REFLEXIVITY: AN UNFACED ISSUE OF PSYCHOLOGY

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The property of reflexivity in a proposition is that of self-reference. Whatever the proposition asserts it applies to itself, explicitly or implicitly. In a science, reflexivity occurs in those conclusions which assert something about the processes whereby they have been derived. It is evident that if psychology, as a whole or in any of its branches, is concerned with the process of thought, it cannot, while it is dealing with the latter, avoid whatever problems accompany reflexivity. To derive conclusions from evidence a man must think. Thus, to assert that thought is of this or that nature, is to say something about the nature of the process whereby this conclusion has been derived.

The fact of the occurrence of reflexive propositions in psychology may be established thus, but this does not inform us why reflexivity is a problem. Since the publication of Bertrand Russell's *Principles of Mathematics* (6) it has been known that certain mathematical and logical paradoxes arise from self-referential propositions. The best known of these is the paradox of the liar: Epimenides, the Cretan, says, "All Cretans are liars." Epimenides, being a Cretan, applies this proposition to himself, and a puzzle, with which the reader is familiar, is precipitated. The abstract logical form of Russell's paradoxes of self-reference need not concern us here, nor need we assume that *every* self-referential proposition yields a paradox.

The problems of concern to psychology involve only a limited class of self-referential propositions, within certain quite peculiar contexts. If, from a presented body of evidence, a conclusion is drawn about the nature of thought, and if, taking thought as what this conclusion asserts it to be, this very conclusion could not have been drawn from this evidence by a process of thought, the paradox of self-reference is evident. Or, if a theory of the nature of perception is urged upon evidence which by *this* theory could not have been observed, the paradox is again evident. This form of argument is graphically described by the phrase, "sawing off the limb one is sitting on."

Many examples of this kind of self-refuting argument could be quoted. It is not peculiar to psychology. Philosophical treatises are full of them. Fallacious argumentation is not peculiar to any one field

of human investigation. What is perculiarly important is that if psychology is to apply its investigative techniques to man's mental activities, including those which are called "reasoning," and if it is to proceed with any hope of ever being able to propound general propositions about the nature of these mental processes, it must be prepared to face the paradoxes of self-reference. It should therefore be worth our while to determine more precisely under what conditions these paradoxes arise and under which they do not.

Only what the logician calls universal propositions—ones that begin with "all" or "no" or their equivalents—can give rise to these paradoxes. If Epimenides had said, "Some Cretans are liars," he could then have excluded himself from his assertion and there would be no paradox. Should psychologists be willing to confine their conclusions to the effect that *some* men think in this or that way, they should be equally safe, since then they could exclude their own thought processes from the assertions they have made. This alternative will, however, scarcely be acceptable to the psychologist, who, like all scientists, seeks generalizations that brook no exceptions.

If psychologists are content to study mere fragments of the mental process, drawing their conclusions about these alone and never making bold to assert that thought consists in just this and this and this and nothing else, their work should be free of the kind of paradox arising from universal propositions. Now I think that many psychological investigators, perhaps the majority of them today, are concerned only with fragmentary portions or aspects of thought processes. So long as they restrict their theories to these fragmented parts of the mental activity of man, they might regard themselves as immune from the paradoxes of reflexivity. But it is not entirely evident that this is so.

If the fragments they are studying are fragments of a *whole*, then they must be conducting their study in the hope that some day what they have contributed as knowledge of a fragment, will be fitted to what others have contributed through study of other fragments to reconstitute the whole. And there is no assurance that a fragment, by reason of the peculiar form which it exhibits, will not in part determine the form of any whole into which it can be fitted. In other words, it is entirely possible that an investigator who confines his research to aspects of the thought process which he is not employing in drawing his conclusions will, none the less, emerge with conclusions that, in their implications, do bear upon the former; and bear in such a manner that they generate paradoxes of self-reference.

The Psychologist as Object of His Own Study

As matters stand, then, either the psychologist is studying some limited phenomenon that happens to have aroused his curiosity, with no intention of applying whatever he learns from it to the solution of any problem that lies beyond it, or he runs the risk of generating paradoxes of reflexivity.

