

## OBJECTIVISM

In our western tradition a model of science and scientific method has emerged which threatens to undermine not only itself, but reasonable and responsible human existence as a whole. We are all somewhat familiar with this model. Its adherents praise the detached investigator who does not let his interests interfere with his work. He strives to arrive at results which are verifiable intersubjectively. For him, truth is independent of any particular knower. What is personal in knowing often is considered arbitrary, and it is separated strictly from objectivity. Truth is believed to be revealed to the unbiased, detached thinker who follows the prescribed rules of a rigorous method, which usually draws heavily from logic for its maxims. Additionally, facts and values are treated as independent of one another. One should be guided by the facts, being careful not to let his values obscure the subject matter, thereby interfering with scientific progress. In general, one always looks beyond himself for the objective criteria which are the mark of truth, 'reality and value.

In his philosophy of personal knowledge, Michael Polanyi attempts to transcend the dichotomy between subjectivity and objectivity by showing that much of what has been considered "mere subjectivity" is the basis of any objectivity whatsoever. Those aspects of the person which are necessary conditions for knowledge are not merely subjective; but personal.

Truth is not completely independent of our individuality, Man in general does not affirm the truth, particular people do, We do not do it by detaching ourselves from all our concerns, but within the context of them, In fact, some of our

concerns are for the truth, Putting the emphasis on objectivity, Polanyi presents a theory of objectivity which takes subjectivity, as commonly understood, into account, The converse can be said if we take subjectivity as primary, However, he takes us beyond the merely subjective and the merely objective to the personal.

My interest is to show how he does this in his philosophy of science, This includes the implications his epistemology has for the development of a metaphysical view which integrates the natural and the human sciences with one another and with the liberal arts, The importance of such an integration will not be missed by those who are acutely aware of the fragmentation in science, scholarship and human life brought about by specialization in all areas of our culture, In the absence of an adequate metaphysics the individual faces an unintelligible world, and the specialist in one field is subject to the propensity to transform his specialized understanding into a metaphysical view, Thus, common sense and science rest in an uneasy peace, while the liberal arts view them and are viewed by them with suspicion, An understanding of their complementarity would help relieve the tension.

An understanding of Polanyi's epistemology, or any like-minded view which takes the personal into account, helps resolve another tension; that between ourselves as we would like ourselves to be and ourselves as we are. Surely scientists do not do work which they do not value, are not interested in, and to which they are not passionately attuned, Actually, they only reject some values, passions, and interests as being unscientific, and they are passionately interested in communicating these scientific values to us. Indeed, the success of science depends on it. If one tried to reject his value-laden, passionate, interested pursuit of the truth, an irresolvable

alienation would develop. The degree to which that does not happen is the degree to which the "objective thinker" denies in practice what he affirms in theory.

If it was simply a matter of a mistaken viewpoint which did not interfere with knowing, then objectivism would not pose much of a threat. However, we shall see that the basic assumptions of objectivism oppose the proper development of science confronting us with a contraction in scientific concern and a correspondingly meaningless world. This is not to say that the ultimate concerns of objectivism are wrong. Objectivism is wrong insofar as it denies the personal, for then it undermines the possibility of its own existence. The concerns of objectivists for knowledge of a reality which is in some sense independent of the knower and accessible in principle to all need to be integrated into a theory of personal knowledge. Polanyi made great strides in doing so.

To understand Polanyi's philosophy of science, we should grasp his understanding of the pejorative meaning of objectivity. In later chapters we can move on to his presentation of an alternative epistemology, philosophy of science, and world view. It is only then that we can appreciate completely the dangers of adhering to objectivist assumptions by understanding what is lost if we rigorously pursue their implications. However, it will be helpful if we first understand the general context of his thought.

## I) THE GENERAL CONTEXT

Polanyi's philosophical work was motivated by social and ethical concerns. The first work he did in the philosophy of science in the late thirties and the early forties concerned the question of whether or not practical social interests should determine the

direction of scientific research. Polanyi argued that they should not. Though some such control is beneficial and necessary, he thought that the free growth of scientific thought had led to far more technological developments and many more discoveries useful to society than a socially controlled science would. The reasons for his stand will be considered in Chapter Five.

