

PROCESS AND REALITY
AN ESSAY IN COSMOLOGY

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BY
ALFRED NORTH WHITEHEAD

F.R.S., Sc.D. (Cambridge), Hon. D.Sc. (Manchester),
Hon. LL.D. (St. Andrews), Hon. D.Sc. (Wisconsin),
Hon. Sc.D. (Harvard and Yale)

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EDITED BY

DAVID RAY GRIFFIN

AND

DONALD W. SHERBURNE



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CHAPTER X

PROCESS

SECTION I

[317] THAT 'all things flow' is the first vague generalization which the unsystematized, barely analysed, intuition of men has produced. It is the theme of some of the best Hebrew poetry in the Psalms; it appears as one of the first generalizations of Greek philosophy in the form of the saying of Heraclitus; amid the later barbarism of Anglo-Saxon thought it reappears in the story of the sparrow flitting through the banquetting hall of the Northumbrian king; and in all stages of civilization its recollection lends its pathos to poetry. Without doubt, if we are to go back to that ultimate, integral experience, unwarped by the sophistications of theory, that experience whose elucidation is the final aim of philosophy, the flux of things is one ultimate generalization around which we must weave our philosophical system.

At this point we have transformed the phrase, 'all things flow,' into the alternative phrase, 'the flux of things.' In so doing, the notion of the 'flux' has been held up before our thoughts as one primary notion for further analysis. But in the sentence 'all things flow,' there are three words—and we have started by isolating the last word of the three. We move backward to the next word 'things' and ask, What sort of things flow? Finally we reach the first word 'all' and ask, What is the meaning of the 'many' things engaged in this common flux, and in what sense, if any, can the word 'all' refer to a definitely indicated set of these many things?

The elucidation of meaning involved in the phrase 'all things flow'† is one chief task of metaphysics.

[318] But there is a rival notion, antithetical to the former. I cannot at the moment recall one immortal phrase which expresses it with the same completeness as that with which† the alternative notion has been rendered by Heraclitus. This other notion dwells on permanences of things—the solid earth, the mountains, the stones, the Egyptian Pyramids, the spirit of man, God.

The best rendering of integral experience, expressing its general form divested of irrelevant details, is often to be found in the utterances of religious aspiration. One of the reasons of the thinness of so much modern metaphysics is its neglect of this wealth of expression of ultimate feeling.

Accordingly we find in the first two lines of a famous hymn a full expression of the union of the two notions in one integral experience:

Abide with me;
Fast falls the eventide.

Here the first line expresses the permanences, 'abide,' 'me' and the 'Being' addressed; and the second line sets these permanences amid the inescapable flux. Here at length we find formulated the complete problem of metaphysics. Those philosophers who start with the first line have given us the metaphysics of 'substance'; and those who start with the second line have developed the metaphysics of 'flux.' But, in truth, the two lines cannot be torn apart in this way; and we find that a wavering balance between the two is a characteristic of the greater number of philosophers. Plato found his permanences in a static, spiritual heaven, and his flux in the entanglement of his forms amid the fluent imperfections of the physical world. Here I draw attention to the word 'imperfection.' In any assertion as to Plato I speak under correction; but I believe that Plato's authority can be claimed for the doctrine that the things that flow are imperfect in the sense of 'limited' and of 'definitely exclusive of much that they might be and are not.' The lines quoted from the hymn are an almost perfect expression of the direct intuition from which the main position of the Platonic philosophy is derived. Aristotle corrected his Platonism into a somewhat different balance. He was the apostle of 'substance and attribute,' and of the classificatory logic which this notion suggests. But, on the other side, he makes a masterly analysis of the notion of 'generation.' Aristotle in his own person expressed a useful protest against the Platonic tendency to separate a static spiritual world from a fluent world of superficial experience. The later Platonic schools stressed this tendency: just as the mediaeval Aristotelian thought allowed the static notions of Aristotle's logic to formulate some of the main metaphysical problems in terms which have lasted till today.

On the whole, the history of philosophy supports Bergson's charge that the human intellect 'spatializes the universe'; that is to say, that it tends to ignore the fluency, and to analyse the world in terms of static categories. Indeed Bergson went further and conceived this tendency as an inherent necessity of the intellect. I do not believe this accusation; but I do hold that 'spatialization' is the shortest route to a clear-cut philosophy expressed in reasonably familiar language. Descartes gave an almost perfect example of such a system of thought. The difficulties of Cartesianism with its three clear-cut substances, and with its 'duration' and 'measured time' well in the background, illustrate the result of the subordination of fluency. This subordination is to be found in the unanalysed longing of the hymn, in Plato's vision of heavenly perfection, in Aristotle's logical concepts, and in Descartes' mathematical mentality. Newton, that Napoleon of the world of thought, brusquely ordered fluency back into the world, regi-

mented into his 'absolute mathematical time, flowing equably without regard to anything external.' He also gave it a mathematical uniform in the shape of his Theory of Fluxions.

