

# RECONSTRUCTION IN PHILOSOPHY

By

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*Enlarged Edition*

WITH A NEW INTRODUCTION  
BY THE AUTHOR

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## INTRODUCTION

### RECONSTRUCTION AS SEEN TWENTY-

#### FIVE YEARS LATER

#### I

THE TEXT of this volume was written some twenty-five years ago—that is, soon after the First World War; that text is printed without revision. This Introduction is written in the spirit of the text. It is also written in the firm belief that the events of the intervening years have created a situation in which the need for reconstruction is vastly more urgent than when the book was composed; and, more specifically, in the conviction that the present situation indicates with greatly increased clearness where the needed reconstruction must center, the locus from which detailed new developments must proceed. Today Reconstruction of Philosophy is a more suitable title than Reconstruction *in* Philosophy. For the intervening events have sharply defined, have brought to a head, the basic postulate of the text: namely, that the distinctive office, problems and subjectmatter of philosophy grow out of stresses and strains in the community life in which a given form of philosophy arises, and that, accordingly, its specific problems vary with the changes in human life that are

always going on and that at times constitute a crisis and a turning point in human history.

The First World War was a decided shock to the earlier period of optimism, in which there prevailed widespread belief in continued progress toward mutual understanding among peoples and classes, and hence a sure movement to harmony and peace. Today the shock is almost incredibly greater. Insecurity and strife are so general that the prevailing attitude is one of anxious and pessimistic uncertainty. Uncertainty as to what the future has in store casts its heavy and black shadow over all aspects of the present.

In philosophy today there are not many who exhibit confidence about its ability to deal competently with the serious issues of the day. Lack of confidence is manifested in concern for the improvement of techniques, and in threshing over the systems of the past. Both of these interests are justifiable in a way. But with respect to the first, the way of reconstruction is not through giving attention to form at the expense of substantial content, as is the case with techniques that are used only to develop and refine still more purely formal skills. With respect to the second, the way is not through increase of erudite scholarship about the past that throws no light upon the issues now troubling mankind. It is not too much to say that, as far as interest in the two topics just mentioned predominates, the withdrawal

from the present scene, increasingly evident in philosophy, is itself a sign of the extent of the disturbance and unsettlement that now marks the other aspects of man's life. Indeed, we may go farther and say that such withdrawal is one manifestation of just those defects of past systems that render them of little value for the troubled affairs of the present: namely, the desire to find something so fixed and certain as to provide a secure refuge. The problems with which a philosophy relevant to the present must deal are those growing out of changes going on with ever-increasing rapidity, over an ever-increasing human-geographical range, and with ever-deepening intensity of penetration; this fact is one striking indication of the need for a very different kind of reconstruction from that which is now most in evidence.

When a view similar to that here presented has been advanced on previous occasions, as, indeed, in the text which follows, it has been criticized as taking what one of the milder of my critics has called "a sour attitude" toward the great systems of the past. It is, accordingly, relevant to the theme of needed reconstruction to say that the adverse criticisms of philosophies of the past are not directed at these systems with respect to their connection with intellectual and moral issues of their own time and place, but with respect to their relevancy in a much changed human situation. The very things

that made the great systems objects of esteem and admiration in their own socio-cultural contexts are in large measure the very grounds that deprive them of "actuality" in a world whose main features are different to an extent indicated by our speaking of the "scientific revolution," the "industrial revolution" and the "political revolution" of the last few hundred years. A plea for reconstruction cannot, as far as I can see, be made without giving considerable critical attention to the background within which and in regard to which reconstruction is to take place. Far from being a sign of disesteem, this critical attention is an indispensable part of interest in the development of a philosophy that will do for our time and place what the great doctrines of the past did in and for the cultural media out of which they arose.

Another criticism akin to that just discussed is that the view here taken of the work and office of philosophy rests upon a romantic exaggeration of what can be accomplished by "intelligence." If the latter word were used as a synonym for what one important school of past ages called "reason" or "pure intellect," the criticism would be more than justified. But the word names something very different from what is regarded as the highest organ or "faculty" for laying hold of ultimate truths. It is a shorthand designation for great and ever-growing methods of observation, experiment

and reflective reasoning which have in a very short time revolutionized the physical and, to a considerable degree, the physiological conditions of life, but which have not as yet been worked out for application to what is itself distinctively and basically *human*. It is a newcomer even in the physical field of inquiry; as yet it hasn't developed in the various aspects of the human scene. The reconstruction to be undertaken is not that of applying "intelligence" as something ready-made. It is to carry over into any inquiry into human and moral subjects the kind of method (the method of observation, theory as hypothesis, and experimental test) by which understanding of physical nature has been brought to its present pitch.

