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PSYCHOLOGY, PROGRESS, AND THE PROBLEM OF REFLEXIVITY: A STUDY IN THE EPISTEMOLOGICAL FOUNDATIONS OF PSYCHOLOGY

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Buss's thesis that, throughout the history of psychology, psychological theories have alternated between two contradictory models of human nature is examined and supported. One model sees humans as actively constructing themselves; the other model sees humans as constructed from the outside. The thesis that the inherent reflexive quality of psychological inquiry is the cause of this alternation is then examined. Three different hypotheses as to how "reflexivity" might explain this alternation are offered. Finally, brief attention is given to the question of whether psychology can be seen as progressing if it is as philosophically indecisive as the analysis suggests.

THE PROBLEM

Reflexivity is the favorite candidate for the property which makes the human sciences unique. Reflexivity is the property of the objects of a scientific inquiry also being the subjects who carry out the inquiry. Reflexivity is generally seen as a mixed blessing.

On the positive side, it is viewed as decisive evidence for the unique capacity of humans to engage in self-conscious inquiry into their own condition. As such, the property itself informs us about the nature of the entities being studied. They are capable of reflecting.

On the negative side, reflexivity is blamed for complicating all three scientific tasks: explanation, prediction, and control (or "optimization" as some developmental psychologists prefer to call it). With respect to *explanation*, there is the problem of objectivity. How can a subject be objective about his or her own behavior? How can one describe, let alone explain, behavior with which one identifies? How can a scientific observer neutrally view behavior which he actually participates in as a subject?

With respect to the problem of *prediction* there is the problem of self-fulfilling prophesy. When scientists predicted that Mount Saint Helens would erupt they did not worry that the prediction would affect the volcano's behavior by causing it to erupt when it would not have because it preferred to do what geologists said it would do; or by causing it to stop an incipient eruption because it preferred to be disobedient. However, when we predict, based on our observations of some community of people studied as object, that the rate of inflation will rise because of people's negative attitudes towards saving money, we generate information which these very people can use in their role as economically self-interested subjects. What the human community will then do is dramatically influenced, and thus changed, by the introduction of the prediction.

With respect to the issue of *control* there is the problem of manipulation. It is one thing to treat nonsentient physical things as objects, as mere means to ends, but quite another to use knowledge gained about people studied as objects to further objectify

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them; it is one thing perhaps to treat people as objects for purposes of understanding or explanation but quite another to keep them as objects for purposes of control. To do so is to deny what reflexivity points up in the first place, that humans are in fact subjects, unique in their capacity to initiate inquiry into their own predicament, and for that reason worthy of special respect, worthy of treatment as ends in themselves.

All this is fairly familiar. What I want to do in this paper is examine an unfamiliar implication for the science of psychology, and possibly the human sciences in general, of the reflexivity phenomenon. The implication I am interested in is suggested in a provocative paper by Allan R. Buss called "The Structure of Psychological Revolutions."[1] Buss claims that transformations of psychological theories, for example, from the supremacy of behavioristic models to the supremacy of cognitive models have a recurrent deep structure. Essentially, the transformations always involve a flip-flop of the explanatory primacy claimed for the category of the subject to a claim for the explanatory primacy of the object, and vice-versa. Each psychological revolution, according to Buss, has reversed "the subject-object relationship with respect to power, primacy, and influence."[2] Every major change in psychological theory has involved an alternating rejection or embrace of a metaphysic which sees the person as constructor of reality to one which sees reality as constructor of the person. Buss insists that this metaphysical tossing and turning is a characteristic "*not* indigenous to the natural sciences, but very much *intrinsic* and *unique* to psychology."[3] The process is one of eternal return. Psychology, on this analysis, does not progress; it simply turns over.

Although Buss calls for a psychological "revolution to end all revolutions," he actually toys with the idea that there can be no end to this flip-flopping and ultimately no progress for psychology precisely because of the way the problem of reflexivity infects the science. He says of his analysis that:

> Such a characterization of revolutionary paradigms within psychology is unique to the human or social sciences since they are reflexive studies. The objects of study in the social sciences (people) are also subjects. They can therefore reflect upon their objectivity, and subsequently change it in light of previous research findings and new information. This largely unacknowledged subject-object contradiction has played havoc in the history of psychology's paradigms, where the unresolved tension has led to two separate structural "solutions," each of which, it is subsequently noted is unsatisfactory in itself.[4]

This quote is Buss's only comment on what ultimately constitutes his explanation for what he takes to be the main feature of the history of psychology. My purpose in what follows is first to provide a bit of support for Buss's historical claim that psychology's history is fruitfully characterized as involving the metaphysical two-step he describes; then to spell out more fully the reasons why reflexivity might be blamed for this latest trouble for rationality in the human sciences; and finally to speculate very briefly on whether psychology can be seen as progressing if the science is indeed as metaphysically indecisive as its history seems to suggest. I shall, on the whole, be raising more questions than providing answers.

