealised desideratum of the theory of knowledge. Theoretically, we still find ourselves locked up within a sphere of dreamlike apparitions, which we call our mind, and now the puzzle is how, conformably to reason, to win our way back again, not only to the things beyond our skin, but also to the special vital appurtenances contained within that bodily envelope.

The fact is, we are psychologically debarred from the access to any pathway leading to outside existences. Our mind cannot go out of itself to meet other things and to blend with them, nor is it anywhere open to the entry of foreign beings.

We have once for all to put up with this fundamental truth. It can never be subverted. But examining the aspect of ideal nature yielded on the one side by the logical, on the other side by the phenomenal propensities of our mind, we discover in both these orders certain definite voids created by unsatisfied relational implications, which implications are distinctly connected with the positive properties of mental occurrences as such. Here it is above all the evident orderliness, manifesting itself in

the combination of ideas that seems to imply something extraneous to mind, coercing single mental states into coherent and consistent connexions. First, there is thus suggested some substratum supporting and perpetuating for reproduction the successive mental states. And then, as we do not find anything in mind itself to account for the coalescing of its disparate moments into specific configurations following each other in regulated sequence, we are induced to infer an influence of some kind controlling this grouping operation. Moreover, the ideal order thus compelled seems to subserve purposes transcending purely ideal capacities. Somehow, namely, we have ourselves the power of imposing permanent changes on the coalesced appearances or perceptions, which changes evince themselves thereafter as forming part of the mind-compelling influences. For instance, I feel coerced to realise the definite and complex mental state which I call a sheet of paper. By the exertion of certain activities within my power I now change the appearance of this sheet of paper so that it consists of ten pieces instead of only one. Henceforth, this transformation does constitute part of the mind-compelling order. I shall be forced to perceive ten pieces whether I wish it or not.

It is true I become aware of all this solely through the medium of subjective feelings, but some hypothesis has to be framed to account for the fact of compulsion, which fact cannot be included in the operations performed by the mind's own spontaneity. We give expression to this experience of outside compulsion by assuming causative agents as instigators of our compelled mental states. We know positively only the latter, but infer therefrom the existence and efficiency of the former. Physical forces or energies are nothing but such hypostatized or substantiated causes of compelled mental states, and the science of externalities consists in the construction of an hypothesis of energies that will adequately explain the facts and relations of the peculiar order of phenomena, apparently derivable from direct sense-stimulation.

It will, however, be best frankly and distinctly to avow that we do not possess within our purely mental constitution any rational premisses from which could be deduced the seat and nature of the compelling influences. The supposition of powers outside our individual minds will ever form the standing desideratum of belief and knowledge, without which not a single scientific or practical step can be taken, and which has on each special occasion to be made good by prompt hypothetical assumption. All activities of our nature are moulded on this transindividual supposition, and receive their cue from it. But, as regards the special conceptual framing of the hypothesis, the

sole guarantee of its correctness can only be afforded by the adequacy of the conception to account for all facts and relations of the so-called outside world.

Thus it happens that the following question has played a great part in philosophy, and still continues to arise: Is our mental being centrally or peripherally coerced? Does the compelling influence work centrifugally or centripetally? From intellectual emotion to thought and sense, or from sense to thought and intellectual emotion? It is of supreme practical importance that this query should be decisively answered. Which of the two chief assumptions can best explain the scheme of nature: the transcendental or the experiential hypothesis; the central or the peripheral influx?

II.

Leaving out of sight the relation of sensations to the surmised extraneous source of their excitation, and taking the immediate and elementary affections of the mind as simply given, the main problem of philosophy, since Locke, has been that of the synthesis of sensations and perceptions.

Sensations, as such, are experienced singly and unconnectedly yet in consciousness they are found coalesced with a number of other remembered sensations into distinct percepts. A percept is an integrated assemblage of present feelings, an individualised set of impressions and ideas; yet, discrete as these mental objects seem to be, they are found conjoined with each other so as to form, not only a coherent totality of configuration, but also an endless train of regulated sequence. Whence this correlative union and orderly procession? In the concrete appearances themselves there is evidently nothing discernible that could in any way account for their definite disposition and connexion. Therefore, somewhere in the hidden recesses of the manifesting structure, there must reside a power, which coerces the unconsolidated and successive manifold of sense into a well-regulated system of conscious appearances. The question is: In what manner, and in which of the provinces of the feeling, thinking and willing mind is this synthetic power exerted?

"No connexions among distinct existences (impressions or perceptions) are ever discoverable by human understanding. We only *feel* a connexion," says Hume.

"As a connexion does not impress our senses, but has to be made by ourselves, it does not belong to the receptivity of the subject, but to the spontaneity of the understanding, of which it is a function *a priori*," says Kant.

The antagonism of our two leading philosophies is tersely

expressed in these most contrary opinions regarding mental synthesis. According to Hume, our judgments about the conjunction of phenomena are based on an association of impressions and ideas established, and at last rendered indissoluble by custom. The inference, *i.e.*, the mental transition from a present impression to the idea of its cause or effect, is an action, not executed by reason, not accomplished by an original energy of the understanding, but wholly impelled by experience. Because two definite impressions have often been experienced in immediate sequence, therefore the presence of one of the impressions irresistibly calls forth the remembered idea of the other impression, and this automatic association is under such circumstances furthermore accompanied by a peculiar sentiment, which assures us of the reality, or objective validity of the connexion, making it appropriate and safe for us to act upon the ideal suggestion.