Just as theories of knowing that developed prior to the existence of scientific inquiry provide no pattern or model for a theory of knowing based upon the present actual conduct of inquiry, so the earlier systems reflect both pre-scientific views of the natural world and also the pre-technological state of industry and the pre-democratic state of politics of the period when their doctrines took form. The actual conditions of life in Greece, particularly in Athens, when classic European philosophy was formulated set up a sharp division between doing and knowing, which was generalized into a complete separation of theory and "practice." It reflected, at the time, the economic organization in which

"useful" work was done for the most part by slaves, leaving free men relieved from labor and "free" on that account. That such a state of affairs is also pre-democratic is clear. In political matters, nevertheless, philosophers retained the separation of theory and practice long after tools and processes derived from industrial operations had become indispensable resources in conducting the observations and experiments that are the heart of scientific knowing.

It should be reasonably obvious that an important aspect of the reconstruction that now needs to be carried out concerns the theory of knowledge. In it a radical change is demanded as to the subject-matter upon which that theory must be based; the new theory will consider how knowing (that is, inquiry that is competent) is carried on, instead of supposing that it must be made to conform to views independently formed regarding faculties of organs. And, while substitution of "intelligence," in the sense just indicated, for "reason" is an important element in the change demanded, reconstruction is not confined to that matter. For the so-called "empirical" theories of knowledge, though they rejected the position of the rationalist school, operated in terms of what *they* took to be a necessary and sufficient faculty of knowledge, accommodating the theory of knowing to their preformed beliefs about "sense-perception" instead of deriving their view

of sense-perception from what goes on in the conduct of scientific inquiry.<sup>1</sup>

It will be noted that the adverse criticisms dealt with in the foregoing paragraphs are dealt with not for the sake of replying to criticisms, but primarily as illustrations of why reconstruction is urgently required, and secondarily as illustrations of where it is needed. For there is no promise of the rise and growth of a philosophy relevant to the conditions that *now* supply the materials of philosophical issues and problems, save as the work of reconstruction takes serious account of how and where systems of the past indicate the need for reconstruction in the present.

## II

It has been stated that philosophy grows out of, and in intention is connected with, human affairs. There is implicit in this view the further view that, while acknowledgment of this fact is a precondition of the reconstruction now required, yet it means more than that philosophy *ought* in the future to be connected with the crises and tensions in the conduct of human affairs. For

<sup>1</sup> The obvious insufficiency of psychological theories on this point has played a part in developing the formalisms already noted. Instead of using this insufficiency as ground for reconstruction of the psychological theory, the defective view was accepted qua psychology and hence was used as a ground for a "logical" theory of knowing that shut out entirely all reference to the factual ways in which knowledge advances.

it is held that in effect, if not in profession, the great systems of Western philosophy all have been thus motivated and occupied. A claim that they always have been sufficiently aware of what they were engaged in would, of course, be absurd. They have seen themselves, and have represented themselves to the public, as dealing with something which has variously been termed Being, Nature or the Universe, the Cosmos at large, Reality, the Truth. Whatever names were used, they had one thing in common: they were used to designate something taken to be fixed, immutable, and therefore out of time; that is, eternal. In being also something conceived to be universal or all-inclusive, this eternal being was taken to be above and beyond all variations in space. In this matter, philosophers reflected in generalized form the popular beliefs which were current when events were thought of as taking place *in* space and time as their all-comprehensive envelopes. It is a familiar fact that the men who initiated the revolution in natural science held that space and time were independent of each other and of the things that exist and the events that take place within them. Since the assumption of underlying fixities—of which the matter of space and time and of immutable atoms is an exemplification—dominated “natural” science, there is no ground for surprise that in a more generalized form it was the foundation upon which philoso-

phy assumed, as a matter of course, that it must erect its structure. Philosophical doctrines which disagreed about virtually everything else were at one in the assumption that their distinctive concern as philosophy was to search for the immutable and ultimate—that which *is*—without respect to the temporal or spatial. Into this state of affairs in natural science as well as in moral standards and principles, there recently entered the discovery that natural science is forced by its own development to abandon the assumption of fixity and to recognize that what for it is actually “universal” is *process*; but this fact of recent science still remains in philosophy, as in popular opinion up to the present time, a technical matter rather than what it is: namely, the most revolutionary discovery yet made.

