

THE RELATION BETWEEN FORM AND PROCESS

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I propose to consider certain aspects of the relation between any principle of organization and the material or content to which the principle is applied. The duality of form and matter received explicit recognition in European philosophy before men did their thinking in terms of the contrast between subjective and objective, or between mind and body. And to whatever degree this earlier dualism may have been overshadowed by the predominant status which these later contrasts have acquired, this more primitive duality has persisted. It is, I believe, of primordial importance and inescapable. The thesis of my paper may be stated at the outset. Experience discloses active forms organizing material. This transpires in various ways and at different levels. It is my belief that this relation is more complex than appears at first sight. A principle which is applied to matter or stuff in order to organize it, categorize it, interpret it, may also express the nature of the material which is thus organized. The matter to which a form or category is applied may also be a process which generates and which finds utterance in the very form which is used to organize it. This is why the title of my paper is the relation between "form and process." But throughout the earlier part of the paper, the simpler relations between form and material will be before us. It is because this relation and the framework of life and of thought which it connotes, issue in certain difficulties, that we shall be led to enquire whether it can be supplemented

by another type of relation. The relation of organizing is at the same time the relation of expressing. If this is granted in principle, there are important consequences for metaphysics, most of which will have to be drawn by my readers and not at this time by myself.

That there are alternative and competitive schemata or patterns, forms or perspectives into which some matter or stuff of experience can be pressed, has been the theme of several of the preceding papers. Mr. Mackay exhibited the historical background of two such fundamental, categorial schemes. One is the subject-predicate, substance-quality relation. The other is the broader type of relational structure as such, of reciprocal and functional relations such as those which interest modern science, lying in one plane and with no privileged status accorded to substance or subject. Mr. Loewenberg depicted three different perspectives, generated by specific types of the relation of priority, into each of which the entire stuff of experience can be thrown without remainder. Each of these perspectives forms a closed circle, each is autonomous, exhaustive, and exclusive of the other two. The philosopher is the fortunate possessor of three estates each of which is self-sustaining and complete. He may wander from one to the other at will, and his choice of a fixed abode depends upon nothing but his own caprice. Each of the three estates, however, fenced in as it is by its own defining type of priority, arouses a feeling of restlessness, and a longing for the free uncramped spaces of cosmic substance. In these cosmic stretches there are no fences made by us—but likewise there are no tracks, either, such as *we* can follow. For we can only tread the paths that we ourselves have made.

For Mr. Pepper, each philosophical estate, each metaphysical structure, is hewn out of material all of which is taken from the cosmic quarry, from stuff. But, as I understand him, the architect's plan, the scheme of paths and fences, the categorial, defining form, of the estate is likewise taken from the cosmic quarry. The fragment of stuff seized upon by the philosopher becomes a 'root metaphor.' It is magically transmitted into a

category, an organizing scheme, which is then applied to the whole of stuff. But because it is only a fragment of stuff it is not adequate to the whole of stuff, so that every metaphysical structure has its own characteristic type of inadequacy, its own way of misstating the nature of stuff. Yet no metaphysical edifice is entirely arbitrary, that is erected in accordance with some plan originating in an architect's mind aloof from and transcendent to the material which he has to use.

These are crass and gross metaphors. Yet they reflect and suggest a primordial root metaphor which appears all but inescapable in one mode or another, and which has even played a determining rôle in philosophical reflection. That primordial, root metaphor is the discernment of the distinction between any form, pattern, scheme, or principle, and any material or stuff which is comprised within form, or that something, whatever it is, to which form is applicable. Preoccupation with form is indeed one of the signal characteristics of human life and experience. A delight in patterns and rhythms, in ordered schemata of stimuli and responses because of the formal relationships which they display, is woven into all of the utilitarian and practical arts whereby primitive man wrests a precarious existence from the resources which his environment offers him. The dominance of custom and taboo, of ritual and art serves but to illustrate the manner in which every response to a here and now particular situation is modified and constrained by some encompassing form whose sweep and whose control transcend that of the immediate occasion eliciting behavior.

This impelling, even if inchoate and but half-conscious sense for form which primitive culture displays, lies midway between those relatively rigid responses of the higher animals to stimuli which are called 'instinctive,' and the reflective, explicit discovery of form as such which was the outstanding achievement of Greek science and philosophy. The belief that there is some primordial principle, *arche*, or *physis* which can be disentangled from the flux and variety of things as experienced, and the successive descriptions of such form or forms, provides