The Historical Thesis

Buss spends little time supporting his thesis that the history of psychology has actually had the deep structure of switching from models which see the person as constructor of reality to ones which see reality as the constructor of the person. I want to spend a little time, therefore, discussing the historical thesis so that I can move on with some con-

fidence to the claim I am most interested in, the claim that reflexivity is the cause of this alternation.

First a word of caution. Buss's thesis is most properly construed as a thesis about psychological theories which try to account for the voluntary, purposeful, rule-governed, occasionally private portions, of human behavior. It is a thesis about purposeful action (although it may, and I suspect it does, have greater generality), about those portions of human psychology most aligned with learning theory, personality, and social psychology. It is not a thesis which significantly affects physiological, sensory, or even neuropsychology. In these areas the Reality Constructs Person metaphysic is generally firmly entrenched. To the extent that neuropsychology is interested in explaining purposeful, intelligent behavior,[5] and not merely with explaining intraneural transmissions, however, Buss's thesis applies. Within this set of parameters Buss's thesis is that Person Constructs Reality and Reality Constructs Person metaphysics do not coexist or achieve integration in any historically known analysis of purposeful action.

Buss begins making his case with Wundt. It is useful, however, to start by mentioning Descartes's dualistic psychology, with its logically distinct set of laws for mental and physical phenomena, because Cartesianism is the paradigm case of a model which explains purposeful action exclusively in terms of the agent's intentions and will. With respect to voluntary human action the person is the first and only cause in Cartesian psychology. Furthermore, much more so than Hobbes, who held a Reality Constructs Person metaphysic, Descartes inspired the psychology of the seventeenth, eighteenth, and first half of the nineteenth centuries.

Buss claims that Wundt is the first psychologist to promote a Person Constructs Reality model. He cites Arthur Blumenthal's[6] paper as support for this interpretation. Kurt Danzinger[7] has argued for such an interpretation of Wundt even more recently. Nonetheless, the interpretation is revisionistic, since Wundt is usually viewed as a structuralist precursor of behaviorism, the Object Creates Subject theory par excellence.

It actually makes no difference to Buss's thesis who hold what, so long as no one holds both Person Constructs Reality and Reality Constructs Person models simultaneously. However, if the historical progression is supposed to involve the rejection of theories which give primacy to objects in favor of subjects and vice-versa in a cyclical pattern, then one would expect that Wundt would be an anti-Cartesian, or at least an anti-Kantian, and thus should be read as a Reality Constructs Person theorist as, for example, E. G. Boring[8] sees him.

There is, of course, the very popular third view which reads Wundt as espousing neither metaphysic and claims that this first stab at doing scientific psychology was essentially descriptive and countenanced no explanatory models at all. If this is true, all Buss needs to do is claim that Wundtian theory is preparadigmatic, which seems ad hoc but saves the historical thesis.

In any case, Buss claims that "Wundt's idealism became transformed into John B. Watson's materialism. What had been subject became the object and vice-versa."[9] Although it is true that Watson, in his behavioristic manifesto,[10] rejected the main methodological tool of Wundtian inspired structuralism, introspection, there is more support to be had for Buss's thesis by looking, as Watson himself did, to functionalism, which also employed introspection, rather than to structuralism as the opposition.

Functionalism was a response to the psychic atomism of Lockean empiricism which had inspired structuralism. In fact, John Dewey's famous "Reflex Arc" paper[11] was a critique of the associationistic model which saw both the contents of consciousness and overt human actions as products of causal chains which start outside the person and

without their engagement. Dewey's point in the paper was that even simple sensations require active involvement, so that what is seen or heard is always being interpreted and organized by and for an interested agent. From the functionalist perspective human action consists of a series of ever more adaptive attempts by the subject to actively and productively make sense out of the world. It is for this reason that psychological functionalism was a natural partner of philosophical pragmatism. Both theories deploy the Person Constructs Reality metaphysic.

