

PART I
THE SPECULATIVE SCHEME

CHAPTER I SPECULATIVE PHILOSOPHY

SECTION I

[4] THIS course of lectures is designed as an essay in Speculative Philosophy. Its first task must be to define ‘speculative philosophy,’ and to defend it as a method productive of important knowledge.

Speculative Philosophy is the endeavour to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted. By this notion of ‘interpretation’ I mean that everything of which we are conscious, as enjoyed, perceived, willed, or thought, shall have the character of a particular instance of the general scheme. Thus the philosophical scheme should be coherent, logical, and, in respect to its interpretation, applicable and adequate. Here ‘applicable’ means that some items of experience are thus interpretable, and ‘adequate’ means that there are no items incapable of such interpretation.

[5] ‘Coherence,’ as here employed, means that the fundamental ideas, in terms of which the scheme is developed, presuppose each other so that in isolation they are meaningless. This requirement does not mean that they are definable in terms of each other; it means that what is indefinable in one such notion cannot be abstracted from its relevance to the other notions. It is the ideal of speculative philosophy that its fundamental notions shall not seem capable of abstraction from each other. In other words, it is presupposed that no entity can be conceived in complete abstraction from the system of the universe, and that it is the business of speculative philosophy to exhibit this truth. This character is its coherence.

The term ‘logical’ has its ordinary meaning, including ‘logical’ consistency, or lack of contradiction, the definition of constructs in logical terms, the exemplification of general logical notions in specific instances, and the principles of inference. It will be observed that logical notions must themselves find their places in the scheme of philosophic notions.

It will also be noticed that this ideal of speculative philosophy has its rational side and its empirical side. The rational side is expressed by the terms ‘coherent’ and ‘logical.’ The empirical side is expressed by the terms ‘applicable’ and ‘adequate.’ But the two sides are bound together by clearing away an ambiguity which remains in the previous explanation of the term ‘adequate.’ The adequacy of the scheme over every item does not mean adequacy over such items as happen to have been considered. It

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means that the texture of observed experience, as illustrating the philosophic scheme, is such that all related experience must exhibit the same texture. Thus the philosophic scheme should be 'necessary,' in the sense of bearing in itself its own warrant of universality throughout all experience, provided that we confine ourselves to that which communicates with immediate matter of fact. But what does not so communicate is [6] unknowable, and the unknowable is unknown;¹ and so this universality defined by 'communication' can suffice.

This doctrine of necessity in universality means that there is an essence to the universe which forbids relationships beyond itself, as a violation of its rationality. Speculative philosophy seeks that essence.

SECTION II

Philosophers can never hope finally to formulate these metaphysical first principles. Weakness of insight and deficiencies of language stand in the way inexorably. Words and phrases must be stretched towards a generality foreign to their ordinary usage; and however such elements of language be stabilized as technicalities, they remain metaphors mutely appealing for an imaginative leap.

There is no first principle which is in itself unknowable, not to be captured by a flash of insight. But, putting aside the difficulties of language, deficiency in imaginative penetration forbids progress in any form other than that of an asymptotic approach to a scheme of principles, only definable in terms of the ideal which they should satisfy.

The difficulty has its seat in the empirical side of philosophy. Our datum is the actual world, including ourselves; and this actual world spreads itself for observation in the guise of the topic of our immediate experience. The elucidation of immediate experience is the sole justification for any thought; and the starting-point[‡] for thought is the analytic observation of components of this experience. But we are not conscious of any clear-cut complete analysis of immediate experience, in terms of the various details which comprise its definiteness. We habitually observe by the method of difference. Sometimes we see an elephant, and sometimes we do not. The result is that an elephant, when present, is noticed. [7] Facility of observation depends on the fact that the object observed is important when present, and sometimes is absent.

The metaphysical first principles can never fail of exemplification. We can never catch the actual world taking a holiday from their sway. Thus, for the discovery of metaphysics, the method of pinning down thought to the strict systematization of detailed discrimination, already effected by antecedent observation, breaks down. This collapse of the method of rigid empiricism is not confined to metaphysics. It occurs whenever we seek the

¹ This doctrine is a paradox. Indulging in a species of false modesty, 'cautious' philosophers undertake its definition.

larger generalities. In natural science this rigid method is the Baconian method of induction, a method which, if consistently pursued, would have left science where it found it. What Bacon omitted was the play of a free imagination, controlled by the requirements of coherence and logic. The true method of discovery is like the flight of an aeroplane. It starts from the ground of particular observation; it makes a flight in the thin air of imaginative generalization; and it again lands for renewed observation rendered acute by rational interpretation. The reason for the success of this method of imaginative rationalization is that, when the method of difference fails, factors which are constantly present may yet be observed under the influence of imaginative thought. Such thought supplies the differences which the direct observation lacks. It can even play with inconsistency; and can thus throw light on the consistent, and persistent, elements in experience by comparison with what in imagination is inconsistent with them. The negative judgment is the peak of mentality. But the conditions for the success of imaginative construction must be rigidly adhered to. In the first place, this construction must have its origin in the generalization of particular factors discerned in particular topics of human interest; for example, in physics, or in physiology, or in psychology, or in aesthetics, or in ethical beliefs, or in sociology, or in languages conceived as storehouses of human experience. In [8] this way the prime requisite, that anyhow there shall be some important application, is secured. The success of the imaginative experiment is always to be tested by the applicability of its results beyond the restricted locus from which it originated. In default of such extended application, a generalization started from physics, for example, remains merely an alternative expression of notions applicable to physics. The partially successful philosophic generalization will, if derived from physics, find applications in fields of experience beyond physics. It will enlighten observation in those remote fields, so that general principles can be discerned as in process of illustration, which in the absence of the imaginative generalization are obscured by their persistent exemplification.

Thus the first requisite is to proceed by the method of generalization so that certainly there is some application; and the test of some success is application beyond the immediate origin. In other words, some synoptic vision has been gained.

In this description of philosophic method, the term 'philosophic generalization' has meant 'the utilization of specific notions, applying to a restricted group of facts, for the divination of the generic notions which apply to all facts.'

In its use of this method natural science has shown a curious mixture of rationalism and irrationalism. Its prevalent tone of thought has been ardently rationalistic within its own borders, and dogmatically irrational beyond those borders. In practice such an attitude tends to become a dogmatic denial that there are any factors in the world not fully expressible

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in terms of its own primary notions devoid of further generalization. Such a denial is the self-denial of thought.

The second condition for the success of imaginative construction is unflinching pursuit of the two rationalistic ideals, coherence and logical perfection.

Logical perfection does not here require any detailed [9] explanation. An example of its importance is afforded by the rôle of mathematics in the restricted field of natural science. The history of mathematics exhibits the generalization of special notions observed in particular instances. In any branches of mathematics, the notions presuppose each other. It is a remarkable characteristic of the history of thought that branches of mathematics,[†] developed under the pure imaginative impulse, thus controlled, finally receive their important application. Time may be wanted. Conic sections had to wait for eighteen hundred years. In more recent years, the theory of probability, the theory of tensors, the theory of matrices are cases in point.

The requirement of coherence is the great preservative of rationalistic sanity. But the validity of its criticism is not always admitted. If we consider philosophical controversies, we shall find that disputants tend to require coherence from their adversaries, and to grant dispensations to themselves. It has been remarked that a system of philosophy is never refuted; it is only abandoned. The reason is that logical contradictions, except as temporary slips of the mind—plentiful, though temporary—are the most gratuitous of errors; and usually they are trivial. Thus, after criticism, systems do not exhibit mere illogicalities. They suffer from inadequacy and incoherence. Failure to include some obvious elements of experience in the scope of the system is met by boldly denying the facts. Also while a philosophical system retains any charm of novelty, it enjoys a plenary indulgence for its failures in coherence. But after a system has acquired orthodoxy, and is taught with authority, it receives a sharper criticism. Its denials and its incoherences are found intolerable, and a reaction sets in.

Incoherence is the arbitrary disconnection of first principles. In modern philosophy Descartes' two kinds of substance, corporeal and mental, illustrate incoherence. There is, in Descartes' philosophy, no reason why there should not be a one-substance world, only corporeal, or [10] a one-substance world, only mental. According to Descartes, a substantial individual 'requires nothing but itself in order to exist.' Thus this system makes a virtue of its incoherence. But,[†] on the other hand, the facts seem connected, while Descartes' system does not; for example, in the treatment of the body-mind problem. The Cartesian system obviously says something that is true. But its notions are too abstract to penetrate into the nature of things.

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The attraction of Spinoza's philosophy lies in its modification of Descartes' position into greater coherence. He starts with one substance,

causa sui, and considers its essential attributes and its individualized modes, i.e., the '*affectiones substantiae*.' The gap in the system is the arbitrary introduction of the 'modes.' And yet, a multiplicity of modes is a fixed requisite, if the scheme is to retain any direct relevance to the many occasions in the experienced world.

The philosophy of organism is closely allied to Spinoza's scheme of thought. But it differs by the abandonment of the subject-predicate forms of thought, so far as concerns the presupposition that this form is a direct embodiment of the most ultimate characterization of fact. The result is that the 'substance-quality' concept is avoided; and that morphological description is replaced by description of dynamic process. Also Spinoza's 'modes' now become the sheer actualities; so that, though analysis of them increases our understanding, it does not lead us to the discovery of any higher grade of reality. The coherence, which the system seeks to preserve, is the discovery that the process, or concrescence, of any one actual entity involves the other actual entities among its components. In this way the obvious solidarity of the world receives its explanation.