the theme of Greek philosophy from Thales to Aristotle. Forms and patterns which for primitive man are inextricably fused with the concrete and particular situation of his practical life, are now sought out for their own sake; they acquire thereby a metaphysical, Olympian, and cosmic status, a lordly sovereignty and independence. Their humble and democratic origin is soon forgotten and ignored. They appear in our midst as strangers from another world, haunting reminders or dim foreshadowings of a transcendent and timeless realm, an objective world of Pure Form, untrammelled with the trappings of sense and matter, process and change. Man's discovery and recognition of such transcendent forms and of the remote world in which they were thought to dwell soon appeared, however, as too stupendous an achievement to be explained by any poor powers native to man's intrinsic nature. This standing miracle of his life and experience, that a creature of time should apprehend the timeless, that a world of pure form should be disclosed to a creature of sense, how could this be unless pure Form itself ceased to be merely objective, awaiting man's discovery, unless Form clothed and revealed itself in homely, human, and comprehensible shape, unless the Word became flesh and dwelt among us. In thus entering into the very texture of experience, in thus relinquishing their solitary habitat beyond the confines of sense and time, forms come to play a different rôle. It is now for them to *transform* and refashion the crude stuff of human nature and experience. They now provide the active, organizing principles of structures which are not given to man, ready made, but which are the products of his own activity. The underlying nature and significance of this shift from objective and transcendent forms awaiting disclosure to active forms whose meaning lies in their use as organizing and constructive principles within experience may be described in a variety of ways. It may be thought of as an expression of the historic fact that the northern barbarian peoples, having been throughout the middle ages disciplined by objective forms which had their origin in Greek and Roman civilization, finally decide to make their own civi-

lization. For such an attitude, there are no authoritative objective forms to be merely discovered and acknowledged. The only significant forms are those which express the life and the interests of human nature, and which can be used to refashion everything which is given. Or we may view this shift from objective forms to active principles of organization, as a concomitant of a vigorous individualism, the recognition of active centers of individual experience incessantly engaged in exploiting the material which the world offers in the interest of its own expanding satisfaction and enjoyment.

Before turning to a consideration of this relation between form and matter, between principles of organization and whatever content may be subjected to them, I want to consider the circumstances which facilitate the discrimination between them. We may here discern the operation of a principle which has a wide range of application.

Any discrimination between different parts or aspects of things experienced depends upon the fact that any specific item is not always found in the same context. It meets us with varying and different associates. This characteristic of our experience which so greatly facilitates discrimination was spoken of by James as "the law of dissociation by varying concomitants." It is the principle that "what is associated now with one thing and now with another tends to become dissociated from either and to grow into an object of abstract contemplation by the mind."¹ If any element or aspect *m* were met with only along with some other aspect or element *n*, and if *n* always appeared with *m*, and never with other associates, then neither *m* nor *n* would be shuffled out for special notice and discrimination. Thus, the ability to discriminate appears to depend upon a certain looseness of structure, upon the absence of invariable and universal ties or relations between the parts of our world.

Such looseness of structure is exemplified on a vast scale in processes of change. Whenever we are aware of anything

¹ James, *Psychology*, I:506.

as moving or changing, we are aware of some item of experience breaking loose from some of its associates and joining others. To perceive change is to perceive shifting and shuffling, such a rearrangement of items. The bird now perched on yonder telegraph pole is, a moment later, on the branch of a tree. The ingredients of my world have become rearranged. The awareness of change is the awareness of the shuffling of elements and aspects, which become discriminated precisely because they are not perennially bound to the same associates.

This looseness of structure, of which all experienced change is but an instance and which makes discrimination possible, generates the discernment of relations as distinct from the items or terms which are related. James's 'law of dissociation by varying concomitants,' which expresses what I have called the world's looseness of structure, states that if I am to discriminate *a* from *b* or *c*, I must be presented first with *a b c*, and then with *a m n*. Now we find the same relations holding between different sets of terms. The bird is now perched on the telegraph pole and later is perched on the tree branch. 'Being perched upon' is the relation which appears in both instances, but with varying concomitants, i.e., with one term, the thing perched upon, different in the two cases. Here, too, is a looseness of structure, making possible the discernment of relations as such, distinct from the items related.

It should be noted that in all these cases of looseness of structure, or varying concomitants, there is present some invariant element or character. It is this invariant which is discriminated. It stands out because it has broken loose from its old associates and has acquired new ones. In a world wholly kaleidoscopic, lacking every trace of an invariant, discrimination would hardly be possible. This invariant character need not perhaps be absolute. It is enough if there be a relative invariancy. Discrimination would still be possible in a world every feature of which is in a state of flux as long as the rate of change is not everywhere the same, permitting the appearance of contrasts and of novel concomitants, as in a race where all the contestants are moving

but with varying distances between them. This need for the presence of some invariant feature, however relative, if anything is to be discriminated from anything else, is the basis, I believe, for the dictum that there is no change without the changeless. The belief in things and substances may turn out to be merely a formulation of the conditions of discrimination. The belief in the existence of space may reflect the psychological principle enunciated by James. Space would be the ultimate invariant, the background, whose foreground consists in the shifting, spatial forms and relations.

Among the invariant features of our world whose discrimination has proved to be momentous are just those denoted by the term 'form.' The same form appears with varying concomitants. The visible shape of the full moon is markedly similar to that of many other circular and spherical things. The discernment of visible circular shape as such is the result of noting the varying colors, textures, sizes which are concomitant with just this specific shape. And it was the visible shape of things which was responsible for the Greek word which has become almost the dominant master term in European philosophy. The *εἶδος* of anything is the common and essential aspect of contour or shape which all things visible possess, and without which they could not be seen. The root of the term *idea* is found in the Latin *videre*, to see.