John B. Watson said of Dewey "I never knew what he was talking about and unfortunately still don't."[12] He is to be taken at his word. Watson espoused an explanatory model with no room for an active subject. He analyzed all human behavior as consisting of reflexes or conditioned reflexes. There was no denial in Watsonian behaviorism that organisms change, that they engage in novel behavior. The claim was simply that they do not initiate the novel behavior. The initiation is done from the outside.

Watson, of course, is not the last word on behaviorism. The paradigm has been expanded to include private behavior, thinking, and the like,[13] which Watson had thrown out along with Wundt and Dewey, as well as a new sort of learning, operant learning, in which what is learned is the result of what follows behavior rather than what precedes it as in classical behaviorism. Skinner, in fact, has recently claimed operant behaviorism as "the very field of purpose and intention."[14] This might lead one to argue, contrary to Buss, that there is considerable flux within a paradigm with respect to its stance on the source of action. Skinner for example, waxing very Deweyan, has said, "At some point the organism must. . . see, hear, smell, and so on, as forms of *action* rather than *reproduction*."[15]

It turns out, however, that even in contemporary behavioristic theory the organism's coming to be an actor rather than a reproducer is ultimately a consequence of what has gone on outside the organism. As Skinner puts it at the end of his paper "A Lecture 'On Having A Poem' ":

> I have had my lecture. I have no sense of fatherhood. If my genetic and personal histories had been different, I should have come into possession of a different lecture. If I deserve any credit at all, it is simply for having served as a place in which certain processes could take place.[16]

It is not merely that Skinner qua individual psychologist sees himself this way, as a mere location; behavioristic theory in most of its forms generally frames things this way. Behaviorism is not, therefore, just identifiable by a certain epistemological conservatism, it is also identifiable by its Reality Constructs Person metaphysic.

Interestingly Buss argues, I should say he states, that psychoanalysis shares the Reality Constructs Person model with behaviorism. He says, "psychoanalysis and behaviorism share the same deep structure [Reality Constructs Person] although each has a different surface structure [unique theoretical terms]."[17] This makes sense. Freud, like Watson, was responding to the long supremacy of metaphysical, broadly Cartesian inspired models, and although Freud maintained a sort of dualism he saw the character of personality traits as determined from somewhere else, by some other—by early childhood experiences and that alien part of self, the unconscious. This, of course, is the way Buss's theory is supposed to work out. The category elevated to explanatory supremacy at any given time is to be the opposite of the formerly supreme one. So, on this interpretation, Freud was simply doing on the continent what behaviorists were doing in America. The lack of convergence of the two traditions is then explained by the irresistable thesis that the surface structures, the particular linguistic formulations, of the

two theories were so different that there were no individuals comfortable enough in both idioms to do translations.

The most recent revolution, of course, is the cognitive one. This revolution is rationalistic in its inspiration. Noam Chomsky, in fact, calls himself a Cartesian, and Piaget and Kohlberg make clear their debts to Kant. Skinner has joked that if Chomsky is a Cartesian he must be a Lockean,[18] all of which is good fun but ultimately helps prove Buss's point. The cognitive paradigm, whether it be in Chomsky's psycholinguistic version or Kohlberg's moral psychological version or Piaget's developmental version emphasizes again and again the active intentional nature of the human subject over and against the objects. Furthermore, there is no long wait in cognitive psychology for the environment to prepare the organism to be actively in charge of its world as there is in both behaviorism and psychoanalysis. The outside is organized by the inner right from the start.

To see that it is largely the Person Constructs Reality versus Reality Constructs Person conflict which motivates the cognitivists' antipathy to behaviorism one need only look at how those involved in the paradigm struggle frame the controversy between themselves and learning theoretical models. Kohlberg, for example, insists that the assumptions of his cognitive developmental moral psychology "contrast sharply with those of 'socialization' or 'social learning theories' of morality";[19] and he goes on to cite the direction of the interaction between the agent and "the world" as the primary stake. And Chomsky, of course, is famous for his charge that behaviorism cannot account for either the complexity or the amount of a human's creative linguistic output in terms of stimuli input. Chomsky believes that the person himself generates the output. And Piaget has always emphasized his Kantian roots by insisting that his theory turns on the intuition that children give categorical structure to the world, not the other way around as some classical empiricists might have it.