The strength of this view lies in the demonstration of the fact, that inferences concerning the actual connexions of phenomena are derived from experience, and that they take place in the sensible sphere of the mind, take place there with an energy independent of the promptings of abstract thought and deliberate volition. Direct judgments about matter-of-fact, genuine synthetical judgments, which declare that because a certain something is present another certain something is also present, or because a certain something has just happened, another certain something has also happened or is about to happen,—such immediate conclusions concerning reality are altogether experiential in their origin, and occur under the sway of a present impression as automatic and sense-derived mental manifestations. It has become more and more certain, since this novel discovery of a whole world of unreasoned conclusions, that judging-operations of this kind, unconsciously performed within the domain of perception, constitute indeed the very groundwork of our natural relations and practical doings. Thus far we are undoubtedly conscious automata, and we cannot help suspecting, that some kind of organic constitution must be at the bottom of this fundamental process of organic inference, or mental reflex-action.

The chief shortcomings of Hume's Association-hypothesis consist: (1) in the omission of an explanation why the ideas so necessarily connected with their suggesting impressions are themselves moreover truly realisable in nature as actual sensations—why the heat, suggested merely as idea by the flame, can also then and there be made good as an impression; (2) in the complete ignoring of any synthetical medium, and of any synthetising power.

The former shortcoming is intentional. Hume deliberately refused to account for the origin of impressions, and had consequently to avoid any allusion to the correspondence of the causally suggested ideas with their realising sensations. This is, however, just the point in causation most difficult to explain, and upon which the relation essentially turns. We are most anxious to learn how this consummation of matter-of-fact inference takes place; how the right sensation or impression comes to fit in at the right moment; how, for instance, the actual heat of the flame happens to be there to make good its suggested idea. This is a problem for the bare insight into which the 18th century was not yet ripe. It can be scientifically solved only with the help of the hypothesis of connatural evolution, a hypothesis which we shall have occasion to consider when its bearings on causation have to be discussed.

The other shortcoming of Hume's philosophy, or rather its creation of an absolute void beyond consciousness, is a necessary consequence of its premisses. Starting with nothing but single and elementary impressions, and their fainter copies, the ideas, it was impossible for experience, with only such clear-cut constituent pieces, to put together anything but a mosaic mind, a mind composed merely of clusters of elements. Of course, this aggregational compounding of our conscious existence was not quite ingenuously feasible. Memory and Association, though only manifest in their concrete results, had nevertheless to be indirectly recognised as forming part of the mental mechanism. Custom could not operate on nothing. In order to establish its connexions it had to work on the same secret resources that originally and spontaneously furnished the copies of impressions, and it had to work also on the hidden spring of ideal transition or inference. But, notwithstanding this surreptitious drawing on Memory and Relativeness, we have to admit that, in consciousness itself, the reproductions and associations are found accomplished without our becoming in the least aware of the means which have brought about these complex and flowing results. Here then, we have a clear exhibition of unconscious powers producing conscious effects, and we may once more parenthetically remark that it lies near to suspect organic foundations for the automatic processes evincing themselves as memory and association.

With Kant, mental synthesis is a subjective operation, intrinsically initiated, directed and executed. According to him, the coherency and order of phenomena are wholly due to original faculties of the mind. It is true, he peremptorily maintains that these *a priori* faculties are exerted only on material impressed on our sensibility. But he allows nothing

actual in the sense-material to affect, in any way, its subsequent synthesis. From somewhere, empirical stuff is kaleidoscopically received in the passive forms of sensibility, making up there a contiguous, but utterly unobjectified manifold. Thereupon synthesis begins. First the raw-material is congruously sorted and loosely connected. Then it is objectively and conceptually cemented together for good. All this is done by a certain spontaneous activity, emanating from our innermost being, the identical Ego, and differing *toto genere* from sensibility. This identical Ego, to which all synthetical processes refer, and without which the confused sense-material would ever remain unshaped, uncombined, unrelated and unconceived, is not itself phenomenally manifest, but belongs to the intelligible world. Its inalienable powers, however, evince themselves as functions *a priori* in the various modes of conjunction, through which the phenomenal world receives its universally valid coherence and unity.

The strength of this view lies in the recognition of a unitary system of innate synthetical powers, through which the particularly and severally experienced sense-affections receive their general relational significance.

The chief failings of the view are: (1) its non-appreciation of the actual correspondence, uninterruptedly subsisting between the ideally connected order, and its realisable sense-affirmations: (2) its non-acquaintance with the conspicuous sphere of automatic sense-judgments or percepts.

Thus, the Aggregation-theory of mental composition fails to recognise a primordial medium, in which connexions are actually established, and in which they then potentially subsist. The Transcendental theory of phenomenal coherence mistakes the conception and naming of combining processes for the actual powers that in reality unconsciously accomplish the conceived synthetical results.

Evidently, there lies somewhere, within the compass of nature, a fixed range of unremitting and controlling activity, from whose solid industry the orderly manifold of consciousness emerges ready-made, and to whose steadfast toil and safe-keeping the whole constancy and communion of the phenomenal world rests entrusted. It is plain, however, that the facts of individual consciousness do not themselves disclose the quickening source whence they spring. We have here nothing but a succession of distinct conscious states, nothing but a mere outflow of ever so many single feelings and thoughts. Something, nevertheless, there needs must be beyond this bare sequence of mental components, something harbouring them all, and persisting inexhaustibly one and the same. The countless changing and

passing states of consciousness obviously issue from some unperishing matrix, and there subsists some binding, living constitution, in which synthetical results, once achieved, thereafter safely and retrievably abide.