In all philosophic theory there is an ultimate which is actual in virtue of its accidents. It is only then capable of characterization through its accidental embodiments, and apart from these accidents is devoid of [11] actuality. In the philosophy of organism this ultimate is termed 'creativity'; and God is its primordial, non-temporal accident.* In monistic philosophies, Spinoza's or absolute idealism, this ultimate is God, who is also equivalently termed 'The Absolute.' In such monistic schemes, the ultimate is illegitimately allowed a final, 'eminent' reality, beyond that ascribed to any of its accidents. In this general position the philosophy of organism seems to approximate more to some strains of Indian, or Chinese, thought, than to western Asiatic, or European, thought. One side makes process ultimate; the other side makes fact ultimate.

SECTION III†

In its turn every philosophy will suffer a deposition. But the bundle of philosophic systems expresses a variety of general truths about the universe, awaiting coordination and assignment of their various spheres of validity. Such progress in coordination is provided by the advance of philosophy; and in this sense philosophy has advanced from Plato onwards. According to this account of the achievement of rationalism, the chief error in philosophy is overstatement. The aim at generalization is sound, but the estimate of success is exaggerated. There are two main forms of such overstatement. One form is what I have termed,† elsewhere,² the 'fallacy of misplaced concreteness.' This fallacy consists in neglecting the degree of abstraction involved when an actual entity is considered merely

² Cf. *Science and the Modern World*, Ch. III.

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so far as it exemplifies certain categories of thought. There are aspects of actualities which are simply ignored so long as we restrict thought to these categories. Thus the success of a philosophy is to be measured by its comparative avoidance of this fallacy, when thought is restricted within its categories.

The other form of overstatement consists in a false estimate of logical procedure in respect to certainty, and in respect to premises. Philosophy has been haunted by the unfortunate notion that its method is dogmatically to indicate premises which are severally clear, distinct, and [12] certain; and to erect upon those premises a deductive system of thought.

But the accurate expression of the final generalities is the goal of discussion and not its origin. Philosophy has been misled by the example of mathematics; and even in mathematics the statement of the ultimate logical principles is beset with difficulties, as yet insuperable.³ The verification of a rationalistic scheme is to be sought in its general success, and not in the peculiar certainty, or initial clarity, of its first principles. In this connection the misuse of the *ex absurdo* argument has to be noted; much philosophical reasoning is vitiated by it. The only logical conclusion to be drawn, when a contradiction issues from a train of reasoning, is that at least one of the premises involved in the inference is false. It is rashly assumed without further question that the peccant premise can at once be located. In mathematics this assumption is often justified, and philosophers have been thereby misled. But in the absence of a well-defined categorial scheme of entities, issuing in a satisfactory metaphysical system, every premise in a philosophical argument is under suspicion.

Philosophy will not regain its proper status until the gradual elaboration of categorial schemes, definitely stated at each stage of progress, is recognized as its proper objective. There may be rival schemes, inconsistent among themselves; each with its own merits and its own failures. It will then be the purpose of research to conciliate the differences. Metaphysical categories are not dogmatic statements of the obvious; they are tentative formulations of the ultimate generalities.

If we consider any scheme of philosophic categories as one complex assertion, and apply to it the logician's alternative, true or false, the answer must be that the scheme is false. The same answer must be given to a like question respecting the existing formulated principles of any science.

The scheme is true with unformulated qualifications, exceptions, limitations, and new interpretations in terms of more general notions. We do not yet know how to recast the scheme into a logical truth. But the scheme is a matrix from which true propositions applicable to particular circumstances can be derived. We can at present only trust our trained instincts

³ Cf. *Principia Mathematica*, by Bertrand Russell and A. N. Whitehead, Vol. I, Introduction and Introduction to the Second Edition. These introductory discussions are practically due to Russell, and in the second edition wholly so.

as to the discrimination of the circumstances in respect to which the scheme is valid.

The use of such a matrix is to argue from it boldly and with rigid logic. The scheme should therefore be stated with the utmost precision and definiteness, to allow of such argumentation. The conclusion of the argument should then be confronted with circumstances to which it should apply.

The primary advantage thus gained is that experience is not interrogated with the benumbing repression of common sense. The observation acquires an enhanced penetration by reason of the expectation evoked by the conclusion of the argument. The outcome from this procedure takes one of three forms: (i) the conclusion may agree with the observed facts; (ii) the conclusion may exhibit general agreement, with disagreement in detail; (iii) the conclusion may be in complete disagreement with the facts.

In the first case, the facts are known with more adequacy and the applicability of the system to the world has been elucidated. In the second case, criticisms of the observation of the facts and of the details of the scheme are both required. The history of thought shows that false interpretations of observed facts enter into the records of their observation. Thus both theory, and received notions as to fact, are in doubt. In the third case, a fundamental reorganization of theory is required either by way of limiting it to some special province, or by way of entire abandonment of its main categories of thought.

[14] After the initial basis of a rational life, with a civilized language, has been laid, all productive thought has proceeded either by the poetic insight of artists, or by the imaginative elaboration of schemes of thought capable of utilization as logical premises. In some measure or other, progress is always a transcendence of what is obvious.

Rationalism never shakes off its status of an experimental adventure. The combined influences of mathematics and religion, which have so greatly contributed to the rise of philosophy, have also had the unfortunate effect of yoking it with static dogmatism. Rationalism is an adventure in the clarification of thought, progressive and never final. But it is an adventure in which even partial success has importance.

SECTION IV

The field of a special science is confined to one genus of facts, in the sense that no statements are made respecting facts which lie outside that genus. The very circumstance that a science has naturally arisen concerning a set of facts secures that facts of that type have definite relations among themselves which are very obvious to all mankind. The common obviousness of things arises when their explicit apprehension carries immediate importance for purposes of survival, or of enjoyment—that is to say, for purposes of 'being' and of 'well-being.' Elements in human experience,

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singled out in this way, are those elements concerning which language is copious and, within its limits, precise. The special sciences, therefore, deal with topics which lie open to easy inspection and are readily expressed by words.

The study of philosophy is a voyage towards the larger generalities. For this reason in the infancy of science, when the main stress lay in the discovery of the most general ideas usefully applicable to the subject-matter in question, philosophy was not sharply distinguished from science. To this day, a new science with any substantial novelty in its notions is considered to be in some way [15] peculiarly philosophical. In their later stages, apart from occasional disturbances, most sciences accept without question the general notions in terms of which they develop. The main stress is laid on the adjustment and the direct verification of more special statements. In such periods scientists repudiate philosophy; Newton, justly satisfied with his physical principles, disclaimed metaphysics.

The fate of Newtonian physics warns us that there is a development in scientific first principles, and that their original forms can only be saved by interpretations of meaning and limitations of their field of application—interpretations and limitations unsuspected during the first period of successful employment. One chapter in the history of culture is concerned with the growth of generalities. In such a chapter it is seen that the older generalities, like the older hills, are worn down and diminished in height, surpassed by younger rivals.

Thus one aim of philosophy is to challenge the half-truths constituting the scientific first principles. The systematization of knowledge cannot be conducted in watertight compartments. All general truths condition each other; and the limits of their application cannot be adequately defined apart from their correlation by yet wider generalities. The criticism of principles must chiefly take the form of determining the proper meanings to be assigned to the fundamental notions of the various sciences, when these notions are considered in respect to their status relatively to each other. The determination of this status requires a generality transcending any special subject-matter.

If we may trust the Pythagorean tradition, the rise of European philosophy was largely promoted by the development of mathematics into a science of abstract generality. But in its subsequent development the method of philosophy has also been vitiated by the example of mathematics. The primary method of mathematics is deduction; the primary method of philosophy is descriptive [16] generalization. Under the influence of mathematics, deduction has been foisted onto philosophy as its standard method, instead of taking its true place as an essential auxiliary mode of verification whereby to test the scope of generalities. This misapprehension of philosophic method has veiled the very considerable success of philosophy in providing generic notions which add lucidity to our apprehension of the facts of experience. The depositions of Plato, Aristotle,

Thomas Aquinas, Descartes, Spinoza, Leibniz,[†] Locke, Berkeley, Hume, Kant, Hegel, merely mean that ideas which these men introduced into the philosophic tradition must be construed with limitations, adaptations, and inversions, either unknown to them, or even explicitly repudiated by them. A new idea introduces a new alternative; and we are not less indebted to a thinker when we adopt the alternative which he discarded. Philosophy never reverts to its old position after the shock of a great philosopher.

SECTION V

Every science must devise its own instruments. The tool required for philosophy is language. Thus philosophy redesigns language in the same way that, in a physical science, pre-existing appliances are redesigned. It is exactly at this point that the appeal to facts is a difficult operation. This appeal is not solely to the expression of the facts in current verbal statements. The adequacy of such sentences is the main question at issue. It is true that the general agreement of mankind as to experienced facts is best expressed in language. But the language of literature breaks down precisely at the task of expressing in explicit form the larger generalities—the very generalities which metaphysics seeks to express.