In spite of all this prima facie support, the historical thesis has some rough edges.[20] First there is the matter of interpretation. Even if we suppose that one of Buss's two models always appears in paradigmatic psychological theories—which by the way sounds very much like a cognitively inspired structuralist thesis—it is difficult to isolate who holds what as, for example, in the case of Wundt. I, in fact, have argued elsewhere that Skinner has an active mental model.[21] I am less confident of that now, but I am more confident than ever that Chomsky's model is much less active than most people think, less active even than I painted it a moment ago. His cognitive linguistic structures are, after all, neural. They are wired in. They are not the kinds of things agents put into action; they are the kinds of things reality, evolution, and natural selection put into action. Second, and this follows from the first, there is the problem of internal fluctuations within a paradigm. For example, when Richard Herrnstein calls, as he recently has in a series of articles in the *American Psychologist*[22] and elsewhere,[23] for greater recognition within behaviorism of the active way even pigeons shape their world, is that still behaviorism, or is it now cognitive psychology, or is it something totally new?

In spite of these complications and the rough edges on the thesis, it has, as I have tried to show, some plausibility, some merit. Paradigm clashes in psychology are, as a matter of fact, often framed as conflicts of agency. This, of course, is true of virtually all scientific controversies in the sense that all sciences are interested in explanation and explanation turns on identifying causal agents. Nevertheless, whereas we might wonder whether cancer is caused by viral agents or industrial pollution or the food we eat, we never wonder whether cancer causes the viruses, or the pollution, or the food we eat. We keep our discourse about cancer in an unequivocal object mode in which we are confident

and unwavering about the direction of our causal chains, even if we are radically uncertain about the specific causal agents.

The conflict about agency in psychology is much more deeply philosophical. It concerns the very direction of the causal chains, the very structure of our explanatory discourse. Because of this the paradigm conflicts which occur in psychology are not merely empirical; they are logical or metaphysical.[34]

Recognizing that the historical thesis requires considerably more support than either Buss or I have given it, I want to bracket it, let it rest as a not unreasonable hypothesis about the existence of an historical phenomenon. I now want to inquire as to how this phenomenon, this historical alternation of metaphysical models in psychology, might be explained in terms of reflexivity.

Three Explanations in Terms of Reflexivity

As I mentioned at the beginning, Buss hints that the cause of the philosophical indecisiveness which colors the history of psychology lies in the fact that the objects of psychological inquiry are also the subjects who perform and process the results of the inquiry. I want to now follow up this hint by elaborating on three different ways reflexivity might be cited as the cause of our problem.

1. One tempting tactic is to try to account for the flip-flop of Reality Constructs Person and Person Constructs Reality models by a psychological thesis about psychologists. The tactic's merit is that it sees the behavior of scientists as subject to the same sort of account as the behavior of the other people for which these scientists purport to account. In this sense the tactic takes the fallible and reflexive nature of psychological inquiry seriously.

The prima facie disadvantage of the tactic is the vicious circularity it courts. Our task is to explain a characteristic which affects both Person Constructs Reality and Reality Constructs Person metaphysics and I suggest doing so by offering a psychological thesis about psychologists. But any psychological thesis, according to my analysis, will operate with either a Person Constructs Reality or Reality Constructs Person metaphysic, and will, therefore, implicitly assume the adequacy of one of the two metaphysics when it is precisely the adequacy or lack thereof of the two metaphysics which we are worried about in the first place.

So much for pointing out thin ice. The sort of analysis I have in mind might proceed as follows. We first note that two ways of discoursing about human behavior are possible, the subjective mode and the objective mode. We know that these two modes are possible by virtue of the fact that they exist in the talk of, for example, existentialists and behaviorists. The capacity to talk in both modes, of course, begins at home. Some of our behavior we describe as "action," some as "happening."

Now the structure of psychological revolutions, as I have been describing it, consists precisely of the entrenchment of one mode of discourse, and the abandonment or suppression of the other mode. Behavior is seen either as subjectively initiated action or as objectively determined happening. Entrenchment of either mode might be explained in terms of the powerful intuition behind each way of talking. The objective mode is promoted by the apparent power of that mode in accounting for all the other, nonhuman, parts of nature; the subjective mode by the equally powerful sense that much of what we do is, in fact, self-initiated.

We then explain the flip-flop of individual psychologists or whole traditions, say from Deweyan functionalism to Watsonian behaviorism, by citing some threshold which

is reached whereby the hegemony of the entrenched mode becomes psychologically intolerable, and causes a re-embrace of the neglected mode. The intolerability might be emotional, for example, "I can no longer stand a theory like behaviorism which views me and others as objects totally manipulated from the outside." Or it might be cognitive, for example, "Any theory like existentialism which systematically ignores external influences cannot be explanatorily complete."