But where are we to seek for such a substantial entity?

Students of philosophy, who have earnestly pondered over the great theme of the synthesis of mental constituents, will have found every aspect of the question deepen into a still more fundamental problem.

Sensations and thoughts, the sole agents through which existences are revealed to us, are themselves ephemeral effluences, arising momentarily and as suddenly vanishing. How then can anything more enduring than a single sensation or a single thought become part of our consciousness? How can that, which is permanent in nature, be in any way manifested by that which is only a perishing semblance?

To gain an approach to this chief enigma of philosophy, we will first explore it in its least complicated presentation. The most immediate and elementary fact of consciousness is undoubtedly that which is called a sensation or impression. So many aerial beats, for instance, strike the tympanum in a second, and give rise to a corresponding multiplicity of vital beats in the auditory tract. It is certain that the sensory impulse received and vitally responded to, consists of numerically discrete units of action, of which, moreover, each ceases to be, as soon as its successor becomes present; now, notwithstanding this serial ingress of non-adhesive and momentarily perishing shocks, the sensory result appears in consciousness as a synthesised, homogeneous, and enduring whole, as one single coherent impression.

I venture to say that this simple statement contains as much unsolved mystery, as may well be condensed into any problem. Indeed, we need only find the true explanation of this one elementary mental occurrence, and with it would be opened to us the most profound secret of mind; for it is obvious that the very life-spring of memory and personal identity is involved in its solution. We should then know, how the unity of our being is maintained amidst its multitudinous affections, and how these relational affections are substantially preserved, in spite of their phenomenal or conscious evanescence.

Time, and everything in it, reveals itself as made up of consecutive moments, each preceding instant lapsing into nothingness at the birth of the next. To our conception time seems ever fleeting away as irrecoverable, past, ever sliding out of sight into the illimitable vacancy of that which is no more, and sinking along with it all its weight of conscious wealth.

Sorrows and joys, sensations, thoughts and actions, no sooner are they realised than they are pushed out of the way again, to be followed by others, in new succession. Yesterday has run out never more to return, and all that is thus passed, is gone by for good.

What magic power is it then, that, nevertheless, contrives to save the complete and intricate fabric of our mind from the nihilistic perils of these its timely wanings, that even succeeds in turning its irrecoverable losses to permanent gain?

Here we find ourselves inevitably brought face to face with this most solemn question concerning the nature of our innermost being. Shall we continue to evade with easy and empty phrases the stern meaning and relentless admonitions implied in its actual manifestations? Shall we conceal from ourselves the true mission of our lives, which is not to swoon back into the pristine bliss of all-comprehensive being, but laboriously to uplift higher still the now precious, pain-wrought inheritance that actually is ours?

Not that the wondrous sphere of ideality is at all to be denied. There exists in all truth as a firm reality, and not merely as an illusive fancy the veritably ideal. But surely its world-embracing picturings are not woven of hyperworldly preconceived thought, but of thought cosmically, slowly, solidly concerted from the first responsive quivering of blind life to its loftiest visions of sympathy and beauty. Thought is the bloom, the sublimation of life, not its fount and origin. And life itself does not scatter and darken the luminousness of transcendent thinking, but irradiates with revealing brightness the concentrated influences of dark and thoughtless things.

The two great cosmological conceptions, which are now struggling against each other for supremacy in human consciousness involve inevitably as ultimate result the decision: Whether life be indeed a deplorable aberration from the original fullness of thought-steeped being; or whether it be rather a desirable unfolding of more and more intense and ample world-consciousness.

The question here immediately at issue is: How from the conscious outflow of particular feelings and thoughts can the nature of their common source be inferred?

We find a very remarkable concurrence of the opinions of our two standard philosophers, with regard to this recondite problem of personal identity or individual substantiality. They both emphatically declare the impossibility of forming a philosophical conception of it.

Hume without much ado roundly asserts: "We have no idea of external substance, distinct from the ideas of particular

qualities, nor have we a notion of mind, distinct from the particular perceptions." This is plain and just reasoning for one who looks upon perceptions as "distinct and independent existences," and for whom mind, therefore, can mean only an aggregate of such perceptions, or indeed, not even that much.

But Kant, to whom, on the contrary, perceptions (in Hume's sense of the term) are nothing but indistinct and dependent appearances, and to whom, above all, the unity of consciousness is an undoubted and supreme fact, how is it that, with such diametrically opposite views, he nevertheless fully corroborates the experiential doctrine, that we know only mental states and that mind as a substance is not cognisable?

Kant also finds, as the result of his profound introspective research, that "when I enter most intimately into what I call *myself*, I always stumble on some particular perception or other". When I eliminate all attributes, that which I deem substantial remains unknown. Our reason is discursive, and thinks only in predicates, consequently we can never through reason reach the ultimate subject of all these predicates. The true Ego is only a sentiment accompanying all conceptions, but it can never become a conception itself. The Ego which we know is only empirical, is altogether made up of particulars. In time, in the "inner sense," nothing enduring is found, nothing, therefore, which could at all justify us in substantiating a thinking entity. The intelligible, identical Ego, which constitutes the unity of consciousness, must ever remain unrecognised, for it can never itself become an appearance, and it is only appearances that can be grasped with our understanding. Of course, it very readily occurs that the unity, apprehended in the synthesis of thoughts, is taken for a unity actually perceived, actually appearing. This, however, is a mistake, which may be called the "surreption of the hypostatised consciousness," a mistake which is at the bottom of all rational psychology, of all psychology which professes to derive its doctrines from data not experiential.