The loosening of visible shape from its varying concomitants inevitably suggested a further step, that of shaking free the feature of form from its visible associations. The concept of form, of idea, becomes widened and generalized through being thus released from restriction to visible shape. There are temporal forms such as rhythms, mathematical forms and figures characterizing numbers and ratios, there are forms exemplified in speech which were easily taken to correspond with the inarticulate logos of nature. What else is knowledge but the discernment of form? Is not form the single invariant of nature, the one single residue which remains when its shifting concomitants and associates drop out of the picture? For, once more,

knowledge is discernment, discrimination. Discrimination is possible only if some item presents itself to us with varying concomitants; this confers upon the item discerned at least a relative constancy contrasted with all of its shifting associates. What is left as the object of discernment and knowledge *par excellence* can be nothing but the invariant pattern or type, the form or idea. Early Greek philosophy went out in search of an invariant, and pictured that invariant as a particular kind of thing, such as water or air. Meanwhile, shape, form, rhythm, order were discriminated from all things and processes. In the metaphysics of Plato and Aristotle these two philosophical motives converge and fuse. Form, and form alone, is the invariant and therefore the real. The two contrasts, that between the invariant and the shifting, between being and becoming, and that between pure form and the content or matter in which form is for the moment embodied, come to coincide. It is thus the world's looseness of structure which facilitates some one item's shaking itself free from its old concomitants and acquiring new ones, and this it is which makes discernment and knowledge possible. In a frozen world, where all the linkages and relations are tight and unalterable, discrimination would be at best but rudimentary; specific items and their boundaries would tend to merge in a flat amorphous background.

But, clearly, we are not solely dependent upon things of themselves shifting their associates and hence becoming discriminated. We not only *observe* change and becoming, which we have seen to be but one instance of the fluctuating concomitants of the world's items. We may ourselves initiate and be responsible for a change in an item's associates. We rearrange and reshuffle the entities comprising our world. We thereby enormously facilitate the process of discrimination and the awareness of things. Even in the absence of overt manipulation of things, when we sit back and look at things, we are shuffling the seen concomitants of whatever we are looking at. I see the picture on the wall now as above the row of books, now to the right of the door, and now to the left of the window. Only because I

thus see it in varying contexts can I be said to discriminate and see it. When I take the picture down and hold it in my hands, or replace it elsewhere on the wall, I am but continuing the same process as that which I began to do when I let my eyes explore its neighborhood. I am, in short, experimenting. I am, on my own initiative, changing the context, the associates and concomitants of some item. And so far as I can see, the experimental method of science is nothing but the refinement and elaboration of such artificially initiated changes in the contexts of things, in the service of discrimination. The voluntary muscles of the body employed in the accommodation of sense organs, in seeing, touching, hearing, and tasting, are instruments for shifting and transposing the concomitants of the experienced contents of our world. That the voluntary initiation of changes in context and relations in the interest of discrimination and knowledge has enormously increased its scope and powers in modern 'experimental' science goes without saying. I seriously question, however, whether it has introduced a radically novel factor in that process of discriminating the ingredients of our world, which all observation and knowledge depend upon. Experimentation, the voluntary inauguration of changes in an item's concomitants, is in principle present from the earliest use of eyes and hands. Generically, the same principle of experimentation is operative throughout the entire range of knowledge. When one frames an hypothesis, one is placing an idea in some novel and it may be fruitful context. To examine a crystal in varying temperatures, to subject it to different reagents, to put it under a microscope or upon a scale, is to experiment. We are able to experiment because the items of our world are not indissolubly attached once for all to their neighbors. We pry them apart and relocate them in a changed habitat. It is the loose structure of the world which makes this possible. To think, to fashion hypotheses, to operate with 'ideas' instead of with 'things', is not in principle anything radically different. What are called ideas are simply those items in our world which exemplify looseness of structure to a vastly greater degree than do

crystals and so-called physical things. It is easier to pry 'ideas' away from their momentary concomitants than is the case with ordinary things. So loosely indeed are they attached to their surroundings that most modern philosophy and psychology have thought it necessary to provide a wholly detached habitat for ideas such that only a virtual miracle can once more restore their context with other things. I am not saying that ideas are physical things. A physical thing, in spite of its movability and its possibility of forming novel associations, is far more rigidly linked with other things than are those items in our world which we call ideas, and this difference is of fundamental importance. I am saying that ideas (in the modern, not the original Greek sense) belong to the world even though they be those items in the world which can most readily be lifted from one context to another.

Whenever, in short, any item is moved from one context to another in the interest of discrimination or knowledge, there is experimentation. This occurs, we have noted, in manifold ways and at various levels. I want now to consider a plane where such experimentation takes place with a very wide sweep and, as it were, in wholesale fashion. We not only take a specific item such as a crystal, and place it in different contexts in order to shake out the discriminable nature of the crystal. We take whole masses of experience, of data, of stuff or matter, and bring them now within the scope of one large organizing principle and now within another. Again, we may take one and the same organizing form and apply it now to one mass of data and now to another. And because the same material can be subjected to or comprised within different forms, and the same form can be used to organize varying masses of material, we easily come sharply to discriminate between forms, schemata, organizing principles, and the matter or stuff which is organized by them. *This* discrimination is a supreme instance of looseness of structure. It is a supreme example of James's "law of dissociation by varying concomitants." And it is we who are able, more or less deliberately, to effect such dissociation and mutation of con-

comitants on a large scale. We are not impressed, as were the Greeks, by the inevitability of a specific form, given a specific matter or process. Forms are not, for modern thought and experience, so tightly linked to objective and cosmic material, that, in apprehending any thing or process, we apprehend the one inevitable form which is attached to that thing. Form has become manifold, flexible, applicable more or less at will to such material as is given to us.