The psychologist could abandon the claim that he is studying mind, or intellectual activity, or any other kind of activity or structure that has anything to do with thought or perception. Other scientists can do this quite legitimately. But can the psychologist? It would be sheer arrogance for the chemist to claim that he is studying the intellectual faculties of man, but for the psychologist to disclaim this, would be to reject his role as a psychologist. This is *his* subject of investigation; it is what distinguishes him from other scientists.

To be sure, the claim that there is no such thing as mind, that what are called intellectual activities are actually nothing more than physiological events, is sometimes made. If it is made by a psychologist, then he can assert that he is studying those physiological events that are most commonly observable in man and that cluster around the phenomena that have mistakenly been attributed to mind. But this is precisely the kind of assertion that precipitates the paradox of reflexivity. Can such a scientist describe the reasoning whereby he has arrived at that conclusion in the language of physiological events alone? Can he even give an account of how a man can make, record and transmit an observation in this language, if he persists in excluding from the latter all reference to an awareness that might accompany physiological events? Indeed, should we be likely to listen to his descriptions and arguments if we did not believe that he was aware of what he was doing when he presented them?

The above is merely an example. This particular claim is not heard very often nowadays, and we may all, now, perceive its fallaciousness. But this kind of fallacy can be committed again. Indeed, it often is committed; usually not explicitly, for those who venture to say what mind really is are few in number; but implicitly by those who imply that the mode of attack they have adopted might ultimately yield an adequate theory of the mind and of intellectual activity.

A psychologist must remember that, however narrow the field of his particular specialty, whatever hypotheses he proposes within that specialty must prove capable of cogging in with the successful hy-

potheses of other specialists, if they are to survive. One cannot patch together a total psychological theory out of a set of mutually inconsistent theories, even if each be consistent with the data collected within its field of investigation. It may be proper enough to distinguish various functions of the mind from one another for purposes of study, but whatever may be the grounds for making such distinctions, they ought not to promote a belief that the mind is a congeries of disparate faculties that cannot work together as an operative whole.

There is no reason why a significant theory of mind should not originate within studies concentrating on certain of its limited functions. However, this is likely to happen only if the originator of such a theory has had sufficient breadth of imagination to see how an hypothesis adequate within a limited area of investigation, can be extended to other areas without reducing the phenomena of the latter to those of the first. There are ancient philosophical views of man that depict him as one huge complex of appetites, others that reduce him to a will, yet others that make of him a machine. Psychologies of learning, of sensation, of perception, of volition, are not likely to yield a satisfactory theory of mind if they insist on viewing all of man's activities through a theory that is adequate only to certain aspects of his behavior.

AVOIDING FALLACIES OF SELF-REFERENCE

Though psychology, for the reasons given, is subject to the paradoxes of reflexivity, it is not inevitable that they should appear within it. They can be avoided. The form of these paradoxes as they appear in psychology has been exhibited. They result from offering a description of mental activities which excludes the very activity through which this description has been constructed. It would be absurd to suppose that such an exclusion was purposive. How, then, does it come about? Probably because the psychologist begins by conceiving himself as studying an objective field of phenomena that is, in all basic respects, similar to that studied by other sciences. In physics, chemistry or biology neither the experimenter nor the theorist is engaged in a study of his own activities, mental or physical. To be sure, he may find it necessary to record, as a part of his protocol, his physical manipulation of the experimental materials or his conceptual manipulation of the data he has collected. But it is not *his* activities that he is studying.

It is tempting for the psychologist to proceed, by analogy, to the conclusion that he is studying the behavior of other men, and that the kind of activity in which he engages while conducting the study plays no different role in his science than in any other. Even this may be granted, so long as he is studying but limited aspects of the behavior of other men. But what emerges from such limited studies can scarcely pass muster as an adequate psychology.

He who wishes not to commit fallacies of self-reference can avoid them by taking two steps: (*a*) He should acquaint himself with the nature of the fallacy and of the peculiar risk his discipline runs of committing it. (*b*) He should turn his attention, upon occasion, to his own activities as an experimenter, as a collector of data, as an observer, as a reasoner, and ask himself whether anything he is about to expound is inconsistent with the ability to do all these things that he has arrogated to himself.