The point is that every proposition refers to a universe exhibiting some general systematic metaphysical character. Apart from this background, the separate entities which go to form the proposition, and the proposition as a whole, are without determinate character. Nothing [17] has been defined, because every definite entity requires a systematic universe to supply its requisite status. Thus every proposition proposing a fact* must, in its complete analysis, propose the general character of the universe required for that fact. There are no self-sustained facts, floating in nonentity. This doctrine, of the impossibility of tearing a proposition from its systematic context in the actual world, is a direct consequence of the fourth and the twentieth of the fundamental categorial explanations which we shall be engaged in expanding and illustrating. A proposition can embody partial truth because it only demands a certain type of systematic environment, which is presupposed in its meaning. It does not refer to the universe in all its detail.

One practical aim of metaphysics is the accurate analysis of propositions; not merely of metaphysical propositions, but of quite ordinary propositions such as 'There is beef for dinner today,' and 'Socrates is mortal.' The one genus of facts which constitutes the field of some special science requires some common metaphysical presupposition respecting the universe. It is merely credulous to accept verbal phrases as adequate statements of propositions. The distinction between verbal phrases and complete propositions is one of the reasons why the logicians' rigid alternative, 'true or false,' is so largely irrelevant for the pursuit of knowledge.

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The excessive trust in linguistic phrases has been the well-known reason vitiating so much of the philosophy and physics among the Greeks and among the mediaeval thinkers who continued the Greek traditions. For example John Stuart Mill writes:

They [the Greeks] ‡ had great difficulty in distinguishing between things which their language confounded, or in putting mentally together things which it distinguished,‡ and could hardly combine the objects in nature into any classes but those which were made for them by the popular phrases of their own country; or at least could not help fancying those classes to be natural, and all others arbitrary and artificial. Ac- [18] cordingly, scientific investigation among the Greek schools of speculation and their followers in the Middle Ages, was little more than a mere sifting and analysing of the notions attached to common language. They thought that by determining the meaning of words they could become acquainted with facts.⁴

Mill then proceeds to quote from Whewell⁵ a paragraph illustrating the same weakness of Greek thought.

But neither Mill, nor Whewell, tracks this difficulty about language down to its sources. They both presuppose that language does enunciate well-defined propositions. This is quite untrue. Language is thoroughly indeterminate, by reason of the fact that every occurrence presupposes some systematic type of environment.

For example, the word ‘Socrates,’ referring to the philosopher, in one sentence may stand for an entity presupposing a more closely defined background than the word ‘Socrates,’ with the same reference, in another sentence. The word ‘mortal’ affords an analogous possibility. A precise language must await a completed metaphysical knowledge.

The technical language of philosophy represents attempts of various schools of thought to obtain explicit expression of general ideas presupposed by the facts of experience. It follows that any novelty in metaphysical doctrines exhibits some measure of disagreement with statements of the facts to be found in current philosophical literature. The extent of disagreement measures the extent of metaphysical divergence. It is, therefore, no valid criticism on one metaphysical school to point out that its doctrines do not follow from the verbal expression of the facts accepted by another school. The whole contention is that the doctrines in question supply a closer approach to fully expressed propositions.

The truth itself is nothing else than how the composite natures of the organic actualities of the world obtain ade- [19] quate representation in the divine nature. Such representations compose the ‘consequent nature’ of God, which evolves in its relationship to the evolving world without dero-

⁴ ‡*Logic*, Book V, Ch. III.

⁵ Cf. Whewell’s *History of the Inductive Sciences*.

gation to the eternal completion of its primordial conceptual nature. In this way the 'ontological principle' is maintained—since there can be no determinate truth, correlating impartially the partial experiences of many actual entities, apart from one actual entity to which it can be referred. The reaction of the temporal world on the nature of God is considered subsequently in Part V: it is there termed 'the consequent nature of God.'

Whatever is found in 'practice' must lie within the scope of the metaphysical description. When the description fails to include the 'practice,' the metaphysics is inadequate and requires revision. There can be no appeal to practice to supplement metaphysics, so long as we remain contented with our metaphysical doctrines. Metaphysics is nothing but the description of the generalities which apply to all the details of practice.

No metaphysical system can hope entirely to satisfy these pragmatic tests. At the best such a system will remain only an approximation to the general truths which are sought. In particular, there are no precisely stated axiomatic certainties from which to start. There is not even the language in which to frame them. The only possible procedure is to start from verbal expressions which, when taken by themselves with the current meaning of their words, are ill-defined and ambiguous. These are not premises to be immediately reasoned from apart from elucidation by further discussion; they are endeavours to state general principles which will be exemplified in the subsequent description of the facts of experience. This subsequent elaboration should elucidate the meanings to be assigned to the words and phrases employed. Such meanings are incapable of accurate apprehension apart from a correspondingly accurate apprehension of the metaphysical background which the [20] universe provides for them. But no language can be anything but elliptical, requiring a leap of the imagination to understand its meaning in its relevance to immediate experience. The position of metaphysics in the development of culture cannot be understood without remembering that no verbal statement is the adequate expression of a proposition.

An old established metaphysical system gains a false air of adequate precision from the fact that its words and phrases have passed into current literature. Thus propositions expressed in its language are more easily correlated to our flitting intuitions into metaphysical truth. When we trust these verbal statements and argue as though they adequately analysed meaning, we are led into difficulties which take the shape of negations of what in practice is presupposed. But when they are proposed as first principles they assume an unmerited air of sober obviousness. Their defect is that the true propositions which they do express lose their fundamental character when subjected to adequate expression. For example consider the type of propositions such as 'The grass is green,' and 'The whale is big.' This subject-predicate form of statement seems so simple, leading straight to a metaphysical first principle; and yet in these examples it conceals such complex, diverse meanings.

SECTION VI

It has been an objection to speculative philosophy that it is overambitious. Rationalism, it is admitted, is the method by which advance is made within the limits of particular sciences. It is, however, held that this limited success must not encourage attempts to frame ambitious schemes expressive of the general nature of things.

One alleged justification of this criticism is ill-success: European thought is represented as littered with metaphysical systems, abandoned and unreconciled.

Such an assertion tacitly fastens upon philosophy the old dogmatic test. The same criterion would fasten ill-[21] success upon science. We no more retain the physics of the seventeenth century than we do the Cartesian philosophy of that century. Yet within limits, both systems express important truths. Also we are beginning to understand the wider categories which define their limits of correct application. Of course, in that century, dogmatic views held sway; so that the validity both of the physical notions, and of the Cartesian notions, was misconceived. Mankind never quite knows what it is after. When we survey the history of thought, and likewise the history of practice, we find that one idea after another is tried out, its limitations defined, and its core of truth elicited. In application to the instinct for the intellectual adventures demanded by particular epochs, there is much truth in Augustine's rhetorical phrase, *Securus judicat orbis terrarum*. At the very least, men do what they can in the way of systematization, and in the event achieve something. The proper test is not that of finality, but of progress.

But the main objection, dating from the sixteenth century and receiving final expression from Francis Bacon, is the uselessness of philosophic speculation. The position taken by this objection is that we ought to describe detailed matter of fact, and elicit the laws with a generality strictly limited to the systematization of these described details. General interpretation, it is held, has no bearing upon this procedure; and thus any system of general interpretation, be it true or false, remains intrinsically barren. Unfortunately for this objection, there are no brute, self-contained matters of fact, capable of being understood apart from interpretation as an element in a system. Whenever we attempt to express the matter of immediate experience, we find that its understanding leads us beyond itself, to its contemporaries, to its past, to its future, and to the universals in terms of which its definiteness is exhibited. But such universals, by their very character of universality, embody the potentiality of other facts with variant types of definiteness. Thus [22] the understanding of the immediate brute fact requires its metaphysical interpretation as an item in a world with some systematic relation to it. When thought comes upon the scene, it finds the interpretations as matters of practice. Philosophy does not initiate interpretations. Its search for a rationalistic scheme is the search for more

adequate criticism, and for more adequate justification, of the interpretations which we performe employ. Our habitual experience is a complex of failure and success in the enterprise of interpretation. If we desire a record of uninterpreted experience, we must ask a stone to record its autobiography. Every scientific memoir in its record of the 'facts' is shot through and through with interpretation. The methodology of rational interpretation is the product of the fitful vagueness of consciousness. Elements which shine with immediate distinctness, in some circumstances, retire into penumbral shadow in other circumstances, and into black darkness on other occasions. And yet all occasions proclaim themselves as actualities within the flux of a solid world, demanding a unity of interpretation.

Philosophy is the self-correction by consciousness of its own initial excess of subjectivity. Each actual occasion contributes to the circumstances of its origin additional formative elements deepening its own peculiar individuality. Consciousness is only the last and greatest of such elements by which the selective character of the individual obscures the external totality from which it originates and which it embodies. An actual individual, of such higher grade, has truck with the totality of things by reason of its sheer actuality; but it has attained its individual depth of being by a selective emphasis limited to its own purposes. The task of philosophy is to recover the totality obscured by the selection. It replaces in rational experience what has been submerged in the higher sensitive experience and has been sunk yet deeper by the initial operations of consciousness itself. The selectiveness of individual experience is moral so far as it con-[23] forms to the balance of importance disclosed in the rational vision; and conversely the conversion of the intellectual insight into an emotional force corrects the sensitive experience in the direction of morality. The correction is in proportion to the rationality of the insight.

Morality of outlook is inseparably conjoined with generality of outlook. The antithesis between the general good and the individual interest can be abolished only when the individual is such that its interest is the general good, thus exemplifying the loss of the minor intensities in order to find them again with finer composition in a wider sweep of interest.