I shall indicate some of the ways in which diverse forms may be applied to the same stuff or matter, ways in which different organizing principles appear to compete among themselves for the right to dominate a mass of given contents or material. I notice first a series of domains or worlds which are generated by our major, dominant interests. There are the worlds of science, of religion, of art, of economics, the worlds of common sense, of description, of appreciation. Each of these comprises what Simmel has called a 'world totality.' In each of them, all or nearly all of the matter of our experience is organized and interpreted in a specific manner. A characteristic attitude or interest sweeps within its own defining form the given material of our experience. The net which each one of these basic organizing principles throws out is wide and comprehensive enough to catch within it everything with which we meet. The independence and autonomy of each of these defining interests and the world totalities which they severally generate, constitute an outstanding feature of modern civilization as contrasted with medieval life. For medieval men the worlds of knowledge, of art, of economic life were imbedded within the one enveloping world totality defined by the religious interest. We are aware of diverse and competing world totalities in each of which the given material of experience is appropriated by a dominant and comprehensive attitude or interest, an organizing and active Form. The stuff which we barely encounter may be material for scientific analysis and interpretation, it may become the object of aesthetic appreciation, it may be responded to in the light of a dominantly religious attitude, or it may be taken

up and assimilated by our practical, common-sense interests. The point is that each of these is a world totality which is the product of applying an active, organizing form to the raw material of experience. And because the same material can be assimilated by different forms, we have become acutely aware of the competitive, exclusive nature of these engrossing principles generating diverse world totalities.

The situation is not essentially altered when we turn to a consideration of that one of these world totalities with which philosophy is chiefly concerned, i.e., the world as known, as the object of our theoretical interest. There is something deeply paradoxical in the fact that the theoretical interest is but one of a variety of competing interests or forms, each of which, as we have seen, generates its own autonomous world totality. For the theoretic interest is at the same time utterly catholic and comprehensive; it is bent upon the acquisition of insight into the nature of all of the worlds of experience and does not willingly permit any world or any organizing form to escape the net of its own interest. How can it be but one specific organizing principle alongside of others which differ from it, and at the same time make good its claim literally to comprehend them all, to grasp the nature of those world totalities which are generated by other than theoretic forms? This seems to me to be the problem of knowledge which actually presses upon us most acutely in our modern life. It is not this question, however, which concerns us here.

Confining our attention to the theoretical interest, to the world as known, we may observe here in this smaller domain the presence of competitive organizing principles. Each specific type of metaphysical structure, naturalism, realism, idealism, rationalism, and what not issues from the selection of some one dominant scheme, category, or form which is applied, in intention, to the entire material of experience. The various types of priority which were analyzed by Mr. Loewenberg provide an admirable illustration of such competitive forms, each of which lays claim to complete autonomy and to a sweeping inclusive-

ness. Each is sovereign within the domain defined by its own initial organizing principle. No one of them is entitled to legislate for another, nor to exercise any constraint or criticism outside of its own specific structure. Each of these appears to generate an autonomous perspective, a sovereign metaphysical state. Competition and mutual jealousy characterizes these metaphysical states no less than they do sovereign political states. Anything like a metaphysical league would appear to threaten the integrity of these potentially warring philosophical structures, just as a league of nations seems to contradict the axiom of political sovereignty.

When one turns from metaphysics to science, does one find anything analogous to such diversity of organizing principles competing for sovereignty over the same mass of material, of facts and data? Or is there in science but a single authoritative categorial scheme implicitly recognized as binding upon every scientific enterprise? Were this the case, the scientist ought never to be in any doubt as to the legitimacy of his ideas of explanation and intelligibility. There would be but a single sovereign way of winning theoretical scientific mastery over any body of facts. Such indeed has been and still is a common presupposition of science and scientific workers. It has repeatedly been assumed that the only legitimate type of scientific intelligibility is that of a mechanical system governed by the immediate contact and push of ultimate material particles. Or, again, mathematical intelligibility, a deductive system of mathematical equations has often seemed the one ideal of scientific understanding and intelligibility, however remote and unrealizable it may be in actual scientific practice. The ideal of mechanical explanation and of mathematical intelligibility point indeed in two different directions. The former has an eye for discrete elements, the latter for continua exemplified by space, time, and the arithmetical continuum. There is an analogous diversity in the conflict between the search for continuous processes of change and development, and the emphasis upon discrete intrusive events which are not predictable in terms of any antecedent

process which they invade. It cannot be said, I believe, that there is one single type of scientific intelligibility, one and only one categorial scheme which dictates the nature of any scientific explanation. There are alternative forms and organizing principles in science no less than in metaphysics. Various categorial schemes compete for mastery over the same material and data.