As here stated, these two steps are precautionary in intent. The second, however, might well be made to bear a positive as well as a negative import. The essential reflexivity of a science like psychology *does* lay it open to fallacies of self-reference, and of course this is a liability. But it ought not to be looked upon as a liability only. It is altogether possible that some psychologists who are aware of the danger of self-referential fallacies will simply narrow the claims put forward for the generality of their conclusions—saying, for instance, that they are studying only the behavior of rats and have no intent to transfer what they have learned about rats to intelligent beings like men. On the other hand, taking a positive approach, the reflexive aspect of psychology is essential to that subject and as such constitutes a challenge, an obligation, and an opportunity to the psychologist. In short, the psychologist should seek to avoid fallacies of reflexivity (as anyone should seek to avoid fallacies), but not reflexivity.

SELF-REFERENCE IN MODERN PSYCHOLOGICAL THEORIES

Granting, then, that psychology should be reflexive, but should not commit fallacies of self-reference, it will prove illuminating to examine briefly several modern psychological theories, with an eye to seeing how well they satisfy this condition.

Freudian theory is of the type that claims inclusiveness, just that kind of inclusiveness that must account for the activity of Freud, the theorist. But though Freud, in his self-analysis, shows some appreciation of the need for reflexivity, his theory fails to encompass

certain most important aspects of man: his searching, his desire for positive values and some best direction for his life. Thus Erich Fromm comments:

Psychoanalysis, in an attempt to establish psychology as a natural science, made the mistake of divorcing psychology from problems of philosophy and ethics. It ignored the fact that human personality cannot be understood unless we look at man in his totality, which includes his need to find an answer to the question of the meaning of his existence and to discover norms according to which he ought to live (2, pp. 6-7).

The puritanical moral tone of Freud's writings has often been noted. Yet his theory provides no grounds upon which this aspect of Freud, the man, could be accounted for. Jones quotes Freud as saying, "When I ask myself why I have always behaved honorably . . . I have no answer . . . Why—and incidentally my six adult children also— have to be thoroughly decent human beings is quite incomprehensible to me" (3, p. 418).

In contrast with Freud, Adler exhibits a willingness as well as ability to take his own accounting into account when he states that the therapist should be able to "make the honest admission that under the same conditions, with the same picture of the world and with the same erroneous goal of personal superiority, we ourselves would have taken practically the same course of action [as the patient]" (1, p. 395). Willingness to "put oneself in the other fellow's place" is the very best insurance against commission of the fallacy of self-reference. It yields the "open perspective" that makes self-criticism not only possible, but a duty. For the "other fellow" is precisely the one who can put our assertions to the test. The quality of theory engendered by this willingness is often called "open-endedness." It is what Hamlet was urging upon Horatio with his advice, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

The inability of a theorist to meet criticisms engendered by his own theory often evinces itself in moral or evaluational dogmatism. Value standards are placed outside the theory, where they cannot be touched by the type of critical reasoning employed to establish the latter. Freud simply admitted that he could not account for his own moral convictions. B. F. Skinner is less modest. He repeatedly denies that there is *any* basis for moral convictions or value judgments *within* the individual:

The free inner man who is held responsible for the behavior of the external biological organism is only a pre-scientific substitute for the kinds of causes which are

discovered in the course of scientific analysis. All these alternative causes lie outside the individual (9, pp. 447-448). Every discovery of an event which has a part in shaping a man's behavior seems to leave so much the less to be credited to the man himself; and as such explanations become more and more comprehensive, the contributions which may be claimed by the individual himself appear to approach zero. Man's vaunted creative powers, his original accomplishments in arts, science and morals, his capacity to choose and our right to hold him responsible for the consequences of his choice — none of these is conspicuous in his new self-portrait (10).

Skinner does exhibit an awareness of the importance of applying his theory to *man*. The question is whether he is prepared to apply it to *himself*. In *Walden Two* his theory is applied generally to the problems of society. However, he does not come to grips with the prospect of defending his own conditioned need to dominate the life of others and his rightness in his choice of community values. Frazier, the main character, states, "Our members are practically always doing what they want to do—what they 'choose' to do—but we see to it that they will want to do precisely the things which are best for themselves and the community" (8, p. 247). Thus speaks the head (dictator) of Skinner's state, who, in place of "taking the attitude of the other fellow," would *control* his attitudes, and that without any theory-proven base for the objectives this control is to achieve.