His philosophy soon blossomed into a critique of contemporary Western thought and society and into an effort to provide a philosophy which contributed to the sustenance and development of those aspects of our culture which lead to personal and social growth. Polanyi terms the most serious problem we presently face "moral inversion". It has its philosophical antecedents in philosophers such as Descartes and Hume who combine a skeptical attitude with a demand for knowledge which is true beyond any conceivable doubt. Because values cannot be established with such certainty, they became suspect. Additionally, because their realization is imperfect, and, in the worst instances, they are invoked in an effort to realize their opposites, "traditional" morality was challenged by romantic and nihilistic movements. In such movements, especially nihilism, we find little satisfaction for our moral passions. Desiring such satisfaction, but openly repudiating what is "moral" and "good", we become open to ideologies which claim to have objective grounds for instituting some social order which are not only independent of traditional social norms, but are not relative to any human society in particular. The grounds for instituting the society are not moral per se, but, as in Marxism, are intrinsic to the order of history or some other objective ground. However, the acceptance of the ideology is motivated largely by the person's moral passions. The result is that he accepts an ideology which is highly moralistic--while he, through the ideology, denies that this is being done. By denying

morality while surreptitiously being moral, the ideology repudiates all moralities except its own leading to social structures whose existence can be instituted and maintained by any means necessary. Since the person is not seen as the ground of the decision to institute the structures he is devalued, while efforts are made to promote the objective grounds of social transformation at the expense of our humanity. Polanyi finds examples of this process in both Marxism and Fascism.

The pursuit of objectivist ideals has resulted not merely in moral inversion, but in a diminution of meaning in our society and in distrust of our tradition and of our own powers of thought and action. In science this is manifested in the reductionist outlook which dominates science and the philosophy of science. The objectivistic ideal has been the ideal of science for the most part, and the failure of scientists to reflect adequately on their own presuppositions and actions has led to the notion of a universe which excludes the very powers on which we rely for understanding it.

In knowing, the counterpart to moral inversion is to distrust our own "psychological" acts of knowing because they 'are fallible while stressing some objective characteristic of a formal method or the object of knowledge as the criterion of truth or reality. What is overlooked is the person's acts of recognizing this criterion and determining if our knowledge meets it. Again the person is devalued, and knowledge is pursued on the basis of assumptions which contradict the performance on which they rely.<sup>1</sup>

In his The Crisis of European Sciences Husserl remarked that this crisis, being a spiritual one, could only be resolved through an adequate notion of rationality.<sup>2</sup> His phenomenology was, of course, an attempt to provide such a theory. Polanyi pursued a similar project. His epistemology of personal knowledge is an attempt to overcome the

objectivistic ideal, supplanting it with a model of knowing and reality which confirms itself in its actions, including the acts we rely on for its self-understanding. His philosophy of science is part of ibis project. By overcoming the objectivistic ideal in knowing he hoped to contribute to the reversal of moral inversion by providing a personal foundation for ethics and corresponding arguments for a free society. He also wanted to resurrect our trust in our tradition and, most importantly, in ourselves.

## 2) OBJECTIVISM

The predominant ideal of objectivity in our culture is one in which the knower detaches himself from his subject matter and his individual concerns in order to arrive at an unbiased knowledge of his subject. Intrinsic to his view are presuppositions, often tacit, about knowing, knowledge, being and the human mind.

For knowing to be objective in this sense is for the knower to follow the prescribed rules of a rigorous method. As noted, it relies mainly on logic for its maxims. The attraction of such methods is not hard to understand, for they promise to provide us with guaranteed results if only we can follow them rigorously. A logical deduction provides the best example. If we start with true premises and follow the rules of logic we cannot help but arrive at true conclusions. If only we could have such a method for arriving at true inductions, or to provide some quantitative measure of the probable truth of a proposition Perhaps it is possible to provide a set of rules for solving problems which we can program into a computer giving it the flexibility of the human mind. All but the first are ideals currently being pursued by philosophers. We shall see later why they cannot be achieved given the structure of knowing.

What is common to all of them is that they are seeking sets of rules or formal operations which, if followed, will yield the desired results. In contrast to sets of formal

operation, the mind, for Polanyi, is a set of informal operations. Formal operations are reversible. They can be repeated indefinitely. Just as we can put a puzzle together and take it apart over and over again, so we can repeat the operations which lead to deriving a logical conclusion or to the solution of a mathematical problem. Informal operations, upon which the formal ones depend, are not reversible.<sup>3</sup> For example, once we have solved a problem we cannot return to our state of perplexity and solve it again.

Likewise, we cannot doubt what we hold to be true as long as we accept it as true, nor can we unlearn a skill one moment and relearn it the next. Undoubtedly our skills can become rusty, we can wonder what led us to accept some proposition in the first place, or, if we have been away from our job, we may have to re-understand what we have forgotten. But we do not have the free control to reverse informal operations which we have with formal operations. In its most extreme form, the advocate of objective method would like to extend the mastery we have over formal operations to all knowing and action.