I wish to mention another region in which we are confronted with a similar situation. The problem of ethics has its roots in the existence of alternative and competitive organizing principles of practice between which we have to choose. We call them ideals, or ends, dominant or root interests, comprehensive plans of action, or purposes. They are in truth active forms. They are categories and perspectives of practice, just as metaphysical and scientific categories are the schemata and principles of theoretical comprehension. We are not interested in them here for their own sake. Our concern with them lies in observing that here, too, there is a plurality of such practical forms and that the necessity of some choice is thrust upon us. There would be no moral problem were there only one inevitable, one single, indubitably authentic practical scheme of organizing our lives and our civilization. If such were the case, all practical problems would be technical, i.e., they would be concerned only with devising means for mastering the material at our disposal in the service of some unquestioned end or ultimate preference which would not itself be subject to critical appraising or reflective comparison with other competing ends and preferences. There is a moral world and a moral problem precisely because the same material of human nature and historical processes can be practically subsumed under mutually exclusive and competitive practical principles. Just as there is a metaphysical problem only because the total stuff of human experience can be subsumed under and theoretically organized by any one of a number of categorial schemes and relations. In both cases there is a kind of looseness of structure as between form and matter; what is given is not indissolubly tied down to a single necessary form.

Neither theoretical nor practical organization of the material of experience is subject to exclusive constraint from the side of the given, of 'facts,' of sense data, of some merely presented state of affairs. And this is why I think that any such attempt as that of Mr. Prall to elicit the principles and laws of thought solely from the characteristics of sense presentation is bound to fail. To assert such a thesis would be analogous to saying that the rules of chess are ultimately to be discerned in the spatio-temporal, sense relations of the pieces as they lie in a box or on a chess-board. To be sure, the rules of chess are arbitrary and conventional, in a sense in which the rules of the intellectual game of thinking are not to be thus characterized. There are many possible sets of rules which would define many kinds of games of chess, and there is only one set of rules for making valid inferences and implications in the game of thinking. Nevertheless, there is more in the game of chess than is contained within the material of the game. That more is the element of form, of principles according to which the pieces are to be moved. To think, to infer, is to organize the material of experience in a certain way, a way which is not exclusively dictated by the material at hand.

Here, then, is a framework of life and thought whose pervasive and dominant characteristic is the contrast between active, organizing principles and a given alien material which is to be arranged and set in order. A survey of human experience discloses the operative presence of organizing forms in the guise of principles which generate the world totalities of science, art, religion, economic life, as categories which give birth to competing metaphysical structures, as demands and schemata which produce various types of scientific intelligibility and explanation, and as dominant ideals of practical life, ultimate preferences and interests determining specific scales of values and choices. An examination of this type of structure, wherever it presents itself, discloses certain typical features which I want to enumerate. The presence of these characteristics renders the resulting situation unsatisfactory and problematic. If we allow

our thinking to be guided solely or predominantly by this set of motives, we are indeed confronted by a dilemma. Either, we are left with a plurality of worlds, of formed and organized structures which are isolated not only from one another but from the stuff and material of reality, or, desirous of escaping such isolation, and wishing to resume the continuity between the various regions of experience and between experience and reality, we are led to rebel against the forms and principles of organization which are responsible for such isolation: either a plurality of ordered realms, constituted by formative principles which are arbitrarily imposed upon a material whose nature is in no way expressed by the form which attempts to organize it, or a wholesale distrust of form as such, a protest against the artificiality, isolation, and arbitrary character of all such external organizing principles. The epistemological alternative of dualism or some form of mysticism and radical empiricism is but one instance of this dilemma between artificiality and isolation or a radical distrust of form. Historically, the protean conflict between rationalism and empiricism portrays this same central dilemma. It confronts us just as surely in the major problems of ethics, of religion, and of social philosophy. In every region, this dilemma is inescapable and irresolvable so long as we are preoccupied solely with the way in which forms are used actively to organize some material. Is there any other relation between principles of organization and the material to which such principles are applied, the recognition of which can aid us in resolving the dilemma? I believe that there is, and I think I know where at least to look for it. But before going in search of such a fresh relation, we must depict the main features of any situation characterized solely by the application of organizing principles to an extraneous material. The following aspects present themselves:

1. There is something given. It is the crude raw material for our enterprise. As it comes to us it is incomplete, unfinished; it supplies us merely with the occasion for doing something with it or to it. It is a datum which we fit into some organized

domain. It is a bare stimulus to which we respond in some one of a variety of ways. It is a presentation which becomes interpreted in the very act by which it is appropriated into our experience. It is material to be organized.

2. There are alternative and competing modes of response to, and interpretation of, that which is given. Were it otherwise there would be no possibility of choice or of conflict among a variety of organized worlds such as we actually find. If the material of our experience carried along with it and demanded the exclusive use of theoretical categories, or of aesthetic forms, or of practical and utilitarian uses, or of a religious attitude on our part, then there would be no struggle on the part of these world-forming principles for an exclusive sovereignty over the same material. Or, if the given were tied down to a single dominant metaphysical category, there would be no rivalry of metaphysical systems. If the material of human nature could not be utilized in the service of many different ideals, if the stuff of human desires and instincts carried along with it but a single plan of life, there would be no moral problem. Moreover, if in any of these instances, the given mass of material were inevitably tied down to some one specific form, if there were no looseness of structure as between form and matter, we would not be in a position to discriminate as sharply as we do organizing principles from the material subsumed under them. We would not be so acutely aware of the presence of various principles competing for the same material. Throughout, one and the same mass of given stuff is confronted by alternative and competing forms. The same datum admits of varying interpretation; it may elicit a variety of responses. The given is problematic just for this reason, that it does not bring with it one single, authentic form, to the exclusion of all other possibly competing forms. It is here, I think, where is to be found the metaphysical root of freedom. It springs from the confrontation of stuff by alternative forms no one of which is predetermined inexorably by the given matter. Moreover, this indeterminateness and looseness of structure with respect to matter

and form is that feature of things which is bound up with what we call consciousness. Consciousness spells the presence of alternative determinations, modes of response to a stimulus, possibilities. Both freedom and mind come into being only when any material does not inevitably carry with it the one form which organizes and determines it.