This sort of analysis is similar to those political analyses which explain periods of liberalism as responses to periods of conservatism, and vice versa. The reason the liberal candidate will be elected, it is sometimes said, is just because people are tired of conservatism.

One trouble with this analysis, and there are many, is that it is of no help in explaining how the rigid entrenchment in one mode occurs in the first place. After all, since the value of both modes is not usually in question when speaking about oneself, it is hard to explain why individuals qua psychologists could be psychologically predisposed to talk in only one way.[25] On the other hand, if we could explain this first step then the invariance of talking in both modes when talking of oneself would provide a clue as to why exclusive allegiance to either mode of discourse qua psychologist is so precarious, so prone to flip-flopping. It is always undermined by our theory about ourselves—by our "home theory."

In any case, this threshold analysis sees reflexivity as the culprit in the sense that reflection on humans as objects requires balancing by reflection on humans as subjects. The puzzle, of course, is why we are incapable of doing both at once qua psychologist. This brings me to the second way reflexivity might be the cause of our trouble.

2. Rather than arguing that there is an emotional or cognitive threshold at which exclusive talk in either the subjective or objective mode becomes annoying or unbelievable, one might suggest that psychological theories flip-flop between Person Constructs Reality and Reality Constructs Person models precisely because both are needed, and because psychologists are cognitively incapable of understanding dialectical, multidirectional models. Psychologists try to tell the whole story but are incapable of telling both sides at once, so they alternate their emphases in historical cycles.

One can make such a case without demeaning the relative cognitive capacity of psychologists by correctly noting that nonlinear, nonunidirectional models are conceptually complex entities which are very difficult to understand, let alone apply. It is also true that classical scientific discourse about physical objects has done fairly well, but not as well as most people think, with linear, unidirectional models.

The difficulty with this analysis is that we know in our "home theory," the one we have about ourself, that human interaction with the world is at least bidirectional; so again it is puzzling why we would have conceptual trouble understanding how to apply a nonlinear, multidirectional model to the larger scheme when we seem to do so in our own case. One might point to the weight of scientific tradition here. I am not alone in suggesting this hypothesis. Lewis Petrinovich asks in the May 1979 *American Psychologist* whether psychology has a favored model and goes on to complain that indeed it does in "the linear process model."[26] The linear process model, of course, is deployed by both the Person Constructs Reality and the Reality Constructs Person metaphysics.

In any case, this second analysis sees reflexivity as the cause of psychological paradigm shifts in much the same way as our first analysis. We need to balance reflection on people as reality makers with reflection on people as made by reality and we lack models which allow us to do both at once. And we blame the pervasiveness of the

unidirectional, linear models of traditional science along with the inherent logical complexity of alternative models as the cause of our failure to construct a logic and a vocabulary which does justice to all the sides of human action at once.

3. This last hypothesis strikes me as having the depth and complicatedness to explain the phenomenon in question. However, it strikes me as almost too wild to be true. Fortunately I am not alone in advancing the hypothesis that the history of psychology might be profitably viewed as a story about the psychologies of different historical periods, as a way, if you will, that social psychology gets done over the long haul. The suggestion requires that we recast the belief that the history of psychology consists of a continual alternation of two philosophical models of the person, each of which is inadequate as a theory about the way people really are. It requires that we give up or at least bracket the belief that there is any way people really are, and view the different paradigms as historically entrenched, contextual phenomena which are to be evaluated in terms of their function in their own times, and not in terms of some model of *the* true or adequate psychological theory. Both Kenneth Gergen[27] and Robert I Watson, Sr.[28] have advanced similar suggestions. Gergen, for example, has argued that "theories of social behavior are primarily reflections of contemporary history."[29]

What I have in mind is an analysis of the history of psychology which views psychological theories as serving temporally circumscribed descriptive and/or prescriptive functions but not any sort of atemporal truth function. For example, instead of viewing psychoanalysis as an inadequate account of human action by virtue of its adherence to the Reality Construct Person metaphysic, we view it as a correct historical depiction of the behavior of Viennese Victorians. It is not the ultimately true or adequate psychological theory, but that is not because of its metaphysic, it is because that is not the function of psychological theories.