The supposed fact that morals demand immutable, extra-temporal principles, standards, norms, ends, as the only assured protection against moral chaos can, however, no longer appeal to natural science for its support, nor expect to justify by science its exemption of morals (in practice and in theory) from considerations of time and place—that is, from processes of change. Emotional—or sentimental—reaction will doubtless continue to resist acknowledgment of this fact and refuse to use in morals the standpoint and outlook which have now made their way into natural science. But in any case, science and traditional morals

have been at complete odds with one another as to the kinds of things which, according to one and the other, are immutable. Hence a deep and impassable gulf is set up between the *natural* subjectmatter of science and the *extra-* if not *supra-natural* subjectmatter of morals. There must be many thoughtful persons who are so dismayed by the inevitable consequences of this split that they will welcome that change in point of view which will render the methods and conclusions of natural science serviceable for moral theory and practice. All that is needed is acceptance of the view that moral subjectmatter is also spatially and temporally qualified. Considering the controverted present state of morals and its loss of popular esteem, the sacrifice demanded should not seem threatening to those who are not moved by vested institutional interest. As for philosophy, its profession of operating on the basis of the eternal and the immutable is what commits it to a function and a subjectmatter which, more than anything else, are the source of the growing popular disesteem and distrust of its pretensions; for it operates under cover of what is now repudiated in science, and with effective support only from old institutions whose prestige, influence and emoluments of power depend upon the preservation of the old order; and this at the very time when human conditions are so disturbed and unsettled as to call more urgently than at any previous time for the kind of

comprehensive and "objective" survey in which historic philosophies have engaged. To the vested interests, maintenance of belief in the transcendence of space and time, and hence the derogation of what is "merely" human, is an indispensable prerequisite of their retention of an authority which in practice is translated into power to regulate human affairs throughout—from top to bottom.

There is, however, such a thing as relative—that is *relational*—universality. The actual conditions and occasions of human life differ widely with respect to their comprehensiveness in range and in depth of penetration. To see why such is the case, one does not have to depend upon a scientifically exploded theory of control from outside and above by self-moved and self-moving forces. On the contrary, theory began to count in the sciences of astronomy, physics, physiology, in their multiple and varied aspects, when this attitude of dogmatism was replaced by the use of hypotheses in conducting experimental observations to bind concrete facts together in systems of increasing temporal-spatial extent. The *universality* that belongs to scientific theories is not that of inherent content fixed by God or Nature, but of range of applicability—of capacity to take events out of their apparent isolation so as to order them into systems which (as is the case with all living things) prove they are alive by the kind of change

which is *growth*. From the standpoint of scientific inquiry nothing is more fatal to its right to obtain acceptance than a claim that its conclusions are final and hence incapable of a development that is other than mere quantitative extension.

While I was engaged in writing this Introduction, I received a copy of an address recently delivered by a distinguished English man of science. Speaking specifically of science, he remarked, "Scientific discovery is often carelessly looked upon as the creation of some new knowledge which can be added to the great body of old knowledge. This is true of the strictly trivial discoveries. It is not true of the fundamental discoveries, such as those of the laws of mechanics, of chemical combination, of evolution, on which scientific advance ultimately depends. These always entail the destruction of or disintegration of old knowledge *before the new can be created.*"<sup>2</sup> He continued by pointing out specific instances of the importance of getting outside of the grooves into which the heavy arm of custom tends to push every form of human activity, not excluding intellectual and scientific inquiry: "It is no accident that bacteria were first understood by a canal engineer, that oxygen was isolated by a Unitarian minister, that the

<sup>2</sup> C. D. Darlington, Conway Memorial Lecture on *The Conflict of Society and Science* (London: Watts & Co., 1948); italics not in text.

theory of infection was established by a chemist, the theory of heredity by a monastic school teacher, and the theory of evolution by a man who was unfitted to be a university instructor in either botany or zoology." He closed by saying, "We need a Ministry of Disturbance, a regulated source of annoyance; a destroyer of routine; an underminer of complacency." The routine of custom tends to deaden even scientific inquiry; it stands in the way of *discovery* and of the *active* scientific worker. For discovery and inquiry are synonymous as an occupation. Science is a *pursuit*, not a coming into possession of the immutable; new theories as points of view are more prized than discoveries that quantitatively increase the store on hand. It is relevant to the theme of domination by custom that the lecturer said the great innovators in science "are the first to fear and doubt their discoveries."

I am here specially concerned with the bearing of what was said about men of science upon the work of philosophy. The borderline between what is called hypothesis in science and what is called speculation (usually in a tone of disparagement) in philosophy is thin and shadowy at the time of initiation of new movements—those placed in contrast with "technical applications and developments" such as take place as a matter of course after a new and revolutionary outlook has managed to win acceptance. Viewed in their own cultural

contexts, the "hypotheses" advanced by those who now bear the name of great philosophers differ from the "speculations" of the men who have made great (and "destructive") innovations in science by having a wider range of reference and possible application; by the fact that they claim not to be "technical" but deeply and broadly human. At the time there is no sure way of telling whether the new way of seeing and of treating things is to turn out to be a case of science or of philosophy. Later, the classification is usually made with comparative ease. It is a case of "science" if and when its field of application is so specific, so limited, that passage into it is comparatively direct—in spite of the emotional uproar attending its appearance—as, for example, in the case of Darwin's theory. It is designated "philosophy" when its area of application is so comprehensive that it is not possible for it to pass directly into formulations of such form and content as to be serviceable in immediate conduct of specific inquiry. This fact does not signify its futility; on the contrary, the contemporary state of cultural conditions was such as to stand effectually in the way of the development of hypotheses that would give immediate direction to specific observations and experiments so definitely factual as to constitute "science." As the history of scientific inquiry clearly shows, it was during the "modern" period that inquiry took the form of *dis-*