3. The next feature to observe is crucial. Each specific active form, organizing whatever material is offered to it, builds a self-contained structure, an organized domain. Whatever comes within this domain is stamped with the same defining mark or category. There is a plurality of such organized sovereign domains. The form which organizes the stuff of one domain has no jurisdiction beyond the boundaries of its own realm. The many domains are impervious to one another. We are in a world of this, that, or the other 'concentric' situation, depicted by Mr. Loewenberg. Or, rather, we are, at any one time, within the confines of some one circumference depending upon the kind of defining relation—the type of priority—which at the moment we happen to select. Once you are within a circle you will discover no hint or leading which will carry you into the organized structure of any other circle. Each generating form builds up a substantive medium isolated from and impervious to all other organized systems.

The account of the situation which I am here giving is necessarily quite abstract because I want it capable of covering many different concrete regions. It should be descriptive of the independent autonomy and isolation in our modern age of the worlds of science, art, religion, and practical economy. It must be pertinent to the strife of metaphysical categories which engender diverse theoretical structures. It must portray the competition of warring moral ideals and ultimate preferences, each of which is responsible for its own specific judgments of value. Here are various strata in our experience. On each level there is a diversity of organizing principles, active forms. Each form generates its own world, its own concentric organization. The ensuing concentric predicaments, on whatever level

they occur, find their prototype in the individualism and solipsism of the ego-centric predicament. Each organizing form is the source of an individual self-contained structure. The material which is built into any one such structure is owned by it exclusively. Active forms thus conceived are principles of individuation and mutual isolation. Forms, regarded primarily as organizing principles, not only lead to organized domains and concentric predicaments which are insulated from one another. The situation as thus viewed entails the further consequence of isolating *all* of the organized realms of experience and of knowledge from cosmic material and stuff, existing in its own right and nature. How could it be otherwise? As soon as stuff comes within the range of any active form organizing a domain in accordance with its own defining principle, it ceases to be pure stuff. In being attended to and apprehended it becomes categorized, labeled, stamped by the form which appropriates it. Its own secret powers and qualities, the natures and habits which characterize it in its own domain are hidden from us. On these premises we are justified in surmising that stuff, substance, things in themselves are not characterized by those relational qualities which belong to the organized material of our domains. Or, at the very least, it is a dogmatic assumption that such is the case, and this is the initial uncritical prejudice of rationalism. By what warrant can we allege that the types of order derived from the organizing principles of the several domains of experience, of discourse, of description, of scientific intelligibility, of value systems, *also* characterize substance which is not fetched within these domains?

Kant's assertion of a chaotic manifold of sensibility which becomes ordered and related only in so far as it is subject to transcendental principles of synthesis has been often countermined by an apparently simple reflection. Kant lugs in a transcendental principle of synthesis, a set of organizing forms, only because he shares with Hume the prejudice that experience as given comes in detached unrelated bits. He does not believe in the reality of relations. He overlooks the fact that relations

are given just as indubitably as are the *relata* and *qualia* between which they hold. Having assumed that the matter of experience is thus truncated and mutilated, he had of course no recourse save to invoke the synthetic organizing activity of forms and principles which are not given along with the matter of experience. His whole position is outflanked, as well as that of Hume's uncritical empiricism, once it is recognized that relations are experienced along with qualities and impressions. Now I think that this comment, repeatedly made by James and Dewey, overlooks the motive which actually led Kant, rightly or wrongly, to his conclusion. It is not that Kant was blind to the fact that we have an experience of 'and' and 'but' and 'of.' It was rather that Kant was primarily impressed by the existence of diverse organizing principles in experience each of which is responsible for its world, its own domain. Kant is the spokesman for the autonomy of the several worlds of science, art, morality, which owe their existence to world-organizing, active forms. Something deeply characteristic of the whole temper of modern civilization finds articulate expression in this philosophy for the first time. Dissatisfaction with the given, the impulse to *make* it intelligible, significant, and human, to organize the given in accordance with principles and ideals which express the nature and demands of the human spirit, this prepossession and its implied consequences outweigh for him every other consideration. If it be asked, then, why Kant was so stupid as not to see that experience does not come in unrelated and isolated bits, the answer is in terms of the exigencies of his initial insight, his faithfulness to the temper of the modern world. And if our experience be seen as the effective operation of dominant organizing interests and categories, the material thus organized must be different from the material which falls outside the scope of our organized domains. Once you accept a framework of active forms organizing a given material, you appear committed to the view that the domains thus organized are not only isolated from one another, generating the various concentric predicaments; they also appear to be cut off from the cosmic source of the stuff