This is the deliberate confession of the most scrupulous and also one of the most penetrating of philosophers; one who in his ripe age—after a life of preparative meditation—had set himself to establish transcendentalism on an irrefragable basis. First, he believed a few months would suffice for the task, for he was already in possession of the entire groundwork of his system. But eleven long years of concentrated contemplation elapsed before he had accomplished the work to his own satisfaction. He then felt bound most impressively to warn all thinkers that no legitimate way can be discovered by which we are allowed understandingly to pierce beyond what is given in

experience, and that in experience only the synthetised manifold of sense is found. "*Noumenorum non datur scientia*".

What then is to be done? Is there, indeed, no method left by which we may, nevertheless, secure some cognisable foundation on which efficiently to ground the phenomenal display of the perishable manifold? Are we, in all reality, irremediably condemned to remain for ever utterly ignorant concerning that which gives unity and consistency to our being, and therewith unity and consistency also to the rest of the perceived and conceived universe?

It behoves us most carefully to consider this critical position, and to follow therein indications of natural truth with no less conscientious awe than Kant himself.

Hume and Kant are right. Self-consciousness does not afford us any knowledge of personal identity. Introspection does not teach us in what manner the manifold of experience is inhering in a substantial Ego; does not make clear how it is that all predicates refer to an ultimate subject; how it happens that time, carrying away our feelings and thoughts, does nevertheless not rob us of our mental possessions; how, on the contrary, these become the firmer rooted the more lavishly we dispose of them.

To escape from hopeless scepticism, it will be appropriate to remember here the fundamental hypothesis of all knowledge, the hypothesis connaturally preconceived, and everywhere desiderated in experience, therefore also unhesitatingly adopted by instinctive and practical life. This hypothesis consists in the hypostatizing of definite causes or forces outside consciousness in correspondence with the definite impressions and perceptions inside consciousness. All science of existences over and above the appearance of our own mental states is based on this one supposition. Consequently the question now before us may, from this point of view, be thus expressed: Can the substance in which mental affections inhere, become an object, an appearance to an observing mind? Can it be viewed, by dint of conscious states, as an outside existence? If so, then a science of it can properly be framed in the same manner as all other sciences are framed. In other words: The unknown confluence of powers, which constitutes a person or individual, can it affect our sensibility in such a manner as may enable us through definitely occurring and varying modes of this our sensibility to recognise—just as we recognise any other thing or event—the secret giving substantiality to a person or individual thus observed?

It is undeniable that the something, to whose being we are ascribing individuality, impresses most intricately, delicately and specifically our senses, appears within our sensibility a

complete and complex unity of conformations and features, being thus perceived by us with surpassing distinctiveness and precision. A strange perversity of thought has hitherto marred the transcendent glory of this inscrutable mystery of sympathetic revelation. By affixing opprobrious names to it, calling it "perishable and corruptible body," or "senseless and inert matter," prejudice has succeeded in vilifying that which in the whole range of our experience is pre-eminently psychical: an abiding entity fixedly mirrored in mind on the sensitive foil of its transitory feelings.

This phenomenal presence, or bodily appearance, attests indeed a most miraculous display of constancy, affinity and intelligibility. In the depths of my own being I find steadfastly subsisting the full symbol of another existence, whose proper constitution and intrinsic essence ever evades my reach. But lo! in spite of all this exteriorising and excluding otherness, we are not foreign to each other in our innermost natures; for I, who am now so definitely and intimately affected by your actuality, do possess on my part the secret virtue of likewise impressing your being with a similar fulness of sympathetic recognition, becoming to it an understood and reliable presence.

When we turn from the contemplation of that part of our personality which we find generalised from the experience of conscious states as such, and which we call our mind, to the contemplation of an outside personality as revealed to us through the medium of our senses, we are struck with the infinitely diversified and elaborate contrivances which here evidently concur in the constitution of such a personal or individual unit. Though we recognise this only symbolically in modes of our own consciousness, still we may rest assured that a corresponding intricacy of constitution belongs irrelatively to the nature of the personality affecting us. Whatever personality may be in its own self, independently of our viewing it, it must necessarily be something at least as complex as the organisation by which its existence attests itself in our minds. Therefore, whatever this perceived organisation discloses to us, we may with perfect confidence symbolically attribute to personality as such, for it necessarily corresponds to some trait in its affecting or stimulating power.

It is this exquisitely attuned connatural parallelism of stimulated and stimulating states which renders science or knowledge of any kind possible. The appearances in space and time are specifically stimulated affections. Let the regulating rhythm in the stimulations be subverted, and all knowledge is at an end. We have then only delirious exhibitions continuing

so long as the intrinsic capacity of the organic structure is not exhausted.

Through the study of organisation we discover that consciousness accompanies only the functions of the highest, most concentrative, and therefore, most central parts of the organic individual ; that, however, the remotest details of its constitution all contribute towards this structurally centralised and functionally centralising consummation of its personal unity. And we find, moreover, that this intrinsic consummation of organic forces is destined to become at last effective in extrinsic results, through the instrumentality of the volitional or executive part of personality. In truth, we discover that we have a wonderfully more complicated and extensive consistence than we are immediately conscious of ; but that fortunately this deficiency in the general subjective feeling of ourselves can be remedied by objective study.