Few modern writers have expressed more effectively (and with more genuine anguish) the predicament of the psychologist who regards the function of all science, and of his own in particular, to be that of control, than Robert Oppenheimer addressing psychologists:

The psychologist can hardly do anything without realizing that for him the acquisition of knowledge opens up the most terrifying prospects of controlling what people do and how they think and how they behave and how they feel . . . I can see that the physicist's pleas that what he discovers be used with humility and be used wisely will seem rather trivial compared with those pleas which you have to make and for which you will have to be responsible (5, p. 128).

George Kelly (4) offers a type of theory that exhibits this "open-endedness" that makes possible a *study* of value attitudes rather than a mere dictation of values from a point outside the theory. He presents a point of view equally applicable to psychologist and layman alike; both look at data of life, organize them, predict from them, and reorganize them. Franklin Shaw (7) has also developed a theory in which, as in Kelly's, life is a process that is open-ended for both scientist and layman. On the other hand, Skinner's approach seems to be open for the scientist but closed for the layman. This contrast suggests that the dimension of open-closed might be an interesting context within which to explore the reflexivity of different theories.

The reason why more psychological theories are not reflexive may be that man generally is too idealistic, in the sense that he is looking for absolutes, for abstractions. Possibly the error of some behaviorists, as with Freud, is too much idealism in this sense. It is paradoxical that these psychologists may be focusing too much on *what they want life to be* and too little on *what man is doing*. As the psychologist attempts to bring his work to a state of fixity, he does so with much agility, flexibility and imagination. This, however, *within* a fixed frame of inquiry that usually excludes values. There are questions that can legitimately be asked, and answered through experiment and observation; but limits are set to the questioning attitude, and beyond these limits opinions are not to be challenged. But truly to encompass man, to be truly reflexive, one's theory must focus on reactive man and creative man.

Too many psychological theorists wish to force man into a mold. Life does not respond to this force, and they fail to appreciate their own originality in attempting to fixate upon permanent elements in man's nature. As a case in point consider the persistent but unsuccessful attempts to stabilize the IQ. To miss the great ingenuity which has gone into the attempt to fix IQ is to miss one aspect of the process nature of man's adjustment. To miss either the fixity or change, the openness or closedness of life, is to fail at being truly reflexive.

WHAT IS ADMISSABLE EVIDENCE IN PSYCHOLOGY?

It is all very well to recommend that psychologists turn their attention to their activities as experimenters, observers and theorizers. But the response is likely to be one of amazed and impatient rejection. "What, is it not these phenomena that we are trying to account for in the end," it is likely to be said, "and should we be required to begin with the construction of a theory about what is most difficult and most comprehensive before we are permitted to study humbly the more tractable phenomena of our discipline?" Such a reply would be justified, too, if the recommendation were read as one requiring a full-blown theory of perception, imagination and reasoning as a precondition of psychological investigation.

The suggestion is not that every psychologist theorize about these things, or investigate all of them directly, but that he *remind* himself from time to time that whatever makes it possible for him to engage in scientific activity is a part of his ultimate subject matter, and that any complete psychological theory must take it into account. Neither

is it necessary that the average psychologist have a theory that will adequately account for this activity of his. Rather, what he can observe as going on in himself should be regarded as data; data with which any theory he propounds, however specialized and limited its scope, must square, on penalty of falling into the paradoxes of self-reference.

The difficulty faced by a psychologist who should wish to take this advice seriously would be, no doubt, in conceiving these activities of his as data. Data, he has been trained to think, are derived from something measurable or countable, or, at the least, something that can be concisely described. The facts of inner consciousness rarely meet any of these conditions, and if they are so tortured as to assume a form in which they do meet them, they cease to be what they were as encountered directly in self-consciousness. But it is not data from which calculation is possible, or data by which this or that detailed hypothesis can be verified, that is here intended. The immediacies of self-consciousness constitute the very thing itself that the psychologist is investigating. That is why his hypotheses must ultimately square with them. They are data in the ultimate sense of being that which theorizing activity must start with and return to. And, what is far more troublesome, they are also what the psychologist must employ in any activity he engages in, whether of observation, calculation or theorizing. And that, precisely, is why ignoring them, or trying to argue them out of existence, or reducing them to something else, involves the psychologist in paradoxes of self-reference.