Bertrand Russell was sympathetic with the hypothesis I am promoting. He said in 1927, when speaking of Thorndike's and Kohler's primate research which had recently taken place in America and Germany respectively, that:

> One may say broadly that all the animals that have been carefully observed have behaved so as to confirm the philosophy in which the observer believed before his observations began. Nay, more, they have all displayed the national characteristics of the observer. Animals studied by Americans rush about frantically, with an incredible display of hustle and pep, and at last achieve the desired result by chance. Animals observed by Germans sit still and think, and at last evolve the solution out of their inner consciousness. To the plain man such as the present writer, this situation is discouraging.[30]

Russell's witty remark, it seems to me, contains more than just a grain of truth. Not only is it plausible to view, for example, Thorndike's descriptions of trial and error learning as an accurate depiction of the spirit of turn-of-the-century America, it is also fair to think of a psychology which sees behavior as full of hustle and pep as recommendatory as well, as prescriptive as well as descriptive. Robert I. Watson, Sr.[31] has suggested that the prescriptive component of psychological theory is invariably underestimated or denied, but that psychologists typically use theory to express appropriate behavior to themselves and to their audience.

The prescriptive component of theory might have either of two relations to the descriptive component. As in the case of Thorndike they might be identical. His theory is not only telling us that Americans do in fact rush around with incredible hustle and pep, but it is also recommending that they continue to do so. Or, at least, this is what a look at the spirit of the time might lead us to think.

On the other hand, the descriptive component might serve as the basis for a counter-prescription. Think, for example, of Sartre's depiction of the psychology of Europe before the War in "Portrait of an Antisemite." People were mere things, manipulated by outside forces, oppressed by their own participation in a psychology of *en-soi*, a Reality Constructs Person model if ever there was one. Sartre's prescription is essentially the proposal of an alternative psychology, the psychology of *pour-soi*, the psychology of self-construction.

The way this third analysis explains the idiosyncratic character of the history of psychology in terms of reflexivity is I think closest to what Buss has in mind when he says that psychology affords people the chance "to reflect upon their objectivity, and subsequently change it in light of previous research findings and new information."[32] The idea is that psychology involves objectifications in linguistic form of the way the subjects are behaving (and/or construing their behavior) in any historical epoch. The objectification can serve the function, beyond its informative function, of helping to entrench the Weltanschauung it depicts, as in the case of Thorndike, or of assisting in the rejection of the Weltanschauung, as in the case of Sartre, where the ugliness of the objectification of self—think of life before psychology as life without a mirror—is sufficient to lead the agents to want to change their appearance.

To recapitulate the analysis thus far: the problem was to offer an explanation of the cyclical alternation of Person Constructs Reality and Reality Constructs Person models in the history of psychology. Both Allan Buss and I think that this alternation exists and that it is peculiar to psychology, or at least to the human sciences. I offered three suggestions as to how reflexivity might be seen as the cause of this flip-flopping. First, there might be some emotional or conceptual threshold which is reached each time a community of psychologists look at human (and, therefore, their own) behavior through the lens of either metaphysic for too long. Reaching the threshold would then result in these psychologists or the next generation of psychologists wearing the opposite lens. The second hypothesis is that there is no logical vocabulary, no metaphysic, available which adequately captures the truth contained in *both* Person Constructs Reality and Reality Constructs Person models. Perhaps this is due to our cognitive incapacity to construct such a vocabulary, or to the weight of traditional scientific models, or perhaps it is simply due to the historical accident that none had yet been constructed. In the second analysis, the only way to offer the true picture of human behavior in the absence of a conceptual model which would allow telling the whole story at once is to tell the different sides of the story every so often. So, in both the first two analyses, we alternately emphasize our objectivity and subjectivity as a vehicle for eventually talking about both sides of ourselves.

The third hypothesis suggests that the flip-flopping occurs because the social and historical sense we have of ourselves flip-flops. On this analysis, psychological talk of humans as subjects who make reality is due to the fact that that is what we are doing or recommending doing at the historical time. When our psychological theories talk of humans as objects made by reality they are depicting or recommending a way of being. In this last analysis, psychology is just a form of social history, a type of social commentary.