The special information which we are now desirous to obtain, is : Whether, among the symbolic occurrences of organisation, there can be detected any clue to the secret of personal identity or individual substantiality, a secret which, as all thinkers know, will not yield to purely introspective research.

We learn, as an indubitable fact of organisation, that every functioning portion of an organism accomplishes its task only by losing some integrant part of its substance, by parting with some constituent elements of its molecular constitution. It is clear that this mutilation would infallibly incapacitate it for a renewed functional effort equal to the first if some provision were not made for the complete restitution of its functioning substance. A sensory nerve, for instance, after a single responsive beat could not be in a condition adequately to respond to a second beat, if its functionally deteriorated substance had not been meanwhile promptly restored to its full integrity. If all the auditory pulses which go to make up a certain homogeneous sound, were not received and transmitted with equal responsive energy, the quality of the resulting sound could not possibly appear homogeneous. If, on placing one's finger upon something which awakens in the mind the sensation of specific touch, the functioning substance of the affected nerves suffered disintegration without adequate reintegration, then it is certain that no two moments in the sensation would be alike.

Identity of function necessarily presupposes identity of functioning substance. It is an unquestionable fact that a substance in functioning undergoes disintegration. Consequently, it is equally unquestionable that identity, manifested in two consecutive moments of any kind of organic function, must be due to the reconstitution of the functioning substance.

What is thus true of the many relationally functioning parts of an organism, must be true of the organism as a whole. If inequalities in the constitution of the entire organic unit, arising from excess of function of one or other of its organs were not duly equalised through correlative reconstitution, then identity of such an organic unit would be out of the question. The central changes wrought by the irruption of continually varying combinations of peripherally stimulated function would soon completely transform the structure of the central substance, in case the organic unit had not the power of renovating itself as a whole. What would become of the vaunted stability of the world of thought, if the random intrusion of phenomenal disturbances could permanently upset the perennial, the change-conquering equilibrium of the central substance, or rather of the complete monadic individual in whose unity and indiscerptibility the soundness of our mind and body safely reposes?

We feel, let us say, thoroughly tired out. The agitating appearances of the bright day have seemingly obliterated our previous store of confirmed knowledge. We search in vain within our exhausted mind for what we used readily to find there. Our will is impotent to summon up its legions of vassal thoughts. Our inner eye strays over emptiness. Let us then no longer wilfully resist, but fully and trustily yield ourselves up to nature. Softly and securely she closes all inlets of rousing impressions, withdraws the hum and stir of foreign presences, steepes our whole being in darkness and oblivion. And now, from out the unconscious depths of vital constructiveness our existence is made whole again, our lost possessions reinstated. We are, once more, ourselves, organically reconstituted, awakening to renewed activity, prescient bearers of all the guiding Past.

The philosophical import of these organic facts cannot be mistaken. Our personality is identical amidst its multifarious modes of functional yielding, only because its unity and integrity is adequately maintained by means of reconstitution. And it remains identical only in so far as such rehabilitation to complete structural identity actually takes place. This perfect state of substantial identity is however, fortunately, only approximately, and never fully attained. Adequately realised, it would at once put an end to all development, would produce an undeviating sameness of vital states, without individual growth, and without generical evolution. There can be distinctly traced, within the scope of individual life, a progressive cycle of anti-identical modifications. The natural growth of a being involves a constant deviation from its personal identity. It leads through pre-established stages of evolution to generical maturity, a condition of existence, in which the growing person has reached a

higher, a transindividual identity with the culminating status of its kind. This identity of adult beings of the same species is again only approximate. If in individual growth it regularly happens that personal identity is made to diverge from uniformity through generical influences, it also happens that the individual has in its turn the power of effecting changes in the identity of the genus. Simultaneously with growth, there occur further deviations from personal identity, caused by the acquisition of individual experience. Excellences of any kind, thus acquired, over and above those already organically embodied in the constitution of the genus, go, through transmission, to heighten the generical standard.

The identity, which we find manifested in vitality, is kept in this manner everywhere flowing and progressive, but it is an essential identity nevertheless, an identity so indispensable to life, that upon its strict conservation depends wholly, not only the consistency of our own personality, but also the appearance and order of the entire universe, as known to us.

Personal identity is grounded in an order of efficiency unthinkable more unfathomable than any thought of ours, than any kind of intelligibly discernible potentiality; unthinkable more substantial than anything found in conceptional revelation. It is perpetual experience, immemorial memory incorporated, systematised, and ever organically resuscitated.

For those, who can find no commensurable transition from their subjective feelings of mental mobility and subtlety to their objective feelings of organic stability and solidity, it may prove serviceable to give heed to the intimate nature of organisation. Not through the firmness of its constituent particles, but only through its composition as a whole and through the specific mode of its activity, does the living substance possess any degree of consistency and constancy. The sundry successive sets of constituent particles, which one after the other are forced in and out the specific cycle of vitality, are playing but a very ephemeral part in the phenomena of life. The peculiar arrangement and activity, which determine in all respects the nature of the living individual, are themselves occurrences intangible enough as actual presences. But the specific arrangement with its accompanying activity is during its perpetuation, moreover, quite newly and incipiently caught up from other pre-existing specific configurations and activities by most rudimentary collocations of particles; and these mere beginnings of organic new formations are ultimately developed into the full likeness of their genealogical prototypes, solely by dint of the transmitted compository influence. Thus, in endless train, the bare peculiarity of arrangement is being transferred

as such, from one individual to another; an imperishing possession, very obviously secured by something altogether transcending the identity of material constituents, on which—according to some—all genuine permanency is based. The successive material embodiments are completely broken up and scattered to the winds, yet the ‘form’ indelibly endures. One and the same persisting presence is ever visibly underlying its many changing and perishing presentations, is moulding with perennial potency all accruing stuff into its exact type of organic conformation, compelling it, for a while, to subserve only its own unitary purposes.