Correlative to the ideal of objective method is that of objective knowledge. It can be defined heuristically as what is arrived at by following an objective method. Just as an objective method follows precepts which universally apply to any reasonable human knower, so objective knowledge is what any reasonable person would assent to if he follows the method. Thus, for example, many think that one cannot be reasonable and illogical, artists, children and the Freudian unconscious notwithstanding. Objective knowledge is also absolute, It is true independently of particular places and times, and it is true whether or not anyone assents to it, In the extreme case it is independent of any knower.

In addition to being radically independent of knowers, it is also that of which we

can be completely certain, Aristotle had an ideal of objective knowledge insofar as he thought that science dealt with necessary truths, The same is true of Descartes whose model of knowledge was clear and distinct ideas which are true beyond any conceivable doubt, Knowledge in this sense is contrasted often with mere belief or opinion, The latter are either knowledge of contingent being or the conclusions of one who has not yet attained the conditions for arriving at certain knowledge. The distinction has held sway over philosophy at least since Plato in a variety of forms, the most obvious being the mathematical ideal of reason where knowledge is of necessary truths. This ideal dominated the thought of such diverse philosophers as Descartes and his fellow rationalists; Hume, whose skepticism presupposed that ideal; and Husserl, who sought apodictic insights into the structure of consciousness which carried a guarantee of their truth similar to that enjoyed by mathematical conclusions, That many of the most influential philosophers of the modern age also have been mathematicians or adept at mathematics is no accident.

A third characteristic of objective knowledge is that there is some aspect of the knowledge which is a sign of its truth. If we are dealing with formal knowledge, necessity could be such a characteristic. In empirical knowledge it could be that there is some basic set of indubitable experiences which form the fundamental grounds for our judgments. Various proposals have been offered. The basic point is that the aspect is of the object intended by consciousness.

Fourth, objective knowledge is wholly explicit. This means that it can be set forth completely in statements. Of course no one claims that this has yet been achieved, though in the early days of science men such as Bacon predicted that it would soon be accomplished. In Polanyi's terms, objective knowledge is wholly specifiable. We will

contrast it later with his notion of knowledge as unspecifiable.

Again, if we return to symbolic logic, we can see that it, like mathematics, closely approximates all four of these ideals. One attempts to manipulate statements in which there is as little ambiguity as possible. Ideally, their meaning must be wholly explicit. An argument is valid (as opposed to true) if the rules of logic are followed. This means that the conclusion follows with necessity from the premises. Absolute certainty is claimed for the validity of the derivation. One violates the rules of logic at the risk of being considered unreasonable for the validity of logical conclusions has an independence of "merely subjective" concerns.

If these views of knowing and knowledge are true, and if reality is what we know, then reality must be such that it can be known in this way. It too exhibits an independence of the knower which permits a purified encounter with it which guarantees objectivity. The prototype for such knowledge for Polanyi is mechanist determinism, eloquently advocated by Laplace.<sup>4</sup> Laplace thought that if he knew "all the forces by which nature is animated and the respective positions of the entities which compose it, then he would be able to predict with certainty all future occurrences as well as knowing the whole past. This presupposes that correlations of events are governed by necessity and mirrors the fascination necessity held for philosophers as a mark of truth. However, with the overthrow of Newtonian mechanics and the view of natural necessity which that view encouraged, the objective model of the universe has been altered. The current view is still reductionist. Like Laplace, its adherents think that everything, insofar as it can be explained, is explained in terms of matter in motion, though an appreciation of statistical laws has replaced the belief in necessary relations. Though we may not be able to predict with certainty, the ultimate understanding of things will be in

terms of physics, the science which will eventually unify all sciences. We should be able to understand human knowing and action, for example, in terms of mathematical formulas which govern the smallest, "ultimate" particles of matter, eliminating the current need for using seemingly vague psychological notions and value-laden terms to explain them. This also means that the ultimate understanding of knowing will not be in terms of our own conscious experience of ourselves knowing. Rather, this conscious experience will be explained in terms of physical events which we do not directly experience, just as objects in the world will not be explained ultimately in terms of what we experience.

Lastly, we can see that the ideals of objective method, objective knowledge and objective being combine in a notion of objective mind. The model of mind as a computer is an example. If objective method is a way to solve problems by following explicit rules and aiming at explicit knowledge, then the objective mind is the "general problem solver" which operates in a similar manner when faced with any question. The action of the mind should be explained strictly in terms of certain specifiable physiological functions which the person may have more or less control over, though usually it tends to function semi-automatically. The control that the person does have is also a physiological function, and we are faced with the question of how a physiological function does not merely control, but also knows, itself. Just as the human mind can know itself, so the possibility of building a computer which can know itself and function just like the human mind is envisaged. In fact, it is one of the stronger operative ideals in computer research. In a slightly different form this ideal is the model for thinking that psychological problems should be treated only in terms of a strict medical model; that is, the mentally ill should be treated only with drugs, diet, shock or

some other comparable treatment yet to be discovered.