At this point the group of seventeenth- and eighteenth- [320] century philosophers practically made a discovery, which, although it lies on the surface of their writings, they only half-realized. The discovery is that there are two kinds of fluency. One kind is the concrecence which, in Locke's language, is 'the real internal constitution of a particular existent.' The other kind is the transition from particular existent to particular existent. This transition, again in Locke's language, is the 'perpetually perishing' which is one aspect of the notion of time; and in another aspect the transition is the origination of the present in conformity with the 'power' of the past.

concrecence
The phrase 'the real internal constitution of a particular existent,' the description of the human understanding as a process of reflection upon data, the phrase 'perpetually perishing,' and the word 'power' together with its elucidation are all to be found in Locke's Essay. Yet owing to the limited scope of his investigation Locke did not generalize or put his scattered ideas together. This implicit notion of the two kinds of flux finds further unconscious illustration in Hume. It is all but explicit in Kant, though—as I think—misdescribed. Finally, it is lost in the evolutionary monism of Hegel and of his derivative schools. With all his inconsistencies, Locke is the philosopher to whom it is most useful to recur, when we desire to make explicit the discovery of the two kinds of fluency, required for the description of the fluent world. One kind is the fluency inherent in the constitution of the particular existent. This kind I have called 'concrecence.' The other kind is the fluency whereby the perishing of the process, on the completion of the particular existent, constitutes that existent as an original element in the constitutions of other particular existents elicited by repetitions of process. This kind I have called 'transition.' *transition*
Concrecence moves towards its final cause, which is its subjective aim; transition is the vehicle of the efficient cause, which is the immortal past.

* The discussion of how the actual particular occasions become original elements for a new creation is termed [321] the theory of objectification. The objectified particular occasions together have the unity of a datum for the creative concrecence. But in acquiring this measure of connection, their inherent presuppositions of each other eliminate certain elements in their constitutions, and elicit into relevance other elements. Thus objectification is an operation of mutually adjusted abstraction, or elimination, whereby the many occasions of the actual world become one complex datum. (This fact of the elimination by reason of synthesis is sometimes termed the perspective of the actual world from the standpoint of that concrecence.) Each actual occasion defines its own actual world from which it originates. No two occasions can have identical actual worlds.

SECTION II

'Concrescence' is the name for the process in which the universe of many things acquires an individual unity in a determinate relegation of each item of the 'many' to its subordination in the constitution of the novel 'one.'

The most general term 'thing'—or, equivalently, 'entity'—means nothing else than to be one of the 'many' which find their niches in each instance of concrescence. Each instance of concrescence is *itself* the novel individual 'thing' in question. There are not 'the concrescence' and 'the novel thing': when we analyse the novel thing we find nothing but the concrescence. 'Actuality' means nothing else than this ultimate entry into the concrete, in abstraction from which there is mere nonentity. In other words, abstraction from the notion of 'entry into the concrete' is a self-contradictory notion, since it asks us to conceive a thing as not a thing.

An instance of concrescence is termed an 'actual entity'—or, equivalently, an 'actual occasion.' There is not one completed set of things which are actual occasions. For the fundamental inescapable fact is the creativity [322] in virtue of which there can be no 'many things' which are not subordinated in a concrete unity. Thus a set of all actual occasions is by the nature of things a standpoint for another concrescence which elicits a concrete unity from those many actual occasions. Thus we can never survey the actual world except from the standpoint of an immediate concrescence which is falsifying the presupposed completion. The creativity in virtue of which any relative** complete actual world is, by the nature of things, the datum for a new concrescence† is termed 'transition.' Thus, by reason of transition, 'the actual world' is always a relative term, and refers to that basis of presupposed actual occasions which is a datum for the novel concrescence.

An actual occasion is analysable. The analysis discloses operations transforming entities which are individually alien† into components of a complex which is concretely one. The term 'feeling' will be used as the generic description of such operations. We thus say that an actual occasion is a concrescence effected by a process of feelings.

A feeling can be considered in respect to (i) the actual occasions felt, (ii) the eternal objects felt, (iii) the feelings felt, and (iv) its own subjective forms of intensity. In the process of concrescence the diverse feelings pass on to wider generalities of integral feeling.