Philosophy frees itself from the taint of ineffectiveness by its close relations with religion and with science, natural and sociological. It attains its chief importance by fusing the two, namely, religion and science, into one rational scheme of thought. Religion should connect the rational generality of philosophy with the emotions and purposes springing out of existence in a particular society, in a particular epoch, and conditioned by particular antecedents. Religion is the translation of general ideas into particular thoughts, particular emotions, and particular purposes; it is directed to the end of stretching individual interest beyond its self-defeating particularity. Philosophy finds religion, and modifies it; and conversely religion is among the data of experience which philosophy must weave into

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its own scheme. Religion is an ultimate craving to infuse into the insistent particularity of emotion that non-temporal generality which primarily belongs to conceptual thought alone. In the higher organisms the differences of tempo between the mere emotions and the conceptual experiences produce a life-tedium, unless this supreme fusion has been effected. The two sides of the organism require a reconciliation in which emotional experiences illustrate a conceptual justification, and conceptual experiences find an emotional illustration.

[24] This demand for an intellectual justification of brute experience has also been the motive power in the advance of European science. In this sense scientific interest is only a variant form of religious interest. Any survey of the scientific devotion to 'truth,' as an ideal, will confirm this statement. There is, however, a grave divergence between science and religion in respect to the phases of individual experience with which they are concerned. Religion is centered upon the harmony of rational thought with the sensitive reaction to the percepta from which experience originates. Science is concerned with the harmony of rational thought with the percepta themselves. When science deals with emotions, the emotions in question are percepta and not immediate passions—other people's emotion and not our own; at least our own in recollection, and not in immediacy. Religion deals with the formation of the experiencing subject; whereas science deals with the objects, which are the data forming the primary phase in this experience. The subject originates from, and amid, given conditions; science conciliates thought with this primary matter of fact; and religion conciliates the thought involved in the process with the sensitive reaction involved in that same process. The process is nothing else than the experiencing subject itself. In this explanation it is presumed that an experiencing subject is one occasion of sensitive reaction to an actual world. Science finds religious experiences among its percepta; and religion finds scientific concepts among the conceptual experiences to be fused with particular sensitive reactions.

The conclusion of this discussion is, first, the assertion of the old doctrine that breadth of thought reacting with intensity of sensitive experience stands out as an ultimate claim of existence; secondly, the assertion that empirically the development of self-justifying thoughts has been achieved by the complex process of generalizing† from particular topics, of imaginatively schematizing the generalizations, and finally by renewed comparison [25] of the imagined scheme with the direct experience to which it should apply.

There is no justification for checking generalization at any particular stage. Each phase of generalization exhibits its own peculiar simplicities which stand out just at that stage, and at no other stage. There are simplicities connected with the motion of a bar of steel which are obscured if we refuse to abstract from the individual molecules; and there are certain simplicities concerning the behaviour of men which are obscured if we

refuse to abstract from the individual peculiarities of particular specimens. In the same way, there are certain general truths, about the actual things in the common world of activity, which will be obscured when attention is confined to some particular detailed mode of considering them. These general truths, involved in the meaning of every particular notion respecting the actions of things, are the subject-matter[†] for speculative philosophy.

Philosophy destroys its usefulness when it indulges in brilliant feats of explaining away. It is then trespassing with the wrong equipment upon the field of particular sciences. Its ultimate appeal is to the general consciousness of what in practice we experience. Whatever thread of presupposition characterizes social expression throughout the various epochs of rational society[†] must find its place in philosophic theory. Speculative boldness must be balanced by complete humility before logic, and before fact. It is a disease of philosophy when it is neither bold nor humble, but merely a reflection of the temperamental presuppositions of exceptional personalities.

Analogously, we do not trust any recasting of scientific theory depending upon a single performance of an aberrant experiment, unrepeated. The ultimate test is always widespread, recurrent experience; and the more general the rationalistic scheme, the more important is this final appeal.

The useful function of philosophy is to promote the [26] most general systematization of civilized thought. There is a constant reaction between specialism and common sense. It is the part of the special sciences to modify common sense. Philosophy is the welding of imagination and common sense into a restraint upon specialists, and also into an enlargement of their imaginations. By providing the generic notions philosophy should make it easier to conceive the infinite variety of specific instances which rest unrealized in the womb of nature.

CHAPTER II THE CATEGOREAL SCHEME ‡

SECTION I

[27] This chapter contains an anticipatory sketch of the primary notions which constitute the philosophy of organism. The whole of the subsequent discussion in these lectures has the purpose of rendering this summary intelligible, and of showing that it embodies generic notions inevitably presupposed in our reflective experience—presupposed, but rarely expressed in explicit distinction. Four notions may be singled out from this summary, by reason of the fact that they involve some divergence from antecedent philosophical thought. These notions are, that of an ‘actual entity,’ that of a ‘prehension,’ that of a ‘nexus,’ and that of the ‘ontological principle.’ Philosophical thought has made for itself difficulties by dealing exclusively in very abstract notions, such as those of mere awareness, mere private sensation, mere emotion, mere purpose, mere appearance, mere causation. These are the ghosts of the old ‘faculties,’ banished from psychology, but still haunting metaphysics. There can be no ‘mere’ togetherness of such abstractions. The result is that philosophical discussion is enmeshed in the fallacy of ‘misplaced concreteness.’¹ In the three notions—actual entity, prehension, nexus—an endeavour has been made to base philosophical thought upon the most concrete elements in our experience.

‘Actual entities’—also termed ‘actual occasions’—are the final real things—of which the world is made up. There is no going behind actual entities to find anything [28] more real. They differ among themselves: God is an actual entity, and so is the most trivial puff of existence in far-off empty space. But, though there are gradations of importance, and diversities of function, yet in the principles which actuality exemplifies all are on the same level. The final facts are, all alike, actual entities; and these actual entities are drops of experience, complex and interdependent.

In its recurrence to the notion of a plurality of actual entities the philosophy of organism is through and through Cartesian.[†] The ‘ontological principle’ broadens and extends a general principle laid down by John Locke in his *Essay* (Bk. II, Ch. XXIII, Sect. 7),[†] when he asserts that “power” is “*a great part of our complex ideas of substances.*”[†] The notion

¹ Cf. my *Science and the Modern World*, Ch. III.

of ‘substance’ is transformed into that of ‘actual entity’; and the notion of ‘power’ is transformed into the principle that the reasons for things are always to be found in the composite nature of definite actual entities—in the nature of God for reasons of the highest absoluteness, and in the nature of definite temporal actual entities for reasons which refer to a particular environment. The ontological principle can be summarized as: no actual entity, then no reason.

Each actual entity is analysable in an indefinite number of ways. In some modes of analysis the component elements are more abstract than in other modes of analysis. The analysis of an actual entity into ‘prehensions’ is that mode of analysis which exhibits the most concrete elements in the nature of actual entities. This mode of analysis will be termed the ‘division’ of the actual entity in question. Each actual entity is ‘divisible’ in an indefinite number of ways, and each way of ‘division’ yields its definite quota of prehensions. A prehension reproduces in itself the general characteristics of an actual entity: it is referent to an external world, and in this sense will be said to have a ‘vector character’; it involves emotion, and purpose, and valuation, and causation. In fact, any characteristic of an actual entity is reproduced [29] in a prehension. It might have been a complete actuality; but, by reason of a certain incomplete partiality, a prehension is only a subordinate element in an actual entity. A reference to the complete actuality is required to give the reason why such a prehension is what it is in respect to its subjective form. This subjective form is determined by the subjective aim at further integration, so as to obtain the ‘satisfaction’ of the completed subject. In other words, final causation and atomism are interconnected philosophical principles.

With the purpose of obtaining a one-substance cosmology, ‘prehensions’ are a generalization from Descartes’ mental ‘cogitations,’ and from Locke’s ‘ideas,’ to express the most concrete mode of analysis applicable to every grade of individual actuality. Descartes and Locke maintained a two-substance ontology—Descartes explicitly, Locke by implication. Descartes, the mathematical physicist, emphasized his account of corporeal substance; and Locke, the physician and the sociologist, confined himself to an account of mental substance. The philosophy of organism, in its scheme for one type of actual entities, adopts the view that Locke’s account of mental substance embodies, in a very special form, a more penetrating philosophic description than does Descartes’ account of corporeal substance. Nevertheless, Descartes’ account must find its place in the philosophic scheme. On the whole, this is the moral to be drawn from the *Monadology*[†] of Leibniz. His monads are best conceived as generalizations of contemporary notions of mentality. The contemporary notions of physical bodies only enter into his philosophy subordinately and derivatively. The philosophy of organism endeavours to hold the balance more evenly. But it does start with a generalization of Locke’s account of mental operations.

Actual entities involve each other by reason of their prehensions of each other. There are thus real individual facts of the togetherness of actual entities, which are real, individual, and particular, in the same sense in [30] which actual entities and the prehensions are real, individual, and particular. Any such particular fact of togetherness among actual entities is called a 'nexus' (plural form is written 'nexūs'). The ultimate facts of immediate actual experience are actual entities, prehensions, and *nexūs*. All else is, for our experience, derivative abstraction.

The explanatory purpose of philosophy is often misunderstood. Its business is to explain the emergence of the more abstract things from the more concrete things. It is a complete mistake to ask how concrete particular fact can be built up out of universals. The answer is, 'In no way.' The true philosophic question² is, How can concrete fact exhibit entities abstract from itself and yet participated in by its own nature?