Let there be no mistake about it: turning the faculties of the mind inward upon themselves is no easy task. It may even be an impossible one, as has frequently been asserted. But if it is, that means that psychology, in its primary role, is impossible. The chief difficulty is that of observing and reporting. What one is seeking to discern, vanishes before one's eyes. If one tries to fix upon perception, what one sees are merely the objects of perception; scrutiny of thought reveals only what is being thought about, or, at best, fleeting sensations that seem to be not thought itself but mere accompaniments of it. Nor does it seem likely that some day an exceptionally keen observer will catch the fleeting object of his quest upon the wing and bring it back to us a captive in a cage of symbols. Very likely, psychology, in this role which is here called primary, is impossible. Still, that does not mean that the psychologist can afford to forget that he is an observing, thinking, calculating being, and that whatever he says about

the mind and its activities must not be permitted to deny this. If these capacities of the mind are to remain inscrutable and inexplicable, then it is required that we admit this and cease in all attempts to replace them by something else that is not inscrutable and inexplicable. The point is simple in the extreme: *what is to be accounted for must be accounted for, else the venture is a failure; and any psychological venture is a failure if in its accounting it fails, or refuses, to take into account its own accounting.*

But, then, is it wise to insist that, though it be impossible, this is the primary role of psychology? It is, for just one reason: it induces a healthy respect for what is not yet known, that is becoming to any scientist. More specifically, it would induce in the psychologist a hesitancy to close his theories to evidence that is so vague and evanescent as to seem by the standards of other sciences not worth considering. This is what was intended by the statement that what is revealed in self-consciousness, however inexpressible it may be, is primary evidence for psychology. Even if it cannot be expressed, there is an entirely genuine sense in which we can judge whether a theory about mind and its functions agrees with it. What is wrong with admitting that psychology is different from other sciences, and that what it must invoke as evidence is not comparable with what other sciences recognize as evidence?

It may be expected that any shift in the conception of what constitutes evidence will be accompanied by a shift in the criteria of what constitutes an adequate report of evidence. If we have not been able to describe, through use of what are the currently accepted paradigms of scientific description, the phenomena that are characteristically psychological, that may be because these phenomena are not amenable to such description. It should be recalled that men have been talking about mind and its functions for many centuries, and that they do not seem to have entirely failed in communicating what they had to say. To be sure, many of these men have not been, and have never professed to be, psychologists. Some of the most successful of them have been novelists; perhaps the most successful have been poets.

It could be that the psychologist could profit through a study of the reportorial techniques of the literary artist. Indeed, the whole process of communication is one of the most obscure of all the activities of mind. It is also one of the most central. Obscure or not, it is essential to psychology, as to any other science. Only, for psychology,

it presents the hazard of paradoxes of self-reference. Every man who seeks to communicate takes it for granted that communication is possible, and if the psychologist expects to communicate, whatever theories he emerges with must square with the fact of communication. That is what he is doing in seeking to communicate: accepting communication as a fact. And if the literary artist has developed unusually successful techniques of communication, exceptionally sensitive to those phenomena which the psychologist has elected to study, it is simply foolish for the latter to eschew their use. And it is a delinquency of duty for him to fail to turn his attention to them as part of the subject matter of his discipline.

SUMMARY

The reflexivity of psychology lies in the fact that the psychologist is the object of his own study. This precipitates paradoxes of self-reference in connection with universal propositions. Even when his subject matter may consist of fragmentary aspects of mental life, ultimately the psychologist's observations have to fit into an understanding of the whole man, including the less tractable aspects of himself such as the qualities enabling him to be a researcher, his values, and all the facts of his consciousness. The way to surmount reflexive difficulties is to be aware of them and how they differentiate psychology from the other sciences, and to draw the consequences. Psychologists should seek to avoid fallacies of reflexivity, but not reflexivity. Examples are given to show how several modern psychologies face up to this problem.

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