Such a wider generality is a feeling of a complex of feelings, including their specific elements of identity and contrast. This process of the integration of feeling proceeds until the concrete unity of feeling is obtained. In this concrete unity all indetermination as to the realization of possibilities has been eliminated. The many entities of the universe, including those originating in the concrescence itself, find their respective rôles in this

final unity. This final unity is termed the 'satisfaction.' The 'satisfaction' is the culmination of the concrescence into a completely determinate matter of fact. In any of its antecedent stages the concrescence exhibits sheer inde- [323] termination as to the nexus between its many components.

SECTION III

An actual occasion is nothing but the unity to be ascribed to a particular instance of concrescence. This concrescence is thus nothing else than the 'real internal constitution' of the actual occasion in question. The analysis of the formal constitution of an actual entity has given three stages in the process of feeling: (i) the responsive phase, (ii) the supplemental stage, and (iii) the satisfaction.

The satisfaction is merely the culmination marking the evaporation of all indeterminateness; so that, in respect to all modes of feeling and to all entities in the universe, the satisfied actual entity embodies a determinate attitude of 'yes' or 'no.' Thus the satisfaction is the attainment of the private ideal which is the final cause of the concrescence. But the process itself lies in the two former phases. The first phase is the phase of pure reception of the actual world in its guise of objective datum for aesthetic synthesis. In this phase there is the mere reception of the actual world as a multiplicity of private centres of feeling, implicated in a nexus of mutual presupposition. The feelings are felt as belonging to the external centres, and are not absorbed into the private immediacy. The second stage is governed by the private ideal, gradually shaped in the process itself; whereby the many feelings, derivatively felt as alien, are transformed into a unity of aesthetic appreciation immediately felt as private. This is the incoming of 'appetition,' which in its higher exemplifications we term 'vision.' In the language of physical science, the 'scalar' form overwhelms the original 'vector' form: the origins become subordinate to the individual experience. The vector form is not lost, but is submerged as the foundation of the scalar superstructure.

In this second stage the feelings assume an emotional [324] character by reason of this influx of conceptual feelings. But the reason why the origins are not lost in the private emotion is that there is no element in the universe capable of pure privacy. If we could obtain a complete analysis of meaning, the notion of pure privacy would be seen to be self-contradictory. Emotional feeling is still subject to the third metaphysical principle,** that to be 'something' is 'to have the potentiality for acquiring real unity with other entities.' Hence, 'to be a real component of an actual entity' is in some way 'to realize this potentiality.' Thus 'emotion' is 'emotional feeling'; and 'what is felt' is the presupposed vector situation. In physical science this principle takes the form which should never be lost sight of in fundamental speculation, that scalar quantities are constructs derivative from vector quantities. In more familiar language, this prin-

ciple can be expressed by the statement that the notion of 'passing on' is more fundamental than that of a private individual fact. In the abstract language here adopted for metaphysical statement, 'passing on' becomes 'creativity,' in the dictionary sense of the verb *create*, 'to bring forth, beget, produce.' Thus, according to the third principle, no entity can be divorced from the notion of creativity. An entity is at least a particular form capable of infusing its own particularity into creativity. An actual entity, or a phase of an actual entity, is more than that; but, at least, it is that.

Locke's 'particular ideas' are merely the antecedent actual entities exercising their function of infusing with their own particularity the 'passing on,'¹ which is the primary phase of the 'real internal constitution' of the actual entity in question. In obedience to a prevalent misconception, Locke termed this latter entity the 'mind'; and discussed its 'furniture,' when he should have discussed 'mental operations' in their capacity of later phases in the constitutions of actual entities. Locke himself fittingly expresses this fundamental vector function of his 'ideas.' In a paragraph, forming a portion of a quotation already [325] made, he writes: "I confess power includes in it some kind of relation,—a relation to action or change; as, indeed, which of our ideas, of what kind soever, when attentively considered, does not?"¹

SECTION IV

The second phase, that of supplementation, divides itself into two subordinate phases. Both of these phases may be trivial; also they are not truly separable, since they interfere with each other by intensification or inhibition. If both phases are trivial, the whole second phase is merely the definite negation of individual origination; and the process passes passively to its satisfaction. The actual entity is then the mere vehicle for the transference of inherited constitutions of feeling. Its private immediacy passes out of the picture. Of these two sub-phases, the former—so far as there is an order—is that of aesthetic supplement, and the latter is that of intellectual supplement.