In other words, philosophy is explanatory of abstraction, and not of concreteness. It is by reason of their instinctive grasp of this ultimate truth that, in spite of much association with arbitrary fancifulness and atavistic mysticism, types of Platonic philosophy retain their abiding appeal; they seek the forms in the facts. Each fact is more than its forms, and each form 'participates' throughout the world of facts. The definiteness of fact is due to its forms; but the individual fact is a creature, and creativity is the ultimate behind all forms, inexplicable by forms, and conditioned by its creatures.

SECTION II

THE CATEGORIES

- I. The Category of the Ultimate.
- II. Categories of Existence.
- III. Categories of Explanation.
- IV. Categoreal Obligations.

It is the purpose of the discussion in these lectures to make clear the meaning of these categories, their applicability, and their adequacy. The course of the discussion will disclose how very far they are from satisfying this ideal.

Every entity should be a specific instance of one category of existence, every explanation should be a specific instance of categories of explanation, and every obligation should be a specific instance of categoreal obliga-

² In this connection I may refer to the second chapter of my book *The Principle of Relativity*, Cambridge University Press, † 1922.

tions. The Category[†] of the Ultimate expresses the general principle presupposed in the three more special categories.

The Category of the Ultimate

'Creativity,' 'many,' 'one' are the ultimate notions involved in the meaning of the synonymous terms 'thing,' 'being,' 'entity.' These three notions complete the Category of the Ultimate and are presupposed in all the more special categories.

The term 'one' does not stand for 'the integral number one,' which is a complex special notion. It stands for the general idea underlying alike the indefinite article '*a* or *an*,' and the definite article '*the*,' and the demonstratives '*this* or *that*,' and the relatives '*which* or *what* or *how*.' It stands for the singularity of an entity. The term 'many' presupposes the term 'one,' and the term 'one' presupposes the term 'many.' The term 'many' conveys the notion of 'disjunctive diversity'; this notion is an essential* element in the concept of 'being.' There are many 'beings' in disjunctive diversity.

'Creativity' is the universal of universals characterizing ultimate matter of fact. It is that ultimate principle by which the many, which are the* universe disjunctively, become the one actual occasion, which is the universe conjunctively. It lies in the nature of things that the many enter into complex unity.

'Creativity' is the principle of *novelty*. An actual occasion is a novel entity diverse from any entity in the 'many' which it unifies. Thus 'creativity' introduces novelty into the content of the many, which are the [32] universe disjunctively. The 'creative advance' is the application of this ultimate principle of creativity to each novel situation which it originates.

'Together' is a generic term covering the various special ways in which various sorts of entities are 'together' in any one actual occasion. Thus 'together' presupposes the notions 'creativity,' 'many,' 'one,' 'identity' and 'diversity.' The ultimate metaphysical principle is the advance from disjunction to conjunction, creating a novel entity other than the entities given in disjunction. The novel entity is at once the togetherness of the 'many' which it finds, and also it is one among the disjunctive 'many' which it leaves; it is a novel entity, disjunctively among the many entities which it synthesizes. The many become one, and are increased by one. In their natures, entities are disjunctively 'many' in process of passage into conjunctive unity. This Category of the Ultimate replaces Aristotle's category of 'primary substance.'

Thus the 'production of novel togetherness' is the ultimate notion embodied in the term 'concrecence.' These ultimate notions of 'production of novelty' and of 'concrete togetherness' are inexplicable either in terms of higher universals or in terms of the components participating in the con-

crescence. The analysis of the components abstracts from the concrescence. The sole appeal is to intuition.

The Categories of Existence

There are eight Categories of Existence:

- (i) Actual Entities (also termed Actual Occasions), or Final Realities, or *Rēs Verae*.
- (ii) Prehensions, or Concrete Facts of Relatedness.
- (iii) *Nexūs* (plural of *Nexus*), or Public Matters of Fact.
- (iv) Subjective Forms, or Private Matters of Fact.
- (v) Eternal Objects, or Pure Potentials for the Specific Determination of Fact, or Forms of Definiteness.
- (vi) Propositions, or Matters of Fact in Potential [33] Determination, or Impure Potentials for the Specific Determination of Matters of Fact, or Theories.
- (vii) Multiplicities, or Pure Disjunctions of Diverse Entities.
- (viii) Contrasts, or Modes of Synthesis of Entities in one Prehension, or Patterned Entities.‡

Among these eight categories of existence, actual entities and eternal objects stand out with a certain extreme finality. The other types of existence have a certain intermediate character. The eighth category includes an indefinite progression of categories, as we proceed from 'contrasts' to 'contrasts of contrasts,' and on indefinitely to higher grades of contrasts.

The Categories of Explanation

There are twenty-seven Categories of Explanation:

- (i) That the actual world is a process, and that the process is the becoming of actual entities. Thus actual entities are creatures; they are also termed 'actual occasions.'
- (ii) That in the becoming of an actual entity, the *potential* unity of many entities in disjunctive diversity‡—actual and non-actual—acquires the *real* unity of the one actual entity; so that the actual entity is the real concrescence of many potentials.
- (iii) That in the becoming of an actual entity, novel prehensions, *nexūs*, subjective forms, propositions, multiplicities, and contrasts, also become; but there are no novel eternal objects.
- (iv) That the potentiality for being an element in a real concrescence* of many entities into one actuality† is the one general metaphysical character attaching to all entities, actual and non-actual; and that every item in its universe is involved in each concrescence. In other words, it belongs to the nature of a 'being' that it is a potential for every 'becoming.' This is the 'principle of relativity.'
- (v) That no two actual entities originate from an identical universe; though the difference between the two universes only consists in

some actual entities, included in one and not in the other, and in the subordinate entities which each actual entity introduces into the world. The eternal objects are the same for all actual entities. The nexus of actual entities in the universe correlate to a concrescence[†] is termed 'the actual world' correlate to that concrescence.

(vi) That each entity in the universe of a given concrescence *can*, so far as its own nature is concerned, be implicated in that concrescence in one or other of many modes; but *in fact* it is implicated only in *one* mode: that the particular mode of implication is only rendered fully determinate by that concrescence, though it is conditioned by the correlate universe. This indetermination, rendered determinate in the real concrescence, is the meaning of 'potentiality.' It is a *conditioned* indetermination, and is therefore called a '*real* potentiality.'

(vii) That an eternal object can be described only in terms of its potentiality for 'ingression' into the becoming of actual entities; and that its analysis only discloses other eternal objects. It is a pure potential. The term 'ingression' refers to the particular mode in which the potentiality of an eternal object is realized in a particular actual entity, contributing to the definiteness of that actual entity.

(viii) That two descriptions are required for an actual entity: (a) one which is analytical of its potentiality for 'objectification' in the becoming of other actual entities, and (b) another which is analytical of the process which constitutes its own becoming.

The term 'objectification' refers to the particular mode in which the potentiality of one actual entity is realized in another actual entity.

(ix) That *how* an actual entity *becomes* constitutes *what* that actual entity *is*;‡ so that the two descriptions of an actual entity are not independent. Its 'being' is [35] constituted by its 'becoming.' This is the 'principle of process.'

(x) That the first analysis of an actual entity, into its most concrete elements, discloses it to be a concrescence of prehensions, which have originated in its process of becoming. All further analysis is an analysis of prehensions. Analysis in terms of prehensions is termed 'division.'

(xi) That every prehension consists of three factors: (a) the 'subject' which is prehending, namely, the actual entity in which that prehension is a concrete element; (b) the 'datum' which is prehended; (c) the 'subjective form' which is *how* that subject prehends that datum.

Prehensions of actual entities—i.e., prehensions whose data involve actual entities—are termed 'physical prehensions'; and prehensions of eternal objects are termed 'conceptual prehensions.' Consciousness is not necessarily involved in the subjective forms of either type of prehension.

(xii) That there are two species of prehensions: (a) 'positive prehensions' which are termed 'feelings,' and (b) 'negative prehensions' which are said to 'eliminate from feeling.' Negative prehensions also have subjective forms. A negative prehension holds its datum as inoperative in the

progressive concrescence of prehensions constituting the unity of the subject.

(xiii) That there are many species of subjective forms, such as emotions, valuations, purposes, adversions, aversions, consciousness, etc.

(xiv) That a nexus is a set of actual entities in the unity of the relatedness constituted by their prehensions of each other, or—what is the same thing conversely expressed—constituted by their objectifications in each other.

(xv) That a proposition is the unity of certain actual entities in their potentiality for forming a nexus, with its potential relatedness partially defined by certain eternal objects which have the unity of one complex eternal [36] object. The actual entities involved are termed the ‘logical subjects,’ the complex eternal object is the ‘predicate.’

(xvi) That a multiplicity consists of many entities, and its unity is constituted by the fact that all its constituent entities severally satisfy at least one condition which no other entity satisfies.

Every statement about a particular multiplicity can be expressed as a statement referent either (a) to *all* its members severally, or (b) to an indefinite *some* of its members severally, or (c) as a denial of one of these statements. Any statement, incapable of being expressed in this form, is not a statement about a multiplicity, though it may be a statement about an entity closely allied to some multiplicity, i.e., systematically allied to each member of some multiplicity.