which we know and experience only as categorized and organized. With one such seemingly self-contained realm, that of discourse, I have dealt in another paper.² I did not see then as clearly as I think I do now, what the primary philosophical motive is which leads one to the belief in an isolated area of discourse, to an insistence upon the discrepancy between all the terms of description within discourse and the object to which the description is intended to apply but which it never reaches because the object does not fall within the domain of description. That motive I believe to be just this tacit dependence upon the categories of organizing active forms assimilating and working upon a given material. Unless this framework undergoes some further modification, unless it is supplemented by something else, there is no way of overcoming either the isolation of the organized structures of experience from one another, or their isolation from substance and things in themselves. Yet it is this framework which appears to be omnipresent and inescapable; it is spread across the pages of modern philosophical reflection in protean shapes. I say 'modern,' because the temper and character of ancient and medieval life and thought were precisely such as not to evoke this philosophical framework. In the very stuff of the world as given, it was supposed that there could be discerned objective forms, relational structures, and ordered schemata. The habitat of man was an organized hierarchy of structures. Categories were as objective as stuff. The material which the world offered to man's powers of apprehension carried with it its own forms. The settled, feudal, and authoritative hierarchy of forms was there, awaiting discernment and acknowledgment. Acquiescence in the given because the given when truly discerned was seen to be stable, ordered, and significant, because stuff implied the presence of inevitable and authoritative forms, this expresses the deepest assumption of the temper of classical philosophy. We may go on and say, if we like, that this philosophy itself expressed the

² "Truth, Discourse, and Reality," *University of California Publications in Philosophy*, X:177-205.

temper of a settled, authoritative, and feudal civilization. Who can call in question the dissolution of this temper of life and thought through the centuries which separate us from the middle ages? When I try to compress into a single formula what it all means, barren and abstract as any formula must be, this is what I have to say. The given has become for us material to be exploited, to be organized, to be transmuted into shapes, compacted into domains in accordance not with what we *find*, but in agreement with what we *want*. Forms have been pried loose from objective stuff. We have learned that the same material can be exploited by different and competing organizing principles. For the physics of Aristotle, nature is constituted of the very same qualities which we find in immediate sense experience, qualities in which objective forms fixedly inhere. For modern physics beginning with Galileo, the qualities which things wear are transmuted into expressions of quantitative and mathematical relations which are neither given nor observed. They are constructed by the operation of deductive reasoning. This at least is the ideal to which modern classical physics appeared to be committed, an ideal which becomes explicit in the work of Newton, Kant, and Laplace. But when the forms and organizing principles of the physical order are seen not to be given along with the qualitative matter of sense experience, they become tinged with a character of conventionality and artificiality.

The same problematic situation confronts us elsewhere. It is depicted, for instance, in the analysis of the moral problem and dilemma to which Royce devoted the first half of his *Religious Aspect of Philosophy*. The organizing principles of conduct and practical life he there speaks of as ideals. There are conflicting principles. There is the warfare of moral ideals. Different forms compete for mastery of the same material. What decides in favor of some ideal as against its competitors? Where do dominant ideals and organizing principles come from? If you say that a valid ideal can only be fetched from what exists, you obliterate the distinction between the ideal and the real. You make every *ought* conform to an *is*. You are an ethical

realist. Conservative conformity to things as they are is the result. If on the other hand, you rebel against the real and the given, if you commit yourself to an ideal which is not deposited by a given situation, there will be nothing to guide you save your own caprice. Either conformity to the real, or the arbitrary and ungrounded choice of some one principle of organization. Whichever ideal you choose, you build up a world which is isolated from every domain which is organized according to a different plan or form. And all the organized ethically significant worlds have no communication with and receive no guidance from the discovered and the given, the real or the objective. Either conventionality, artifice, and isolation, or no significant and ordered world at all. This is the alternative and the dilemma imposed upon us by a framework of thought and life in which diverse active forms compete for the right to exploit and organize a mass of given material.

I am convinced that it is just this dilemma which is the central theme in the philosophy of Hume. Nothing is given in experience save discrete and unrelated impressions. Every element of order and organization in the world is an adventitious and illegitimate intrusion, imputed to the world through 'custom and imagination,' through practical necessity and animal faith. It is no part of the given. Yet there is no theoretical justification for any organized structures which exhibit a discrepancy from the given. The world of common sense and of organized knowledge, the world in which there are leadings and linkages, substance and causality, is authorized neither by experience nor by reason. Every principle of organization and source of order is arbitrary and irrational, nor is it justified by any hint conveyed to us by what we find. The organized structures of experience are artificial. The unorganized stuff of impressions is useless for knowledge or for practice. Where will one find a more adequate formulation of the dilemma which issues from the organizing principle of modern life and thought?

It is clear that we cannot leave the matter thus, and it is possible to indicate the sort of relation between form and matter,

whose discovery would ease the tension which we have been depicting. It would be that relation in which the organizing principle which orders any material at the same time expresses the nature of the stuff which it organizes. Can we hope to find any such relation as this? I think that we may. I shall at this time do no more than cite, all too briefly, certain situations in which forms stand to material both in the relation of expressing its nature and of organizing it. And because any material which gets itself concentrated and expressed in a form is a process rather than any static stuff, I shall speak of the relation between form and process.