All this means, the recognition, indeed, of a hyperindividual actuality, much of the same order as Platonic ideas professed to be; but the conception is experientially, not transcendently derived. The Platonic idea was the reminiscence of an archetypal order only intelligibly existent, and connected with our sensible world of ectypal manifoldness merely by help of a supernaturally pre-established harmony. The organic idea is the symbolical representation in human conception of the actually embodied synthesis of a sensible manifold, realised in thought by help of a naturally established harmony between the perceiving subject and the perceived object. The former idea was the expression of an ideal estrangement, the latter of an actual concordance.

The conception of our own individual identity forms part of the organic idea, and receives, as we have seen, its explanation from organic occurrences.

The substantiality of our being, as vaguely hypostatized by introspection, is actually the same organic fact of reconstitution under a somewhat different aspect. Vital occurrences of any kind, sensory functions naturally included, are in all truth varying modifications of one and the same identical and indivisible organic unit. We have here a display of most manifold appearances and events, a continual outflow of most diversified specific energies. Yet the manifesting entity indiscernibly endures. It lasts undiminished and undivided amidst all its changing and perishing modes. It lavishly spends itself without suffering any substantial loss.

This fact, evident but unexplained, has constituted the great paradox in philosophical interpretation, the inevitable stumbling-block of all systems. The insoluble mystery of substantiality, the “final inexplicability” of all schools, and with us of that of Kant as well as that of Hume, of that of Hamilton as well as that of Mill, has consisted in the impossibility of conceiving how anything can remain actually and indivisibly the same under constant intrinsic changes and timely expropriations. Or, as

John Mill puts it, "How something which has ceased, or is not yet in existence, can still be in a manner present".

Duration, not as the sum total, but as the support of changes, has thus remained a philosophical perplexity, beyond the reach of sober thought. It was distinctly felt that time with its contents cannot possibly be a mere rope of sand, yet it was not understood from what perdurable and unrelinquishing influence it receives unifying consistency and relativity.

This ancient mystery is scientifically cleared by the recognition of the reconstitutive power of the organic unit as an indiscerptible totality. This assertion may be thus confidently made, because it can be witnessed without a chance of error how by reintegration the living substance preserves its identity amidst continual functional changes.

What more can be affirmed of any substance, not thus experimentally given but otherwise imagined, than that amidst its varying affections it constitutes an identical, indivisible, perdurable, and self-sustaining focus of energy. The deepest philosophical discussions have always turned on these essential attributes of substantiality; but the performance of putting together a true substance out of these well-conceived properties was carried on outside any real medium; in fact, in absolute vacuity. For "indivisible simplicity" is an utterly annihilating attribute. It completely nullifies any sort of reality. It represents nothing but an inert mathematical point.

Homogeneous extension of any kind is, indeed, infinitely divisible; but this means, in reality, that no part of it—be it ever so minute—is qualitatively distinguishable from the whole. Take, on the other hand, as initial totality a chemical molecule consisting of heterogeneous elements, and all the reasoning applicable to homogeneous extension becomes at once invalid. Here, evidently, it is only the definite combination which forms the whole, constituting it a truly indivisible unit, of which no part is qualitatively identified with its totality. Any process of division would instantaneously annul the indiscerptible integrity, by dint of which it forms the definite whole given in reality; a whole consisting altogether in the specifically interdependent relations of heterogeneous elements.

It is precisely in this sense that an organism is essentially an indivisible totality. The living substance, even in its most elementary forms, constitutes a flowing chemical unit, of which all parts are interdependent and heterogeneous. A careful survey of the chemical cycle that sustains the living substance proves this plainly.¹ Observers have been hitherto misled, in the inter-

¹ Readers who have no opportunity of observing monera for themselves, but who would like visually to realise the vital conditions above indicated,

pretation of the nature of the protoplasmic individual, chiefly by the fact that any severed portion retains its vitality, continuing to perform the main functions of life. They concluded therefrom that the living substance must be made up of qualitatively equal parts; a conclusion which seemed also in perfect harmony with facts familiar through the study of inorganic nature. Nevertheless, the misinterpretation here under consideration is very transparent. If I cut a piece off an entire moner, the cut-off piece, as well as the moner itself, will reconstitute the full integrity of the type represented by the complete individual. This occurs certainly not because both parts of the divided individual consisted of equal molecules; but, on the contrary, because they formed fragments of a mutilated unit, which by complemental affinity or organic repair succeeded in reintegrating themselves. This very evident state of things becomes quite unmistakable when the two portions of a divided organism are strikingly heterogeneous, even to the naked eye, the one being, for instance, the head, the other the tail-end of the individual. If now—as it actually occurs in certain worms and other inferior animals—the head forms a new tail, and the tail a new head, it is altogether patent that the completion of the organic totality is here the controlling influence, and that it is the chemical heterogeneity, not the chemical homogeneity, of the severed parts which makes the complemental reconstitution possible.