(xvii) That whatever is a datum for a feeling has a unity *as felt*. Thus the many components of a complex datum have a unity: this unity is a ‘contrast’ of entities. In a sense this means that there are an endless number of categories of existence, since the synthesis of entities into a contrast in general produces a new existential type. For example, a proposition is, in a sense, a ‘contrast.’ For the practical purposes of ‘human understanding,’ it is sufficient to consider a few basic types of existence, and to lump the more derivative types together under the heading of ‘contrasts.’ The most important of such ‘contrasts’ is the ‘affirmation-negation’ contrast in which a proposition and a nexus obtain synthesis in one datum, the members of the nexus being the ‘logical subjects’ of the proposition.

(xviii) That every condition to which the process of becoming conforms in any particular instance has its reason *either* in the character of some actual entity in the actual world of that concrescence, *or* in the character of the subject which is in process of concrescence. This category of explanation is termed the ‘ontological principle.’ It could also be termed the ‘principle of efficient, [37] and final, causation.’ This ontological principle means that actual entities are the only *reasons*; so that to search for a *reason* is to search for one or more actual entities. It follows that any condition to be satisfied by one actual entity in its process expresses a fact either about the ‘real internal constitutions’ of some other actual entities, or about the ‘subjective aim’ conditioning that process.

The phrase 'real internal constitution' is to be found in Locke's *Essay Concerning Human Understanding* (III, III, 15): "And thus the real internal (but generally in substances unknown) constitution of things, whereon their discoverable qualities depend, may be called their 'essence.'" Also the terms 'prehension' and 'feeling' are to be compared with the various significations of Locke's term 'idea.' But they are adopted as more general and more neutral terms than 'idea' as used by Locke, who seems to restrict them to *conscious mentality*. Also the ordinary logical account of 'propositions' expresses only a restricted aspect of their rôle in the universe, namely, when they are the data of feelings whose subjective forms are those of judgments. It is an essential doctrine in the philosophy of organism that the primary function of a proposition is to be relevant as a lure for feeling. For example, some propositions are the data of feelings with subjective forms such as to constitute those feelings to be the enjoyment of a joke. Other propositions are felt with feelings whose subjective forms are horror, disgust, or indignation. The 'subjective aim,' which controls the becoming of a subject, is that subject feeling a proposition with the subjective form of purpose to realize it in that process of self-creation.

(xix) That the fundamental types of entities are actual entities, and eternal objects; and that the other types of entities only express how all entities of the two fundamental types are in community with each other, in the actual world.

[38] (xx) That to 'function' means to contribute determination to the actual entities in the nexus of some actual world. Thus the determinateness and self-identity of one entity cannot be abstracted from the community of the diverse functioning of all entities. 'Determination' is analysable into 'definiteness' and 'position,' where 'definiteness'[†] is the illustration of select eternal objects, and 'position' is relative status in a nexus of actual entities.

(xxi) An entity is actual, when it has significance for itself. By this it is meant that an actual entity functions in respect to its own determination. Thus an actual entity combines self-identity with self-diversity.

(xxii) That an actual entity by functioning in respect to itself plays diverse rôles in self-formation without losing its self-identity. It is self-creative; and in its process of creation transforms its diversity of rôles into one coherent rôle. Thus 'becoming' is the transformation of incoherence into coherence, and in each particular instance ceases with this attainment.

(xxiii) That this self-functioning is the real internal constitution of an actual entity. It is the 'immediacy' of the actual entity. An actual entity is called the 'subject' of its own immediacy.

(xxiv) The functioning of one actual entity in the self-creation of another actual entity is the 'objectification' of the former for the latter actual entity. The functioning of an eternal object in the self-creation of an actual entity is the 'ingression' of the eternal object in the actual entity.

(xxv) The final phase in the process of concrescence, constituting an

actual entity, is one complex, fully determinate feeling. This final phase is termed the 'satisfaction.' It is fully determinate (a) as to its genesis, (b) as to its objective character for the transcendent creativity, and (c) as to its prehension—positive or negative—of every item in its universe.

(xxvi) Each element in the genetic process of an actual [39] entity has one self-consistent function, however complex, in the final satisfaction.

(xxvii) In a process of concrescence, there is a succession of phases in which new prehensions arise by integration of prehensions in antecedent phases. In these integrations 'feelings' contribute their 'subjective forms' and their 'data' to the formation of novel integral prehensions; but 'negative prehensions' contribute only their 'subjective forms.' The process continues till all prehensions are components in the one determinate integral satisfaction.

SECTION III

There are nine Categoreal Obligations:

(i) *The Category of Subjective Unity.* The many feelings which belong to an incomplete phase in the process of an actual entity, though un-integrated by reason of the incompleteness of the phase, are compatible for integration by reason of the unity of their subject.

(ii) *The Category of Objective Identity.* There can be no duplication of any element in the objective datum of the 'satisfaction' of an actual entity, so far as concerns the function of that element in the 'satisfaction.'

Here, as always, the term 'satisfaction' means the one complex fully determinate feeling which is the completed phase in the process. This category expresses that each element has one self-consistent function, however complex. Logic is the general analysis of self-consistency.

(iii) *The Category of Objective Diversity.* There can be no 'coalescence' of diverse elements in the objective datum of an actual entity, so far as concerns the functions of those elements in that satisfaction.

'Coalescence' here means the notion of diverse elements exercising an absolute identity of function, devoid of the contrasts inherent in their diversities.

(iv) *The Category of Conceptual Valuation.* From each physical feeling there is the derivation of a purely [40] conceptual feeling whose datum is the eternal object determinant of the definiteness of the actual entity, or of the nexus, physically felt.

^{*}(v) *The Category of Conceptual Reversion.* There is secondary origination of conceptual feelings with data which are partially identical with, and partially diverse from, the eternal objects forming the data in the first phase of the mental pole. The diversity is a relevant diversity determined by the subjective aim.

Note that category (iv) concerns conceptual reproduction of physical feeling, and category (v) concerns conceptual diversity from physical feeling.

(vi) *The Category of Transmutation.* When (in accordance with category [iv], or with categories [iv] and [v])† one and the same conceptual feeling is derived impartially by a prehending subject from its analogous simplet physical feelings of various actual entities in its actual world, then, in a subsequent phase of integration of these simple physical feelings together with the derivate conceptual feeling, the prehending subject may transmute the *datum* of this conceptual feeling into a characteristic of some *nexus* containing those prehended actual entities among its members, or of some part of that nexus. In this way the nexus (or its part), thus characterized, is the objective datum of a feeling entertained by this prehending subject.

It is evident that the complete datum of the transmuted feeling is a contrast, namely, 'the nexus, as one, in contrast with the eternal object.' This type of contrast is one of the meanings of the notion 'qualification of physical substance by quality.'

This category is the way in which the philosophy of organism, which is an atomic theory of actuality, meets a perplexity which is inherent in all monadic cosmologies. Leibniz in his *Monadology* meets the same difficulty by a theory of 'confused' perception. But he fails to make clear how 'confusion' originates.

(vii) *The Category of Subjective Harmony.* The val-[41]uations of conceptual feelings are mutually determined by the adaptation of those feelings to be contrasted elements congruent with the subjective aim.

Category (i) and category (vii) jointly express a pre-established harmony in the process of concrescence of any one subject. Category (i) has to do with data felt, and category (vii) with the subjective forms of the conceptual feelings. This pre-established harmony is an outcome of the fact that no prehension can be considered in abstraction from its subject, although it originates in the process creative of its subject.

(viii) *The Category of Subjective Intensity.* The subjective aim, whereby there is origination of conceptual feeling, is at‡ intensity of feeling (α) in the immediate subject, and (β) in the *relevant* future.

This double aim—at the *immediate* present and the *relevant* future—is less divided than appears on the surface. For the determination of the *relevant* future, and the *anticipatory* feeling respecting provision for its grade of intensity, are elements affecting the immediate complex of feeling. The greater part of morality hinges on the determination of relevance in the future. The relevant future consists of those elements in the anticipated future which are felt with effective intensity by the present subject by reason of the real potentiality for them to be derived from itself.

(ix) *The Category of Freedom and Determination.* The concrescence of each individual actual entity is internally determined and is externally free.

This category can be condensed into the formula, that in each concrescence whatever is determinable is determined, but that there is always

a remainder for the decision of the subject-superject of that concrescence. This subject-superject is the universe in that synthesis, and beyond it there is nonentity. This final decision is the reaction of the unity of the whole to its own internal determination. This reaction is the final modification of emotion, appreciation, and purpose. But the decision [42] of the whole arises out of the determination of the parts, so as to be strictly relevant to it.

SECTION IV

The whole of the discussion in the subsequent parts either leads up to these categories (of the four types) or is explanatory of them, or is considering our experience of the world in the light of these categories. But a few preliminary notes may be useful.

It follows from the fourth category of explanation that the notion of 'complete abstraction' is self-contradictory. For you cannot abstract the universe from any entity, actual or non-actual, so as to consider that entity in complete isolation. Whenever we think of some entity, we are asking, What is it fit for here? In a sense, every entity pervades the whole world; for this question has a definite answer for each entity in respect to any actual entity or any nexus of actual entities.

It follows from the first category of explanation that 'becoming' is a creative advance into novelty. It is for this reason that the meaning of the phrase 'the actual world' is relative to the becoming of a definite actual entity which is both novel and actual, relatively to that meaning, and to no other meaning of that phrase. Thus, conversely, each actual entity corresponds to a meaning of 'the actual world' peculiar to itself. This point is dealt with more generally in categories of explanation (iii) and (v). An actual world is a nexus; and the actual world of one actual entity sinks to the level of a subordinate nexus in actual worlds beyond that actual entity.