Conclusion: The Problem of Progress

In closing, and as promised at the outset, I want to speculate very briefly and unsatisfactorily on the question of progress in psychology, fully aware that the concept of progress itself is in some disrepute among philosophers like Kuhn[33] and Feyerabend.[34] Buss seems to think that a necessary condition for psychology to escape its monotonous

metaphysical two-step involves getting its philosophical act together, and coming up with a genuinely dialectical conceptual scheme. However, if either of my first two suggestions as to why psychology flip-flops between Person Constructs Reality and Reality Constructs Person models is even remotely true, then the prospect of coming up with the right dialectical conceptual scheme, and having it accepted by the greater psychological community is unlikely. In fact individuals like Klaus Riegel,[35] Lewis Petrinovitch,[36] and Richard Lerner[37] have promoted dialectical psychologies with elaborate nonlinear models, but have had trouble being accepted in the mainstream. Whether this is due to the weight of old traditions, or to the difficulty of understanding nonlinear models, or to the inadequacy of these particular conceptual schemes I am not sure.

Nevertheless, even if it is the case that psychologists are inevitably condemned to a process of eternal return, to a perpetual metaphysical two-step with the Person Constructs Reality and Reality Constructs Person models, there is still one classical sense in which psychology might be said to progress overall. This is the Popper-Lakatos[38] sense in which we count theory T2 as progressive over theory T1 if T2 explains everything T1 explains plus something else. Armed with such a criterion, we might be able to plot progress within each metaphysical tradition. For instance, we might claim that the Reality Constructs Person model has progressed from its appearance in Hobbesian psychology to its (re)appearance in Skinnerian psychology because Skinnerian psychology explains everything Hobbesian psychology explains plus provides us with new information about schedules of reinforcement and extinction rates. Or we might claim progress within the Person Constructs Reality tradition from Descartes to Chomsky on grounds that Chomskyan psychology can explain everything Cartesianism can, plus some things about linguistic development which Cartesianism cannot explain. We then weld the two traditions together and claim that psychology has a progressive character overall even though it cannot formulate its metaphysic in a form that it can live with over time.[39]

However, if my third hypothesis about the nature of psychological inquiry is correct, that is, if psychological theory is just a form of social commentary with both a descriptive and prescriptive side, then the whole search for progress is wrongheaded. There are simply better or worse descriptions, more or less accurate renderings of the spirit of a time, more or less hopeful prescriptions for the future. If this is the case then paradigm clashes in psychology do not indicate conflicts over truth, they reflect conflicts in an epoch over who we are and who we are to become.

I will stop here, but not because I have solved any problems. I am well aware of the fact that I have raised many more issues in need of explanation than I have explained. My sense though is that the proper interpretation to give to the nature of psychological inquiry is at least as complicated and confusing as I have painted it. It requires philosophically sensitive historians of science and historically sensitive psychologists and philosophers to give us some coherent sense of what is, in fact, going on in this science.

NOTES

1. Allan R. Buss, "The Structure of Psychological Revolutions," *Journal of the History of the Behavioral Sciences* 14 (1978): 57-64.
2. Ibid., p. 59.
3. Ibid., p. 58.
4. Ibid., p. 59.
5. Dalbir Bindra, *A Theory of Intelligent Behavior* (New York: Wiley, 1976).

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8. E. G. Boring, *A History of Experimental Psychology* (New York: Appleton-Century-Crofts, 1950).

9. Buss, "The Structure of Psychological Revolutions," p. 62.

10. John B. Watson, "Psychology as the Behaviorist Views It," *Psychological Review* 20 (1913): 158-177.

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12. Henryk Misiak and Virginia S. Sexton, *History of Psychology: An Overview* (New York: Grune & Stratton, 1966), p. 329.

13. B. F. Skinner, "Behaviorism at Fifty," in T. W. Wann, *Behaviorism and Phenomenology* (Chicago: University of Chicago Press, 1964).

14. B. F. Skinner, *About Behaviorism* (New York: Knopf, 1974), p. 55.

15. Skinner, "Behaviorism at Fifty," p. 87.

16. B. F. Skinner, "A Lecture 'On Having a Poem' " (1971), in *Cumulative Record*, 3rd ed. (New York: Appleton-Century-Crofts, 1972), p. 355.

17. Buss, "The Structure of Psychological Revolutions," p. 62.

18. Skinner, "A Lecture 'On Having a Poem,' " p. 346.

19. Lawrence Kohlberg, "Moral Stages and Moralization: The Cognitive-Development Approach," in T. Lickona, *Moral Development and Behavior: Theory, Research, and Social Issues* (New York: Holt, Rinehart, & Winston, 1976), p. 48.