In short, the living substance or organic individual is indivisible, because it constitutes a specific chemical unit, persistingly maintained by means of reintegration.

It is perdurable, because amidst a continual vortex of changes, it succeeds in preserving its integrity by restoration.

And, lastly, it is self-sustaining, because it has residing within its own self affinitive powers which, during functional and other destructive changes, constitute it a chemical radical with definite energies of complemental saturation.

Under this readily verifiable organic point of view, some of the oldest and most unwieldy philosophical paradoxes receive an easy and undubious solution. In the operations of vitality and organisation we find reconciled conceptions, which otherwise appeared utterly incompatible. It becomes evident, beyond suspicion, how identity and perdurability can coincide in one and the same being with change and decay; nay how such a being can even draw progressive power of unity from the perpetual flow of the perishing manifold.

will find very fair illustrations of various monera, appended to a paper contributed by the present writer to the London *St. Thomas's Hospital Reports*, 1879.

And now that we have established substantiality on a scientific basis, and have gained an insight into its organisation and working, it will be interesting to contemplate for a moment the difference presented by the spurious substantialities figuring in philosophical systems, when compared with the genuine substantiality here explained.

In the effort to account for knowledge, it was found indispensable to presuppose as foundation something identically enduring; for, even the simplest proposition presupposes identity and stability of some part of its contents. Through generalisation of this logical relation, substance came to officiate in philosophy as something which supports varying modifications without itself ever varying.

After what has been here stated, it can be seen at a glance, how hopelessly unintelligible such a conception of substantiality must ever remain. In order, logically, to insure the surmised unchangeableness of substance, metaphysicians had to postulate its simplicity, and at last also its indivisibility. Anything complex is liable to change. Everything is complex which is in any way composed, for it consists of constituent elements. Everything is complex which is extended, for it can be divided into manifold parts. Therefore only the uncomposed and the indivisible can be perdurable and incorruptible.

So much seemed necessarily implied in the conception of substantiality, and now the puzzle was intelligibly to unify the diverse, manifestly known attributes, with a simple and unextended substratum which remained ever concealed. It was clear—even to early thinkers—that the attributes which are many in number and heterogeneous in kind cannot possibly form constituent parts of a substance which is thought of as simple and indivisible. Consequently the attributes had to be conceived as affections of the substance. But how? At times the conception of substantiality appeared to fit best the enduring existence which seems to support all external changes. The state of material subsistence implied a substantial substratum of some sort. There was here, clearly, something unperishing, underlying the perishing modifications. But it was hard to understand how composite and divisible things could in any way inhere in something whose unchangeable persistence involved uncompromising simplicity and indivisibility. Besides the substantiality supporting material attributes was not itself a perceptible existence, and had therefore to be conceived as a purely intelligible entity; an entity which could only be realised in thought, and never could become a sensible manifestation. Some philosophers, remaining, nevertheless, faithful to the objective view, endeavoured now to construct the universe

out of the interaction of simple and indivisible particles, which particles had, at last, however consistently to dwindle away into unextended centres, manifesting their existence merely through irradiation of energy. To others it appeared that thought, as such, possessed the closest affinity to substantial being. The perdurable something, manifesting modifications, and never revealing itself to sense, might possibly be thought itself, all-comprehensive thought, adequately disclosing, as changing moods of its own, the apparent manifold. A certain simplicity and indivisibility belongs seemingly to the nature of thought, and generally speaking it does not lose its existence by manifesting its affections. It is still there, undiminished, to repeat its performances over and over again. But if thought is actually the substance, or—more correctly—the veritable substantial thing-in-itself, what becomes of it when no thinking is going on? Where does thought retire to in the intervals of its manifestations? It had to be admitted, on close inspection, that the substantiality of thought, for all its promise, discovers itself, likewise, as interrupted, incoherent and ephemeral. In fact, it never presents itself as a persistent whole, but always only as a succession of moments, perishing within the diffracting and dissolving medium of time. Therefore, thought, as known to us, cannot be that all-sustaining essence of being, metaphysically postulated. Moreover, in proportion as thought, in its thinking moments, widens in comprehension, it loses its hold on reality. When fully stretched, so as to become co-extensive with being in general, it represents not the totality of being, supporting the entire wealth of known affections, but only an empty shadow of being, deprived of all qualities.

The ultimate, all-comprising substratum must then be something infinitely more profound than thought, something, of which thought itself is merely one among many divers modifications. It is this utterly saturated substance, in its undisturbed simplicity and indivisibility, which is conceived as the self-sufficient One-and-All, the Absolute.

It necessarily follows therefrom, that any perturbation in the self-poised repose of this complete totality can only lower its maximum state of perfection. Modifications or affections of any kind can only become manifest through restriction of its absolute completeness. "*Determinatio est negatio*," says Spinoza rightly, echoing therein the teachings of the Cabbala, and these again the teachings of Neoplatonism. The position of anything determinate, within the uniform excellence of the all-embracing existence, must needs be a privation, a degradation, a negation of the perfection of that existence.

This, undoubtedly, is the genuine logical outcome of the

spurious notion of substantiality which governs transcendentalism. The metaphysics and ethics of that great school of philosophy will have sooner or later unswervingly to bend to this leading conception. Transcendental optimism and personalism are inconsistencies, which will have to give way to unpromising pessimism and pantheism. To such a cosmological conception our human lives can signify ethically nothing but a struggle for complete reabsorption, for the final state of absolute quietude somehow—by some unaccountable guilt—recklessly forfeited. This view of emotional pacification through re-identification with the All-Being, long familiar to nations of the East, is becoming a wide-spread creed also in Europe.