The first, the fourth, the eighteenth, and twenty-seventh categories state different aspects of one and the same general metaphysical truth. The first category states the doctrine in a general way: that every ultimate actuality embodies in its own essence what Alexander³ [43] terms 'a principle of unrest,' namely, its becoming. The fourth category applies this doctrine to the very notion of an 'entity.' It asserts that the notion of an 'entity' means 'an element contributory to the process of becoming.' We have in this category the utmost generalization of the notion of 'relativity.' The eighteenth category asserts that the obligations imposed on the becoming of any particular actual entity arise from the constitutions of other actual entities.

The four categories of explanation, (x) to (xiii), constitute the repudia-

³ Cf. "Artistic Creation and Cosmic Creation," *Proc. Brit. Acad.*, 1927, Vol. XIII.

tion of the notion of vacuous actuality, which haunts realistic philosophy. The term ‘vacuous actuality’ here means the notion of a *res vera* devoid of subjective immediacy. This repudiation is fundamental for the organic philosophy (cf. Part II, Ch. VII, ‘The Subjectivist Principle’). The notion of ‘vacuous actuality’ is very closely allied to the notion of the ‘inherence of quality in substance.’ Both notions—in their misapplication as fundamental metaphysical categories—find their chief support in a misunderstanding of the true analysis of ‘presentational immediacy’ (cf. Part II, Ch. II, Sects. I and V).

It is fundamental to the metaphysical doctrine of the philosophy of organism, that the notion of an actual entity as the unchanging subject of change is completely abandoned. An actual entity is at once the subject experiencing and the superject of its experiences. It is subject-superject, and neither half of this description can for a moment be lost sight of. The term ‘subject’ will be mostly employed when the actual entity is considered in respect to its own real internal constitution. But ‘subject’ is always to be construed as an abbreviation of ‘subject-superject.’*

The ancient doctrine that ‘no one crosses the same river twice’ is extended. No thinker thinks twice; and, to put the matter more generally, no subject experiences twice. This is what Locke ought to have meant by his doctrine of time as a ‘perpetual perishing.’

[44] This repudiation directly contradicts Kant’s ‘First Analogy of Experience’ in either of its ways of phrasing (1st or 2nd† edition). In the philosophy of organism it is not ‘substance’ which is permanent, but ‘form.’ Forms suffer changing relations; actual entities ‘perpetually perish’ subjectively, but are immortal objectively. Actuality in perishing acquires objectivity, while it loses subjective immediacy. It loses the final causation which is its internal principle of unrest, and it acquires efficient causation whereby it is a ground of obligation characterizing the creativity.

Actual occasions in their ‘formal’ constitutions are devoid of all indetermination. Potentiality has passed into realization. They are complete and determinate matter of fact, devoid of all indecision. They form the ground of obligation. But eternal objects, and propositions, and some more complex sorts of contrasts, involve in their own natures indecision. They are, like all entities, potentials for the process of becoming. Their ingestion expresses the *definiteness* of the actuality in question. But their own natures do not in themselves disclose in what actual entities this potentiality of ingestion is realized. Thus they involve indetermination in a sense more complete than do the former set.

A multiplicity merely enters into process through its individual members. The only statements to be made about a multiplicity express how its individual members enter into the process of the actual world. Any entity which enters into process in this way belongs to the multiplicity, and no other entities do belong to it. It can be treated as a unity for this purpose, and this purpose only. For example, each of the six kinds of entities

just mentioned is a multiplicity† (i.e., not the individual entities of the kinds, but the collective kinds of the entities). A multiplicity has solely a disjunctive relationship to the actual world. The ‘universe’ comprising the absolutely initial data for an actual entity is a multiplicity. The treatment of a multiplicity as though it [45] had the unity belonging to an entity of any one of the other six kinds produces logical errors. Whenever the word ‘entity’ is used, it is to be assumed, unless otherwise stated, that it refers to an entity of one of the six kinds, and *not* to a multiplicity.

There is no emergent evolution concerned with a multiplicity, so that every statement about a multiplicity is a disjunctive statement about its individual members. Entities of any of the first six kinds, and generic contrasts, will be called ‘proper entities.’

In its development the subsequent discussion of the philosophy of organism is governed by the belief that the subject-predicate form of proposition is concerned with high abstractions, except in its application to subjective forms. This sort of abstraction, apart from this exception, is rarely relevant to metaphysical description. The dominance of Aristotelian logic from the late classical period onwards has imposed on metaphysical thought the categories naturally derivative from its phraseology. This dominance of his logic does not seem to have been characteristic of Aristotle’s own metaphysical speculations. The divergencies, such as they are, in these lectures from other philosophical doctrines mostly depend upon the fact that many philosophers, who in their explicit statements criticize the Aristotelian notion of ‘substance,’ yet implicitly throughout their discussions presuppose that the ‘subject-predicate’ form of proposition embodies the finally adequate mode of statement about the actual world. The evil produced by the Aristotelian ‘primary substance’ is exactly this habit of metaphysical emphasis upon the ‘subject-predicate’ form of proposition.

CHAPTER III SOME DERIVATIVE NOTIONS

SECTION I

[46] THE primordial created fact is the unconditioned conceptual valuation of the entire multiplicity of eternal objects. This is the ‘primordial nature’ of God. By reason of this complete valuation, the objectification of God in each derivate actual entity results in a graduation of the relevance of eternal objects to the concrescent phases of that derivate occasion. There will be additional ground of relevance for select eternal objects by reason of their ingressions into derivate actual entities belonging to the actual world of the concrescent occasion in question. But whether or no this be the case, there is always the definite relevance derived from God. Apart from God, eternal objects unrealized in the actual world would be relatively non-existent for the concrescence in question. For effective relevance requires agency of comparison, and agency belongs exclusively to actual occasions.** This divine ordering is itself matter of fact, thereby conditioning creativity. Thus possibility which transcends realized temporal matter of fact has a real relevance to the creative advance. God is the primordial creature; but the description of his nature is not exhausted by this conceptual side of it. His ‘consequent nature’ results from his physical prehensions of the derivative actual entities (cf. Part V).

‘Creativity’ is another rendering of the Aristotelian ‘matter,’ and of the modern ‘neutral stuff.’ But it is divested of the notion of passive receptivity, either of ‘form,’ or of external relations; it is the pure notion of the activity conditioned by the objective immortality of [47] the actual world—a world which is never the same twice, though always with the stable element of divine ordering. Creativity is without a character of its own in exactly the same sense in which the Aristotelian ‘matter’ is without a character of its own. It is that ultimate notion of the highest generality at * the base of actuality. It cannot be characterized, because all characters are more special than itself. But creativity is always found under conditions, and described as conditioned. The non-temporal act of all-inclusive unfettered valuation is at once a creature of creativity and a condition for creativity. It shares this double character with all creatures. By reason of its character as a creature, always in concrescence and never in the past, it receives a reaction from the world; this reaction is its consequent nature. It is here termed ‘God’; because the contemplation of our natures, as

enjoying real feelings derived from the timeless source of all order, acquires that ‘subjective form’ of refreshment and companionship at which religions aim.

This function of creatures, that they constitute the shifting character of creativity, is here termed the ‘objective immortality’ of actual entities. Thus God has objective immortality in respect to his primordial nature and his consequent nature. The objective immortality of his consequent nature is considered later (cf. Part V); we are now concerned with his primordial nature.

God’s immanence in the world in respect to his primordial nature is an urge towards the future based upon an appetite in the present. Appetition is at once the conceptual valuation of an immediate physical feeling combined with the urge towards realization of the datum conceptually prehended. For example,† ‘thirst’ is an immediate physical feeling integrated with the conceptual prehension of its quenching.

Appetition¹ is immediate matter of fact including in itself a principle of unrest, involving realization of what [48] is not and may be. The immediate occasion thereby conditions creativity so as to procure, in the future, physical realization of its mental pole, according to the various valuations inherent in its various conceptual prehensions. All physical experience is accompanied by an appetite for, or against, its continuance: an example is the appetition of self-preservation. But the origination of the novel conceptual prehension has, more especially, to be accounted for. Thirst is an appetite towards a difference—towards something relevant, something largely identical, but something with a definite novelty. This is an example at a low level which shows the germ of a free imagination.

In what sense can unrealized abstract form be relevant? What is its basis of relevance? ‘Relevance’ must express some real fact of togetherness among forms. The ontological principle can be expressed as: All real togetherness is togetherness in the formal constitution of an actuality. So if there be a relevance of what in the temporal world is unrealized, the relevance must express a fact of togetherness in the formal constitution of a non-temporal actuality. But by the principle of relativity there can only be one non-derivative actuality, unbounded by its prehensions of an actual world. Such a primordial superject of creativity achieves, in its unity of satisfaction, the complete conceptual valuation of all eternal objects. This is the ultimate, basic adjustment of the togetherness of eternal objects on which creative order depends. It is the conceptual adjustment of all appetites in the form of aversions and adversions. It constitutes the meaning of relevance. Its status as an actual efficient fact is recognized by terming it the ‘primordial nature of God.’

The word ‘appetition’ illustrates a danger which lurks in technical terms. This same danger is also illustrated in the psychology derived from Freud.

¹ Cf. Leibniz’s *Monadology*.