*cession*, which, however, was not useless or idle, scientifically speaking. For, as the word etymologically implies, this discussion was a shaking up, a stirring, which loosened the firm hold of earlier cosmology upon science. This period of discussion, with the loosening that attended it, marks the time of the shading off of what now ranks as "philosophy" into what has now attained the rank of "science."<sup>3</sup> What is called the "climate of opinion" is more than a matter of opinions; it is a matter of cultural habits that determine intellectual as well as emotional and volitional attitudes. The work done by the men whose names now appear in histories of philosophy rather than of science played a large role in producing a climate that was favorable to initiation of the scientific movement whose outcome is the astronomy and physics that have displaced the old ontological cosmology.

It does not need deep scholarship to be aware that, at the time, this new science was regarded as a deliberate assault upon religion and upon the morals then intimately tied up with the religion of Western Europe. Similar attacks followed the revolution that began in the nineteenth century in biology. Historical facts prove

<sup>3</sup> It is well worth recalling that for quite a while Newton ranked as "philosopher" of the division of that subject still classified as "natural" in distinction from metaphysical and moral. Even by his followers his deviations from Descartes were treated as matter not of physical science but of "natural philosophy."

that discussions that have not been carried, because of their very comprehensive and penetrating scope, to the point of detail characteristic of science, have done a work without which science would not be what it now is.

### III

The point of the foregoing discussion does not lie, however, in its bearing upon the value of past philosophic doctrines. Its relevancy for this Introduction consists of its bearing upon the reconstruction of work and subjectmatter that is needed to give philosophy today the vitality once possessed by its predecessors. What took place in the earlier history of science was serious enough to be named the "warfare of science and religion." Nevertheless, the scope of the events that bear that name is limited, almost technical, when it is placed in comparison with what is going on now because of the entry of science more generally into life. The present reach and thrust of what originates as science affects disturbingly every aspect of contemporary life, from the state of the family and the position of women and children, through the conduct and problems of education, through the fine as well as the industrial arts, into political and economic relations of association that are national and international in scope. They are so varied, so multiple, as well as developing with such rapidity, that they do not lend themselves to generalized

statement. Moreover, their occurrence presents so many and such serious practical issues demanding immediate attention that man has been kept too busy meeting them piecemeal to make a generalized or intellectual observation of them. They came upon us like a thief in the night, taking us unawares.

The primary requisite of reconstruction is accordingly to arrive at an hypothesis as to how this great change came about so widely, so deeply, and so rapidly. The hypothesis here offered is that the upsets which, taken together, constitute the crisis in which man is now involved all over the world, in all aspects of his life, are due to the entrance into the conduct of the everyday affairs of life of processes, materials and interests whose origin lies in the work done by physical inquirers in the relatively aloof and remote technical workshops known as laboratories. It is no longer a matter of disturbance of religious beliefs and practices, but of every institution established before the rise of modern science a few short centuries ago. The earlier "warfare" was ended not by an out-and-out victory of either of the contestants but by a compromise taking the form of a division of fields and jurisdictions. In moral and ideal matters supremacy was accorded to the old. They remained virtually immutable in their older form. As the uses of the new science proved beneficial in many practical affairs, the new physical and physiological sci-

ence was tolerated with the understanding that it dealt only with lower material concerns and refrained from entering the higher spiritual "realm" of Being. This "settlement" by the device of division gave rise to the dualisms which have been the chief concern of "modern" philosophy. In the developments which have actually occurred and which have culminated especially within the last generation, the settlement by division of territories and jurisdictions has completely broken down in practice. This fact is exhibited in the present vigorous and aggressive campaign of those who accept the division between the "material" and the "spiritual" but who also hold that the representatives of natural science have not stayed where they belong but have usurped in actual practice—and oftentimes in theory—the right to determine the attitudes and procedures proper to the "higher" authority. Hence, according to them, the present scene of disorder, insecurity and uncertainty, with the strife and anxiety that inevitably results.

I am not here concerned to argue directly against this view. Indeed, it may even be welcomed provided it is taken as an indication of where the issue centers with respect to reconstruction in philosophy. For it indicates by contrast the only direction which, under existing conditions, is intellectually and morally open. The net conclusion of those who hold natural science to be the *fons et origo* of the undeniably serious ills of the

present is the necessity of bringing science under subjection to some special institutional "authority." The alternative is a generalized reconstruction so fundamental that it has to be developed by recognition that while the evils resulting at present from the entrance of "science" into our common ways of living are undeniable they are due to the fact that no systematic efforts have as yet been made to subject the "morals" underlying old institutional customs to scientific inquiry and criticism. Here, then, lies the reconstructive work to be done by philosophy. It must undertake to do for the development of inquiry into human affairs and hence into morals what the philosophers of the last few centuries did for promotion of scientific inquiry in physical and physiological conditions and aspects of human life.