In the aesthetic supplement there is an emotional appreciation of the contrasts and rhythms inherent in the unification of the objective content in the concrescence of one actual occasion. In this phase perception is heightened by its assumption of pain and pleasure, beauty and distaste. It is the phase of inhibitions and intensifications. It is the phase in which blue becomes more intense by reason of its contrasts, and shape acquires dominance by reason of its loveliness. What was received as alien, has been recreated as private. This is the phase of perceptivity, including emotional reactions to perceptivity. In this phase, private immediacy has welded the data into a new fact of blind feeling. Pure aesthetic supple-

¹ *Essay*, II, XXI, 3.†

ment has solved its problem. This phase requires an influx of conceptual feelings and their integration with the pure physical feelings.

But 'blindness' of the process, so far, retains an indetermination. There must be either a determinate negation [326] of intellectual 'sight,' or an admittance of intellectual 'sight.' The negation of intellectual sight is the dismissal into irrelevance of eternal objects in their abstract status of pure potentials. 'What might be' has the capability of relevant contrast with 'what is.' If the pure potentials, in this abstract capacity, are dismissed from relevance, the second sub-phase is trivial. The process then constitutes a blind actual occasion, 'blind' in the sense that no intellectual operations are involved; though conceptual operations are always involved. Thus there is always mentality in the form of 'vision,' but not always mentality in the form of conscious 'intellectuality.'

But if some eternal objects, in their abstract capacity, are realized as relevant to actual fact, there is an actual occasion with intellectual operations. The complex of such intellectual operations is sometimes termed the 'mind' of the actual occasion; and the actual occasion is also termed 'conscious.' But the term 'mind' conveys the suggestion of independent substance. This is not meant here: a better term is the 'consciousness' belonging to the actual occasion.

An eternal object realized in respect to its pure potentiality as related to determinate logical subjects is termed a 'propositional feeling' in the mentality of the actual occasion in question. The consciousness belonging to an actual occasion is its sub-phase of intellectual supplementation, when that sub-phase is not purely trivial. This sub-phase is the eliciting, into feeling, of the full contrast between mere propositional potentiality and realized fact.

SECTION V

To sum up: There are two species of process, macroscopic process, and microscopic process. The macroscopic process is the transition from attained actuality to actuality in attainment; while the microscopic process is the conversion of conditions which are merely real into determinate actuality. The former process effects the [327] transition from the 'actual' to the 'merely real'; and the latter process effects the growth from the real to the actual. The former process is efficient; the latter process is teleological. The future is merely real, without being actual; whereas the past is a nexus of actualities. The actualities are constituted by their real genetic phases. The present is the immediacy of teleological process whereby reality becomes actual. The former process provides the conditions which really govern attainment; whereas the latter process provides the ends actually attained. The notion of 'organism' is combined with that of 'process' in a twofold manner. The community of actual things is an organism; but it is not a static organism. It is an incompleteness in process.

of production. Thus the expansion of the universe in respect to actual things is the first meaning of 'process'; and the universe in any stage of its expansion is the first meaning of 'organism.' In this sense, an organism is a nexus.

Secondly, each actual entity is itself only describable as an organic process. It repeats in microcosm what the universe is in macrocosm. It is a process proceeding from phase to phase, each phase being the real basis from which its successor proceeds towards the completion of the thing in question. Each actual entity bears in its constitution the 'reasons' why its conditions are what they are. These 'reasons' are the other actual entities objectified for it.

An 'object' is a transcendent element characterizing that *definiteness* to which our 'experience' has to conform. In this sense, the future has *objective* reality in the present, but no *formal* actuality. For it is inherent in the constitution of the immediate, present actuality that a future will supersede it. Also conditions to which that future must conform, including real relationships to the present, are really objective in the immediate actuality.

Thus each actual entity, although complete so far as concerns its microscopic process, is yet incomplete by reason of its objective inclusion of the macroscopic [328] process. It really experiences a future which must be actual, although the completed actualities of that future are undetermined. In this sense, each actual occasion experiences its own objective immortality.

NOTE.—The function here ascribed to an 'object' is in general agreement with a paragraph (p. 249, 2nd^d edition) in Professor Kemp Smith's *Commentary on Kant's Critique*, where he is considering Kant's 'Objective Deduction' as in the first edition of the *Critique*: "When we examine the objective, we find that the primary characteristic distinguishing it from the subjective is that it lays a compulsion upon our minds, constraining us to think about it in a certain way. By an object is meant something which will not allow us to think at haphazard."

There is of course the vital difference, among others, that where Kemp Smith, expounding Kant, writes 'thinking,' the philosophy of organism substitutes 'experiencing.'