The mental poles of actualities contribute various grades of complex feelings to the actualities including them as factors. The [49] basic operations of mentality are ‘conceptual prehensions.’ These are the only operations of ‘pure’ mentality. All other mental operations are ‘impure,’ in the sense that they involve integrations of conceptual prehensions with the physical prehensions of the physical pole. Since ‘impurity’ in prehension refers to the prehension arising out of the integration of ‘pure’ physical prehensions with ‘pure’ mental prehensions, it follows that an ‘impure’† mental prehension is also an ‘impure’ physical prehension and conversely. Thus the term ‘impure’ applied to a prehension has a perfectly definite meaning; and does not require the terms ‘mental’ or ‘physical,’ except for the direction of attention in the discussion concerned.

The technical term ‘conceptual prehension’ is entirely neutral, devoid of all suggestiveness. But such terms present great difficulties to the understanding, by reason of the fact that they suggest no particular exemplifications. Accordingly, we seek equivalent terms which have about them the suggestiveness of familiar fact. We have chosen the term ‘appetition,’ which suggests exemplifications in our own experience, also in lower forms of life such as insects and vegetables. But even in human experience ‘appetition’ suggests a degrading notion of this basic activity in its more intense operations. We are closely concerned with what Bergson calls ‘intuition’—with some differences however. Bergson’s ‘intuition’† is an ‘impure’ operation; it is an integral feeling derived from the synthesis of the conceptual prehension with the physical prehension from which it has been derived according to the ‘Category of Conceptual Reproduction’ (Categoreal Obligation† IV). It seems that Bergson’s term ‘intuition’ has the same meaning as ‘physical purpose’ in Part III of these lectures. Also Bergson’s ‘intuition’ seems to abstract from the subjective form of emotion and purpose. This subjective form is an essential element in the notion of ‘conceptual prehension,’ as indeed in that of any prehension. It is an essential element in ‘physical purpose’ (cf. Part III). If we con- [50] sider these ‘pure’ mental operations in their most intense operations, we should choose the term ‘vision.’ A conceptual prehension is a direct vision of some possibility of good or of evil—of some possibility as to how actualities *may* be *definite*. There is no reference to particular actualities, or to any particular actual world. The phrase ‘of good or of evil’ has been added to include a reference to the subjective form; the mere word ‘vision’ abstracts from this factor in a conceptual prehension. If we say that God’s primordial nature is a completeness of ‘appetition,’† we give due weight to the subjective form—at a cost. If we say that God’s primordial nature is ‘intuition,’ we suggest mentality which is ‘impure’ by reason of synthesis with physical prehension. If we say that God’s primordial nature is ‘vision,’ we suggest a maimed view of the subjective form, divesting it of yearning after concrete fact—no particular facts, but after *some* actuality. There is deficiency in God’s primordial nature which the term ‘vision’ obscures.

One advantage of the term ‘vision’ is that it connects this doctrine of God more closely with philosophical tradition. ‘Envisagement’ is perhaps a safer term than ‘vision.’ To sum up: God’s ‘primordial nature’ is abstracted from his commerce with ‘particulars,’ and is therefore devoid of those ‘impure’ intellectual cogitations which involve propositions (cf. Part III). It is God in abstraction, alone with himself. As such it is a mere factor in God, deficient in actuality.

SECTION II

The notions of ‘social order’ and of ‘personal order’ cannot be omitted from this preliminary sketch. A ‘society,’ in the sense in which that term is here used, is a nexus with social order; and an ‘enduring object,’ or ‘enduring creature,’ is a society whose social order has taken the special form of ‘personal order.’

A nexus enjoys ‘social order’ where (i) there is a common element of form illustrated in the definiteness [51] of each of its included actual entities, and (ii) this common element of form arises in each member of the nexus by reason of the conditions imposed upon it by itsprehensions of some other members of the nexus, and (iii) these prehensions impose that condition of reproduction by reason of their inclusion of positive feelings of that* common form. Such a nexus is called a ‘society,’ and the common form is the ‘defining characteristic’ of the society. The notion† of ‘defining characteristic’ is allied to the Aristotelian notion oft ‘substantial form.’

The common element of form is simply a complex eternal object exemplified in each member of the nexus. But the social order of the nexus is not the mere fact of this common form exhibited by all its members. The reproduction of the common form throughout the nexus is due to the genetic relations of the members of the nexus among each other, and to the additional fact that genetic relations include feelings of the common form. Thus the defining characteristic is inherited throughout the nexus, each member deriving it from those other members of the nexus which are antecedent to its own concrescence.

A nexus enjoys ‘personal order’ when (α) it is a ‘society,’ and (β) when the genetic relatedness of its members orders these members ‘serially.’

By this ‘serial ordering’ arising from the genetic relatedness, it is meant that any member of the nexus—excluding the first and the last, if there be such—constitutes a ‘cut’ in the nexus, so that (a) this member inherits from all members on one side of the cut, and from no members on the other side of the cut, and (b) if A and B are two members of the nexus and B inherits from A , then the side of B ’s‡ cut, inheriting from B , forms part of the side of A ’s cut, inheriting from A , and the side of A ’s cut from which A inherits forms part of the side of B ’s cut from which B inherits. Thus the nexus forms a single line of inheritance of its defining characteristic. Such a nexus is called an ‘enduring object.’ It might have been

termed a ‘person,’ in the legal sense [52] of that term. But unfortunately ‘person’ suggests the notion of consciousness, so that its use would lead to misunderstanding. The nexus ‘sustains a character,’ and this is one of the meanings of the Latin word *persona*. But an ‘enduring object,’ *qua* ‘person,’ does more than sustain a character. For this sustenance arises out of the special genetic relations among the members of the nexus. An ordinary physical object, which has temporal endurance, is a society. In the ideally simple case, it has personal order and is an ‘enduring object.’ A society may (or may not) be analysable into many strands of ‘enduring objects.’ This will be the case for most ordinary physical objects. These enduring objects and ‘societies,’ analysable into strands of enduring objects, are the permanent entities which enjoy adventures of change throughout time and space. For example, they form the subject-matter of the science of dynamics. Actual entities perish, but do not change; they are what they are. A nexus which (i) enjoys social order, and (ii) is analysable into strands of enduring objects may be termed a ‘corpuscular society.’ A society may be more or less corpuscular, according to the relative importance of the defining characteristics of the various enduring objects compared to that of the defining characteristic of the whole corpuscular nexus.

SECTION III

There is a prevalent misconception that ‘becoming’ involves the notion of a unique seriality for its advance into novelty. This is the classic notion of ‘time,’ which philosophy took over from common sense. Mankind made an unfortunate generalization from its experience of enduring objects. Recently physical science has abandoned this notion. Accordingly we should now purge cosmology of a point of view which it ought never to have adopted as an ultimate metaphysical principle. In these lectures the term ‘creative advance’ is not to be construed in the sense of a uniquely serial advance.

[53] Finally, the extensive continuity of the physical universe has usually been construed to mean that there is a continuity of becoming. But if we admit that ‘something becomes,’ it is easy, by employing Zeno’s method, to prove that there can be no continuity of becoming.² There is a becoming of continuity, but no continuity of becoming. The actual occasions are the creatures which become, and they constitute a continuously extensive world. In other words, extensiveness becomes, but ‘becoming’ is not itself extensive.

Thus the ultimate metaphysical truth is atomism. The creatures are atomic. In the present cosmic epoch there is a creation of continuity. Perhaps such creation is an ultimate metaphysical truth holding of all cosmic

² Cf. Part II, Ch. II, Sect. II; and also my *Science and the Modern World*, Ch. VII, for a discussion of this argument.

epochs; but this does not* seem to be a necessary conclusion. The more likely opinion is that extensive continuity is a special condition arising from the society of creatures which constitute our immediate epoch. But atomism does not exclude complexity† and universal relativity. Each atom is a system of all things.

The proper balance between atomism and continuity is of importance to physical science. For example, the doctrine, here explained, conciliates Newton's corpuscular theory of light with the wave theory. For both a corpuscle, and an advancing element of a† wave front, are merely a permanent form propagated from atomic creature to atomic creature. A corpuscle is in fact an 'enduring object.' The notion of an 'enduring object' is, however, capable of more or less completeness of realization. Thus, in different stages of its career, a wave of light may be more or less corpuscular. A train of such waves at all stages of its career involves social order; but in the earlier stages this social order takes the more special form of loosely related strands of personal order. This dominant personal order gradually vanishes as the time advances. Its defining characteristics become less and [54] less important, as their various features peter out. The waves then become a nexus with important social order, but with no strands of personal order. Thus the train of waves starts as a corpuscular society, and ends as a society which is not corpuscular.

SECTION IV

Finally, in the cosmological scheme here outlined one implicit assumption of the philosophical tradition is repudiated. The assumption is that the basic elements of experience are to be described in terms of one, or all, of the three ingredients, consciousness, thought, sense-perception. The last term is used in the sense of 'conscious perception in the mode of presentational immediacy.' Also in practice sense-perception is narrowed down to visual perception. According to the philosophy of organism these three components are unessential elements in experience, either physical or mental. Any instance of experience is dipolar, whether that instance be God or an actual occasion of the world. The origination of God is from the mental pole, the origination of an actual occasion is from the physical pole; but in either case these elements, consciousness, thought, sense-perception, belong to the derivative 'impure' phases of the concrescence, if in any effective sense they enter at all.

This repudiation is the reason why, in relation to the topic under discussion, the status of presentational immediacy is a recurrent theme throughout the subsequent Parts† of these lectures.