This view of what philosophy needs in order to be relevant to present human affairs and to regain the vitality it is losing is not concerned to deny that the entry of science into human activities and interests has its destructive phase. Indeed, the point of departure for the view here presented regarding the reconstruction demanded in philosophy is that this entry, amounting to a hostile invasion of the old, is the main factor operating to produce the present estate of man. And, while the attack upon science as the responsible and guilty party is terribly one-sided in its emphasis upon the destruction

involved and in neglect of the many and great human benefits that have accrued, it is held that the issue cannot be disposed of by drawing a balance sheet of human loss and gain with a view to showing that the latter predominates.

The case in fact is much simpler. The premise on which the present assault upon science depends is that old institutional customs, including institutional belief, provide an adequate, and indeed a final, criterion by which to judge the worth of consequences produced by the disturbing entry of science. Those who maintain this premise systematically refuse to note that "science" has a copartner in producing our critical situation. It only takes an eye single to the facts to observe that science, instead of operating alone and in a void, works within an institutional state of affairs developed in pre-scientific days, one which is not modified by scientific inquiry into the moral principles that were then formed and were, presumably, appropriate to it.

One simple example shows the defection and distortion that results from viewing science in isolation. The destructive use made of the fission of the nucleus of an atom has become the stock-in-trade of the assault upon science. What is so ignored as to be denied is that this destructive consequence occurred not only in a war but because of the existence of war, and that war as an institution antedates by unknown millennia the appearance

on the human scene of anything remotely resembling scientific inquiry. That *in this case* destructive consequences are directly due to pre-existent institutional conditions is too obvious to call for argument. It does not prove that such is the case everywhere and at all times; but it certainly cautions us against the irresponsible and indiscriminate dogmatism now current. It gives us the definite advice to recall the unscientific conditions under which morals, in both the practical and the theoretical senses of that word, took on form and content. The end-in-view in calling attention to a fact that cannot be denied, but that is systematically ignored, is not the futile, because totally irrelevant, purpose of justifying the work of scientific inquirers in general or in special cases. It is to direct attention to a fact of outstanding intellectual import. The development of scientific inquiry is immature; it has not as yet got beyond the physical and physiological aspects of human concerns, interests and subject-matters. In consequence, it has partial and exaggerated effects. *The institutional conditions into which it enters and which determine its human consequences have not as yet been subjected to any serious, systematic inquiry worthy of being designated scientific.*

The bearing of this state of affairs upon the present state of philosophy and the reconstruction which should be undertaken is the theme and thesis of this Introduc-

tion. Before directly resuming that theme, I shall say something about the present state of morals: a word, be it remembered, that stands both for a morality as a practical socio-cultural *fact* in respect to matters of right and wrong, good and evil, and for theories about the ends, standards, principles according to which the actual state of affairs is to be surveyed and judged. Now the simple fact of the case is that any inquiry into what is deeply and inclusively human enters perforce into the specific area of morals. It does so whether it intends to and whether it is even aware of it or not. When "sociological" theory withdraws from consideration of the basic interests, concerns, the actively moving aims, of a human culture on the ground that "values" are involved and that inquiry as "scientific" has nothing to do with values, the inevitable consequence is that inquiry in the human area is confined to what is superficial and comparatively trivial, no matter what its parade of technical skills. But, on the other hand, if and when inquiry attempts to enter in critical fashion into that which is human in its full sense, it comes up against the body of prejudices, traditions and institutional customs that consolidated and hardened in a pre-scientific age. For it is tautology, not the announcement of a discovery or of an inference, to state that morals, in both senses of the word, are pre-scientific when formed in an age preceding the rise of science as

now understood and practiced. And to be unscientific, when human affairs in the concrete are immensely altered, is in effect to resist the formation of methods of inquiry into morals in a way that renders existing morals—again in both senses—anti-scientific.

The case would be comparatively simple if there were already in hand the intellectual standpoint, outlook, or what philosophy has called "categories," to serve as instrumentalities of inquiry. But to assume that they are at hand is to assume that intellectual growths which reflect a pre-scientific state of human affairs, concerns, interests and ends are adequate to deal with a human situation which is increasingly and for a very large part the outgrowth of new science. In a word, it is to decide to continue the present state of drift, instability and uncertainty. If the foregoing statements are understood in the sense in which they are intended, the view that is here proposed in regard to reconstruction in philosophy will stand out forcibly. From the position here taken, reconstruction can be nothing less than the work of developing, of forming, of producing (in the literal sense of that word) the intellectual instrumentalities which will progressively direct inquiry into the deeply and inclusively human—that is to say, moral—facts of the present scene and situation.