20. The roughest edge on the thesis, or perhaps it is simply the sharpest edge, bears the visage of an ultimate philosophical question, determinism versus indeterminism. It is worth suppressing in a footnote, at least for my present purposes, that all psychological theories are, in a strict and ultimate sense, committed to the Reality Constructs Person metaphysic. To prove this one needs only perform a *Gedanken* experiment in which one asks their favorite candidate for a Person Constructs Reality or integrative model, say Piaget, how they explain why a person, or persons, are so good at performing some cognitive or motor task. The answer will always, if one is tenacious, take one to causes outside the person, to training, brain physiology, evolution, and the like. Reality Constructs Person theorists will just take you to these places faster. This is because all psychologists think of human behavior as having causes outside, and other than, the behavior itself—and this is part and parcel of the scientific Weltanschauung. It does not defeat Buss's and my thesis, however, if our thesis is construed as a second order historical-philosophical thesis about where a particular theoretical tradition typically defines the causally relevant boundaries and factors in its accounts of human action, and not as a thesis about ultimate causation. The thesis of ultimate causation, with its net of infinite explanatory regress, falls deftly on all puzzles in the philosophy of science and, therefore, deserves both deference and discharge.

21. Owen J. Flanagan, *B. F. Skinner's Radical Behaviorism: The Adequacy Question*, unpublished doctoral dissertation, Boston University, (1977): and Owen J. Flanagan, "Skinnerian Metaphysics and The Problem of Operationism," *Behaviorism* 8 (1980): 1-13.

22. Richard J. Herrnstein, "The Evolution of Behaviorism," *American Psychologist* 32 (1977): 593-603; and Richard J. Herrnstein, "Doing What Comes Naturally: A Reply to Professor Skinner," *American Psychologist* 32 (1977): 1013-1016.

23. Richard J. Herrnstein, "Acquisition, Generalization, and Discrimination Reversal of A Natural Concept," *Journal of Experimental Psychology: Animal Behavior Processes* 5 (1979): 96-109.

24. The mere fact that the trouble in the history of psychology is philosophical trouble has led many historians and philosophers of science to argue that psychology is a preparadigmatic type of inquiry. I would argue in response that, even as they philosophically flip-flop, psychological models, each in their own time, satisfy the Kuhnian criteria for a paradigm by attracting a group of researchers away from the competition, who then rigidly adhere to the model's way of thinking, and are incapable of processing anomalies. And unlike political and religious models which are characterized by similarly fervent devotion, and exclusion of anomalies, psychological models often lead to significant empirical research within the paradigm. Think, for example, of all the work on schedules of reinforcement generated by Skinner's program, or all the cross-cultural work on language development generated by Chomsky's.

25. If my third hypothesis that the psychology of a time represents the way people think of themselves at that time is true, then it is wrong to think this, wrong, that is, to think that throughout history people deploy both metaphysics in talking about or thinking about their own behavior.

26. Lewis Petrinovitch, "Probabilistic Functionalism: A Conception of Research Method," *American Psychologist* 34 (1979): 373-390.

27. Kenneth Gergen, "Social Psychology As History," *Journal of Personality and Social Psychology* 26 (1973): 309-320.

28. Robert I. Watson, Sr., "The History of Psychology Conceived As Social Psychology of the Past," *Journal of the History of the Behavioral Sciences* 15 (1979): 205-230.

29. Gergen, "Social Psychology As History," p. 309.

30. Bertrand Russell, *An Outline of Philosophy* (New York: Meridian, 1927), p. 32-33.

31. Robert I. Watson, Sr., "The History of Psychology," *passim*.

32. Buss, "The Structure of Psychological Revolutions," p. 59.

33. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).

34. Paul Feyerabend, "Against Method," *Minnesota Studies in Philosophy of Science* 4 (1970).

35. Klaus R. Riegel, "The Dialectics of Human Development," *American Psychologist* 31 (1976): 689-700.

36. Petrinovitch, "Probabilistic Functionalism."

37. Richard M. Lerner, "Nature, Nurture, and Dynamic Interactionism," *Human Development* 21 (1978): 1-20.

38. Karl R. Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge* (New York: Basic Books, 1962); Imre Lakatos and Alan Musgrave, eds., *Criticism and the Growth of Knowledge* (Cambridge: Cambridge University Press, 1970).

39. Allan Janik has suggested to me that the situation I describe has its parallel in economics where there has been progress in microeconomics, while macroeconomics remains conceptually up for grabs. This may or may not have to do with economics' dependence on psychology.