A purpose is an active form of experience as practical. A purpose is a plan of action which organizes and guides directly a process of behavior and indirectly the objective situation of our environment. It exemplifies a dominant scheme of practice and of conduct. When sufficiently comprehensive, a purpose shades off into an ideal. It incorporates a judgment of value and it claims the right of organizing a course of conduct. Where do purposes, plans of actions, ideals, judgments of value and standards come from? The rôle which they play in organizing the material of human nature, in controlling the processes of life and behavior suggests an origin in some region transcendent to the processes which they organize. How otherwise could forms be active principles of organization? Ethical dualism and idealism, the divorce between the ideal and the real, between the *ought* and the *is*, between form and process, appears as the inevitable transcription of our experience as practical and as active. This motive receives its classical formulation in the ethics of Kant. But, on the other hand, if any ideal in truth derives from a source alien to and transcendent to the processes and vital interests which it is to organize, what is to insure any measure of relevancy, or any rightful claim on the part of such external forms to intrude into and dominate the processes of life and behavior? The stuff which is organized by purposes and ideals is not inert, passive material with no momentum or energy of its own. It is comprised of interests, desires, impulses,

conations; not matter but process is the proper counterpart of those forms with which ethics is concerned. A form or ideal which does not express the nature and life of such processes is both unable, as a matter of fact, to obtain any control over them, nor has it any right to claim such control. But this is not to say that every ideal or form is a sheer prolongation or echo, an abstract transcript of the process which it expresses. A purpose or ideal which expresses a vital interest thereby modifies, enriches, and transforms that interest. Forms are not epiphenomena or shadows, or thin cross-sections of processes. Nor are they adventitious intrusions into processes from some transcendent world. They stand to processes in the relation both of expressing their nature and of organizing them. This supplies me with the one significant clew to an understanding of the central issues of theoretical ethics.

A second region which provides an illustration of a form which organizes the very processes which it expresses is that of language symbols. To say that words are symbols of things or substitutes for them is not adequate. A significant word is a concentration, an expression, a form of our response to a thing. A word summarizes a process of behavior, to speak in behavioristic terms, or it summarizes and expresses a train of thought. As Stout puts it, "what they, i.e., words, fix and detain is not a sensible presentation, as such, but an apperceptive system."³ Words are, he says primarily expressive signs. They are expressions of thought processes. They are forms which summarize and concentrate in themselves moving and living processes, whether of behavior or of thought. But at the same time a language symbol is not merely the passive deposit of some antecedent process. It is also the instrument whereby that process is itself clarified, organized, and literally rendered articulate, i.e., appearing as a jointed, relational structure. The common experience of discovering what one wants to say only through the act of uttering in language symbols some as yet inarticulate and relatively unorganized idea provides a capital instance of

³ Stout, G. F., *Analytical Psychology*, II:192.

the double relation in which forms may stand to processes. A process finds utterance in a form. Form is demanded by process. Yet form, in expressing a process, also reacts back upon the process, deflecting and organizing it, eliciting from it a greater wealth of content and meaning than seemed to be present before form made its appearance.

I should wish also to view the central problem of the categories in the light of this situation. A category is an organizing principle used to interpret the given. Whence are categories derived? Are we limited to one of the two alternatives, either that categories have their source in some mind or self or principle of synthesis utterly discontinuous with the given, or that they are imbedded within the given, awaiting abstraction? I do not think that we are. Each of these alternatives leads to insuperable difficulties. Were categories really extraneous to the material to which they purport to apply, their application, if successful, would be a sheer miracle. Nor would they yield any comprehension or interpretation *of* the given. The continuity between the given and the forms which interpret it and render it intelligible cannot be completely broken. On the other hand, categories complete the given; they have a sweep and spread vastly greater than that of any given. They are the sources of ideal constructions. They do organize the given and are not merely lifted out of given material. This can only be described, so far as I can see, by saying that categories both express the nature of the given and, also, organize, complete, and enrich the given. Given, are, indeed, processes which express themselves in forms, and these in turn organize the processes whence they have sprung.

It is the richness and complexity of process which is responsible for the generation of so many forms. Their competition, their diversity, expresses the vitality of process. No one form in which process expresses itself is or can be adequate to the whole nature and life of process. Hence the discrepancy and tension between form and process, between continuity and discreteness, a tension which is exemplified in every region of the

world's processes open to our inspection. Physical processes engender and express their nature in physical things which in turn deflect the processes which have generated them. Each thing, each center of organization, is limited and partial; it becomes replaced by another thing. It is the same for living structures and forms with respect to life processes, and it is not otherwise with historical structures and institutions in relation to the processes of history.

And experience itself, occurring as it does only in what we call selves, is to be viewed not as any self-enclosed substantive domain, generating our concentric dilemmas, our closed circles isolated from each other and from the objective medium which envelops them. Experience itself is the expression and concentration of processes, physical, biological, historical, and social; only because it is thus continuous with processes which stretch out in various directions and dimensions, does it hold the power and the right to interpret and to organize, to master both theoretically and practically the very processes of nature and life of which it is an expression. Experience is not an island whose shore-line separates it from the surrounding ocean of reality; it is no self-enclosed domain. It is rather the focal point of a perspective in which the nature and life of processes which stretch outward in ever widening reaches find both expression and interpretation.