The first step, a prerequisite of further steps in the same general direction, will be to recognize that, factu-

ally speaking, the present human scene, for good and evil, for harm and benefit alike, is what it is because, as has been said, of the entry into everyday and common (in the sense of ordinary and of shared) ways of living of what has its origin in *physical* inquiry. The methods and conclusions of "science" do not remain penned in within "science." Even those who conceive of science as if it were a self-enclosed, self-actuated independent and isolated entity cannot deny that it does not remain such in practical fact. It is a piece of theoretical antimistic mythology to view it as an entity, as do those who hold that it is *fons et origo* of present human woes. The science that has so far found its way deeply and widely into the actual affairs of human life is partial and incomplete science: competent in respect to physical, and now increasingly to physiological, conditions (as is seen in the recent developments in medicine and public sanitation), but nonexistent with respect to matters of supreme significance to man—those which are distinctively of, for, and by, man. No intelligent way of seeing and understanding the present estate of man will fail to note the extraordinary split in life occasioned by the radical incompatibility between operations that manifest and perpetuate the morals of a pre-scientific age and the operations of a scene which has suddenly, with immense acceleration and with thorough pervasiveness, been factually determined by a science

which is still partial, incomplete, and of necessity one-sided in operation.

## IV

In what precedes, reference has been made several times to what certain human beings classed as philosophers accomplished in the seventeenth, eighteenth and nineteenth centuries in the way of clearing the ground of cosmological and ontological debris which had been absorbed emotionally and intellectually into the very structure and operation of Western culture. It was not claimed that credit for the specific inquiries which progressively revolutionized astronomy, physics (including chemistry) and physiology belongs to philosophers. It is recorded as matter of historic fact that the latter performed an office that, given the accepted cultural climate and the momentum of accepted custom, was an indispensable prerequisite of what men of science accomplished. What will now be added to that statement, in conjunction with its bearing upon reconstruction of philosophy, is that in doing their specific jobs scientific men worked out a method of inquiry so inclusive in range and so penetrating, so pervasive and so universal, as to provide the pattern and model which permits, invites and even demands the kind of formulation that falls within the function of philosophy. It is a method of knowing that is self-corrective in operation;

that learns from failures as from successes. The heart of the method is the discovery of the identity of inquiry with discovery. Within the specialized, the relatively technical, activities of natural science, this office of discovery, of uncovering the new and leaving behind the old, is taken for granted. Its similar centrality in every form of intellectual activity is, however, so far from enjoying general recognition that, in matters which are set apart as "spiritual" and "ideal" and as distinctively moral, the mere idea of it shocks many who take it as a matter of course in their own specialized work. It is a familiar fact that the practical correlate of discovery when it is scientific and theoretical is *invention*, and that in many of the physical aspects of human affairs there is even now a generalized method for the invention of inventions. In what is distinctively human, invention rarely occurs, and then only in the stress of an emergency. In human affairs and in relations that range extensively and penetrate deeply the mere idea of invention awakens fear and horror, being regarded as dangerous and destructive. This fact, which is important but which rarely receives notice, is assumed to belong to the very nature and essence of morals as morals. This fact testifies both to the reconstruction to be undertaken and to the extreme difficulty of every attempt to bring it about.

The adjustment which finally moderated, without

completely exorcising, the earlier split between science and received institutional customs was a truce rather than anything remotely approaching integration. It consisted, in fact, of a device that was the exact opposite of integration. It operated on the basis of a hard and fast division of the interests, concerns and purposes of human activity into two "realms," or, by a curious use of language, into two "spheres"—not hemispheres. One was taken to be "high" and hence to possess supreme jurisdiction over the other as inherently "low." That which is high was given the name "spiritual," ideal, and was identified with the moral. The other was the "physical" as determined by the procedures of the new science of nature. In being low it was material; its methods were fitted only to the materialistic and to the world of sense-perception, not to that of reason and revelation. The new natural science was grudgingly given a license to operate on condition that it stay in its own compartment and mind its own business, as thus determined for it. That for philosophy the outcome was the whole brood and nest of dualisms which have, upon the whole, formed the "problems" of philosophy termed "modern" is a reflection of the cultural conditions which account for the basic split between the moral and the physical. These words stand in fact for the attempt to obtain the practical advantages of ease, comfort, convenience and power that were the

outcome of the "application" of the new science to the ordinary affairs of life, while retaining intact the supreme authority of the old in those matters of high morals named "spiritual." The material and utilitarian advantages of the new science, rather than anything approaching acknowledgment of the intellectual—to say nothing of the moral—import of the new method, turned out to be the most dependable ally of the men who produced the new method of revolutionizing what had been taken to be a scientific account of nature as cosmos.