The real contest, now pending, is not between intervening modes of thought, but between the very extremes. Either genuine Transcendentalism or genuine Naturalism. The fate of future generations depends on the decision.

III.

Our sciences have been hitherto exclusively governed by the Aggregation-hypothesis. All bodies are conceived as clusters of elements, not only when the units entering into their structure are considered homogeneous, but also when they are known to be heterogeneous. The constitution of bodily textures is mentally represented as a grouping of elements into more and more complex configurations. These constituent elements are believed to persist, as such, within the compound; indeed, to make up the same by their mere juxtaposition, and the summation of their respective energies. Forces, infringing on material products of this kind, are thought immediately and intrinsically to affect only the relative position of the constituent elements, and thereby mediately also the general equilibrium of their sundry energies. Permanent modifications of material compounds acted upon in this manner are considered to be effected by permanent displacement of their elementary particles. Diminution of mass is believed to occur only and simply through subtraction of constituent elements; increase of mass through addition of such. In every case the elements themselves are taken to be the veritable bearers of the specific properties and energies, of which the compound represents the balanced sum total.

In studying primitive forms of protoplasm, as I have already explained in this journal (MIND XIX., XX), I was led to frame a very different conception of the intimate constitution of living structure. In this instance, at least, the compound as such, *i.e.*, the balanced totality of the product, is very evidently the

controlling power; a unitary power, to which all elementary energies are completely subservient. The constituent elements, that enter into the composition, receive their relative position and influence from the specific constitution of the whole. They form integrant parts of an indiscerptible unit, not constituent parts of a divisible aggregate. Infringing forces do not merely displace elements, but break up the integrity of the whole. There occurs not simply mechanical shifting, but chemical ruption. And the disturbed equilibrium is not restored by mechanical readjustment of parts; but is effected by complementary reconstitution of the chemical totality. Permanent modifications of such a unit cannot possibly take place through permanent displacement of its elements. In violent encroachment, either the substantial unit ceases altogether to be, or it succeeds in restoring its previous integrity. Permanent modifications have to come about through a change in the mutual affinities of the elements, the modified status of saturation, evinced by the compound as a whole, becoming then the expression and index of the realised modification. When in the course of growth or development elements are added to the whole, they are not merely interposed between other elements, but go to effect a chemical change in the entire unit. There results an essentially different being by means of a modified chemistry, not only an enlarged bulk by means of a numerical increase of constituent parts.

The modes of energy displayed by the organic individual are not due to the expenditure of force newly brought to it by accruing complementary material or food, but are altogether due to the unlocking of forces contained in the saturated affinities of the chemical radical, which in any condition of functional disintegration remains the conservative and restorative core of the living substance. This permanent, self-sustaining core of life is the embodiment of all evolutionary results, and its vital manifestations are the expression of its own most specific and rigorously preserved endowments. It is this spontaneous self-preservation of the living substance amidst superficial changes, keeping intact the accumulated acquisition of ages, that composes the perdurable substratum for the display of temporal occurrences.

The organic individual appears to us as a chemical unit constantly shattered by external influences at its exposed and chemically cumulating regions; but as constantly renovated by intrinsic affinities through incorporation of complementary material. The surface of a highly developed organism presents most diversely differentiated points of contact to most diversely stimulating influences. These inlets of specific modifications all

converge towards one common centre. And to whatever depth the disturbing influences may happen to penetrate, they are always met by the spontaneously reconstituting energy of the organism as a whole.

Thus the innermost fact of organisation, or rather the culminating event of intrinsic organic reproductions, coincides with the most profound psychological occurrence. The *spontaneous* reconstitution to perfect integrity of the living organic unit, in spite of multifarious temporary encroachments and derangements, accounts for the supreme stability of pre-organised experience, for the stability of what with human predilection we are wont to call the conceptual order. And it explains also the contrast which is found to obtain between the self-evolving persistency of that order, and the evanescence of special phenomenal displays, *i.e.*, of the casually stimulated sensory configurations. It is the intrinsically and spontaneously renovated totality of our being, which is enduringly opposed as reacting medium to the successive inrush of varying sensory activities.

The logical order depends on ideal and volitional detachment of previously centralised and recognised affections from the all-comprehending unity of apperception. The phenomenal order depends, on the contrary, on the compulsory determination of specific affections, potentially inhering in more peripheral regions of the mental structure. Here, however, "determination" is by no means "negation," but very positive confirmation. It is truly confirmation of organic life and being, because the relations between the stimulated parts and the stimulating influences are naturally preconcerted. It essentially belongs to the nature of organic existence to be thus specifically roused by external powers.

Conscious states are clearly ephemeral effluences of an enduring being poised—far beyond conceptual comprehension—in the exquisitely exact and subtle balance of what symbolically reveals itself to us as vital substantiality.

So far as the resplendent gifts of vitality are concerned, we may implicitly rely on organic perpetuation; only, we must ever bear in mind that this perpetuation has to take place through the instrumentality of individuals. It, therefore, devolves upon each of us most scrupulously to concern himself, that during his period of agency the transmitted endowments of the living substance do not suffer deterioration. And, moreover, it is incumbent on us all to be striving with ambitious solicitude that our own mite, which by personal exertion we are able to contribute to life's abounding store, may not prove unworthy of lasting incorporation.

EDMUND MONTGOMERY.