### 3) A NON-OBJECTIVIST ACCOUNT

Polanyi's theory of knowledge as personal counters each of these objectivist ideals. First, detachment is not uninvolved, but a heightened involvement of the person with the subject matter under investigation. The inquirer often loves his work and its subject matter. This is why many people with little aptitude or affection for a particular subject cannot understand why someone devotes most of his life to it. They cannot imagine anyone loving it. The work is also valued by the person. If it were not a value in some sense, he would not pursue it. Thus, the strict separation of knowing and valuing and of facts and values in science is spurious. One tries to know what he considers it valuable to know, and the fact as known is valuable. Things can also be valuable in their own right. Thus, when one knows an animal this can involve an appreciation of its value as well as its functioning. Each of its functions can be a value for us and in itself.

Detachment is a commitment. Prolonged inquiry depends on a set of conditions for its success. Besides our own habits and our native creative ability, we rely on the tradition within which the inquiry is occurring and the society in which we live for support and guidance. Scientific detachment emerged from within human society and has its antecedents in over two million years of human achievement. Scientists had to win their place within our culture by struggling with contrary viewpoints both within and outside the scientific community. That position is maintained and developed by the direct personal transmission of that tradition from teacher to pupil and by the support for it from other segments of society which have some appreciation of scientific knowledge and its value. One achieves scientific detachment for oneself by appropriating this

tradition and its norms. Its emergence and survival depend on the commitments of the individual, achieved with the support of the group.

Second, knowing is an art. It is not achieved by only following the precise rules of a method. Science is a creative endeavor which ultimately transcends rules in its achievements. In fact, the rules, premises, and methods of science are discovered after the fact.<sup>5</sup> It was only after scientific knowledge was achieved that we began to wonder what it was. Likewise, it is only after one has made a discovery that he can specify what led him to it. The current controversies surrounding the nature of scientific method should deter us from thinking that it has been fully objectified or that it is completely known. Scientific method is in the process of being formed. Scientific values and beliefs combine in determining both the method and the object of inquiry. It would be unreasonable to restrict scientific method to a set of explicit rules when the nature of scientific achievements is still open to debate and when its future development is a real possibility. The creativity of scientists is not only evident in their discovery of facts, but in their innovations in scientific method. Indeed, the latter insights are the more significant,

Third, not all knowledge is objective. Objective knowledge as fully specifiable knowledge has a place within human knowledge, but is not the whole of it. It relies for its existence and application on tacit knowledge in the same way that formal operations rely on informal acts, Polanyi agrees that knowledge is absolute and objective in the sense that what is known does not rely on the knower for its existence. He does not agree that knowledge implies certainty nor that certainty implies that we are sure beyond any conceivable doubt. As we shall see in Chapter III this view is a profound shift from the ideal of knowledge in Anglo-American philosophy. But it is also a shift

which is consonant with the fact that scientific knowledge is knowledge of contingent being. Since what exists could conceivably be otherwise, the grounds for our knowledge do not require our assent with formal necessity. It is always possible to conceive of things being otherwise, and thus to have a conceivable doubt.

Additionally, the ultimate criteria for knowledge are not aspects of the object intended by the knower. Instead, they are immanent in the person's appraisals of his own success in meeting self-set standards of achievement. These standards can be, and are, shared with others, but they concern the personal performance of cognitional acts. Fourth, reality for Polanyi is composed of a series of ontological levels understood by autonomous sciences. He bases this claim on his theories of tacit logic and the logics of emergence and achievement. All three notions can be understood after we discuss knowing as a series of tacit integrations.

Finally, the mind cannot be understood by explaining it in terms of physiological functions alone. There is an irreducible experiential level which must be understood as experienced in any adequate theory of the mind. Neither is the mind a set of specifiable, explicit operations which can be duplicated by a computer. In his claims that both knowledge and knowing are tacit he argues against the possibility of duplicating the action of the human mind in terms of any set of fully specifiable relationships.

Of course few people adhere to all of the objectivist ideals. However, many have some blend of them, even though they may be in conflict with others that they hold. They may not be made explicit, questioned or considered. More often they are taken for granted, guiding thought and action implicitly. This is an indication of their strength and influence. It is also an example of tacit knowing, though in this case of a knowing which does not know itself nor the implications of an adequate theory of its

operations. This is what Polanyi tries to provide, an understanding of our committing of ourselves in knowing and acting and of the implications of these commitments. That understanding leads to an appropriation of and a trust in our tradition and a recognition of and a trust in ourselves as responsible centers of thought and action.

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