The truce endured for a time. The equilibrium it presented was decidedly uneasy. The saying about keeping a cake and at the same time eating it is applicable. It represented the effort to enjoy the material and practical or utilitarian advantages of the new science while preventing its serious impact on old institutional habits—including those of belief—that were accepted as the foundation of norms and moral principles. In consequence the division would not stay put. Upon the whole, without deliberate intent (though with considerable deliberate encouragement from one group of "advanced" philosophical thinkers) the consequences issuing from the uses to which the new science was put crowded in upon the activities and values nominally reserved for the "spiritual." The impact of this encroachment constitutes what is called secularization, a

movement which, as it extended itself, was regarded as a sacrilegious profaning of the sacredness of the spiritual. Even today many men who are in no way practically identified with old ecclesiastical institutions, or with the metaphysics associated with it, speak regretfully and at best apologetically of this secularization. Yet the opportunity for any genuine universalization of the method—and spirit—of science as inquiry, which is perforce discovery in which old intellectual attitudes and conclusions are unceasingly yielding to the different and new, lies precisely in discovering how to give the factors of this secularization the shape, the content and the authority nominally assigned to morals, but not now exercised in fact by those morals that have come down to us from a pre-scientific age. The actuality of this loss of authority is acknowledged in the current revival of the old doctrine of the inherent depravity of human nature to account for the loss, as well as being shown in widespread pessimism as to the future of man. These complaints and doubts are warranted as long as one regards the institutional customs in action and belief of a pre-scientific age as ultimate and immutable. But they also apply, if they are employed that way, a challenge to develop a theory of morals that will give positive intellectual direction to man in developing the practical—that is, actually effective—morals which will utilize the resources now at our disposal to bring into

the activities and interests of human life order and security, not only in place of confusion but on a wider scale than ever existed in the past.

Three things are intimately connected in the plaints and promulgations that are temporarily most vocal. They are: (1) the attack upon natural science; (2) the doctrine that man is so inherently corrupt that it is impossible to form morals which will operate in behalf of stability, equity and (true) freedom without recourse to an extra-human and extra-natural authority; and (3) the claim put forth by representatives of some particular kind of institutional organization, that they alone can do what is needed. I do not mention this matter here in order to subject it to direct criticism. I mention it because it presents a position so generalized as clearly to indicate one direction in which philosophy may move out of the apathy of irrelevance. By sharp contrast, it points to the other direction in which philosophy may proceed: that of systematic endeavor to see and to state the constructive significance for the future of man issuing from the revolution wrought primarily by the new science; provided we exercise resolute wisdom in developing a system of belief-attitudes, a philosophy, framed on the basis of the resources now at our command.

The issue actually raised by the assault upon the new science and its offspring by wholesale condemnation of

human nature, and by the plea to reinstate in full measure the authority of antique medieval institutions, is simply whether we are to move forward in a direction made possible by these new resources or whether the latter are so inherently untrustworthy that we must bring them under control by subjection to an authority claiming to be extra-human and extra-natural—as far as the import of “natural” is determined by scientific inquiry. The impact of systematic perception of this cleavage of directions upon philosophy is disclosure that what is called “modern” is as yet unformed, inchoate. Its confused strife and its unstable uncertainties reflect the mixture of an old and a new that are incompatible. The genuinely modern has still to be brought into existence. The work of actual production is not the task or responsibility of philosophy. That work can be done only by the resolute, patient, co-operative activities of men and women of good will, drawn from every useful calling, over an indefinitely long period. There is no absurd claim made that philosophers, scientists or any other one group form a sacred priesthood to whom the work is entrusted. But, as philosophers in the last few centuries have performed a useful and needed work in furtherance of physical inquiry, so their successors now have the opportunity and the challenge to do a similar work in forwarding moral inquiry. The conclusions of that inquiry by themselves would no

more constitute a complete moral theory and a working science of distinctively human subjectmatter than the activities of their predecessors brought the physical and physiological conditions of human existence into direct and full-fledged existence. But it would have an active share in the work of construction of a moral human science which serves as a needful precursor of reconstruction of the actual state of human life toward order and toward other conditions of a fuller life than man has yet enjoyed.

Systematic exposure of how, where and why philosophies appropriate to ancient and medieval conditions and to those of the few centuries which have elapsed since the appearance of natural science on the human scene is so irrelevant as to be obstructive in intellectual dealings with the present scene, is itself a challenging intellectual task. As earlier intimated, reconstruction is not something to be accomplished by finding fault or being querulous. It is strictly an intellectual work demanding the widest possible scholarship as to the connections of past systems with the cultural conditions that set their problems and a knowledge of present-day science which is other than that of "popular" expositions. And this negative aspect of the intellectual activity to be performed involves of necessity a systematic exploration of the values belonging to what is genuinely new in the scientific, technological and po-

litical movements of the immediate past and of the present, when they are liberated from the incubus imposed on them by habits formed in a pre-scientific, pre-technological-industrial and pre-democratic political period.

One now fairly often runs across signs of a growing tendency to react against the view which holds that science and the new technology are to be blamed for present evils. It is recognized that as means they are so powerful as to give us valuable new resources. All that is needed, so it is held, is an equally effective moral renewal that will use these means for genuinely human ends. This position is certainly a marked improvement upon a mere assault on science and technology for the purpose of effecting a specific institutional subordination of them. It is to be welcomed in so far as it perceives that the matter at issue is moral or human. But—at least in the cases in which I have met it—it suffers from a serious defect. It appears to assume that we already have in our possession, ready-made, so to say, the morals that determine the ends for which the greatly enhanced store of means should be used. The *practical* difficulty in the way of rendering radically new "means" into servants of ends framed when the means at our disposal were of a different kind is ignored. But much more important than this, with respect to theory or philosophy, is the fact that it re-

tains intact the divorce between some things as means and mere means and other things as ends and only ends because of their own essence or inherent nature. Thus in effect, though not in intent, an issue which is serious enough to be *moral* is disastrously evaded.

Just as this separation of some things as ends-in-themselves from other things as means-in-themselves, by their very nature, is a heritage of an age in which only those activities were called "useful" which served living physiologically rather than morally, and which were carried on by slaves or serfs to serve men who were *free* in the degree to which they were relieved from the need of labor that was base and material, so the primary need of the new state in which resources vastly different both qualitatively and quantitatively are at our command involves formation of new ends, ideals and standards to which to attach our new means. It is morally as well as logically impossible that a thoroughly changed kind of means should be harnessed to ends which at most are supposed to be changed only in the ease with which they can be reached. The thoroughgoing secularization of means and opportunities that has been going on has so far revolutionized the conduct of life as to have unsettled the old scene. Nothing is more intellectually futile (as well as practically impossible) than to suppose harmony and order can be achieved except as new ends and standards, new moral

principles, are first developed with a reasonable degree of clarity and system.

In short, the problem of reconstruction in philosophy, from whatever angle it is approached, turns out to have its inception in the endeavor to discover how the new movements in science and in the industrial and political human conditions which have issued from it, that are as yet only inchoate and confused, shall be carried to completion. For a fulfillment which is consonant with their own, their proper, direction and momentum of movement can be achieved only in terms of ends and standards so distinctively human as to constitute a new moral order.

It is for the future to undertake, even in their philosophic aspect, the specific reconstructions that are involved in this carrying on to fulfillment what we have as yet attained only partially. Even a satisfactory listing of the issues that are involved with respect to philosophy must, by and large, wait till the philosophic movement in this direction has been carried beyond any point as yet attained. But one outstanding member of such a list has just received incidental attention: namely, the divorce that was set up between mere means and ends-in-themselves, which is the theoretical correlate of the sharp division of men into free and slave, superior and inferior. Science as conducted, science in practice, has completely repudiated these separations and isolations.

Scientific inquiry has raised activities, materials, tools, of the type once regarded as practical (in a low utilitarian sense) into itself; it has incorporated them into its own being. The way work is carried on in any astronomical observatory in the land, as well as in any physical laboratory, is evidence. Theory in formal statement also is as yet far behind theory in scientific practice. Theory in fact—that is, in the conduct of scientific inquiry—has lost ultimacy. Theories have passed into hypotheses. It remains for philosophy to point out in particular and in general the untold significance of this fact for morals. For in what is now taken to be morals the fixed, the immutable, still reign, even though moral theorists and moral institutional dogmatists are at complete odds with one another as to *what* ends, standards and principles are the ones which are immutable, eternal and universally applicable. In science the order of fixities has already passed irretrievably into an order of connections *in process*. One of the most immediate duties of philosophical reconstruction with respect to the development of viable instruments for inquiry into human or moral facts is to deal systematically with *human* processes.

Attention was earlier given in passing to some current misconceptions of the position set forth in the text which follows. I conclude with explicit notice of a point that has received repeated mention in the preceding

text of the present Introduction. It has been charged that the view here taken of the work and subjectmatter of philosophy commits those who accept it to identification of philosophy with the work of those men called "reformers"—whether with praise or with disparagement. In a verbal sense re-form and re-construction are close together. But the re-construction or re-form here presented is strictly one of theory of the type that is so comprehensive in scope as to constitute philosophy. One of the operations to be undertaken in a reconstructed philosophy is to assemble and present reasons why the separation once set up between theory and practice no longer exists, so that a man like Justice Holmes can say that theory is the most practical thing, for good or for evil, in the world. One may hope surely that the theoretical enterprise herein presented will bear practical issue and for good. But that achievement is the work of human beings as human, not of them in any special professional capacity.

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