

## Can Cognitive Psychology Offer a Meaningful Account of Meaningful Human Action?

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The cognitive movement which has risen to preeminence in psychology has been interpreted in two contradictory ways: as a significant break from mechanism and behaviorism, and as the most sophisticated brand of the same. This paper examines the philosophical assumptions upon which cognitive psychology rests and argues that it differs from behaviorism chiefly in its vocabulary and its willingness to deal with complex human phenomena. The cognitive approach is not capable of giving an adequate account of meaningful human action because of its grounding in meaningless mechanism. The fundamental starting point of cognitive theory eschews genuine agency and possibility while meaningful human action requires them.

Even a casual review of the current state of theoretical and empirical endeavor in psychology suggests that the so-called "cognitive revolution" has effected a clear and unmistakable change in the discipline. Cognitive psychology has, without question, become the dominant paradigm, replacing behaviorism as the theoretical mainstream.

Various textbooks acknowledge a set of movements and advances which constitute the formal history of cognitive psychology. Credited with giving rise to the new cognitive science area are: Gestalt psychology, the rediscovery of the works of Piaget, the development of sophisticated computers (Neisser, 1967, 1976), the development of information theory, and modern linguistics (Reynolds and Flagg, 1977). Cognitive psychology has claimed (and rightly should be given) credit for rescuing the discipline from the constraints and limiting perspectives previously offered by behaviorism.

Study of the informal history of the cognitive revolution suggests the discipline of psychology has been very much of two minds about the movement. It seems to have attracted adherents for two rather disparate reasons. On the one hand, cognitive psychology has been seen as a more or less humanistic movement, refuting behaviorism's strict external environmental determinism, and allowing us to talk intelligently of intelligent behavior and decision making, attributing causality to the person, or at least to something inside the person. On the other

hand, cognitive psychology has been attractive to many who seem to be in sympathy with the mechanism and strict determinism of behaviorism but who lament its simplistic denial of the internal cognitive world and its reliance on obviously inadequate elementary causal processes. The existence of these two quite divergent views of cognitive psychology has, I believe, contributed to a lack of understanding, or at least a lack of clarity regarding the nature of the cognitive perspective and what it can offer as a theoretical basis for psychology.

The intent of this article is to examine the nature of the alternative, "cognitive" way of accounting for psychological phenomena. I will contend that careful consideration of the theoretical and philosophical grounding of this perspective will show that the difference between cognitive and behavioral psychology is at best one of degree, and not one which rests on any important metaphysical disparity. Most of the difference is superficial, arising from the new psychological language the cognitive movement has engendered, and does not penetrate to the level of metaphysics. It should be emphasized, however, that differences in the language accounts offered by various psychological movements are substantial and important because the language in which psychology is done is crucial in determining what psychology will take as its subject matter, and what it will find as a result of its study. Cognitive psychology does offer a unique explanatory language; however, since cognitive psychology is not a radical—in the sense of going to the root of the matter—departure from behaviorism, it can be shown to be, like behaviorism—and for the same reasons—unsatisfactory as a grounds for the investigation of meaningful human action, and thus inadequate to the task psychology has set for itself (especially for telic and humanistic psychologists for whom meaningfulness is of primary concern). The cognitive account of human action cannot yield understanding of the meaningful human world.

### **The Nature of Meaningful Actions**

If this contention regarding the fundamental inadequacy of cognitive psychology is to find support it is important to be clear in our understanding of just what a "meaningful action" is. As a beginning point, we might refer to our common conversational language; a meaningful action is one that means something to the actor and the community which provide context for it. More generally, it is an action which has shared meaning in a group or community—it makes a difference to us. Borrowing from the line of analysis presented by Harré (1984), Harré, Clarke, and De Carlo (1985) and Sabini and Silver (1982), a meaningful action always exists within a shared contextual framework of variants and other possibilities. It is thus one for which our language must have a term in order to distinguish it from other actions. In fact, it is in such intentional language distinctions, which always distinguish an act from others by its context and teleological aim, that the meaning of the action consists.

The meaning of the action (or of any concept) resides in its possibilities and alternatives, its meaningful network of ends and distinctions, and not in its referent nor in the relation of correspondence between concept and reference (Harré, Clarke, and De Carlo, 1985, pp. 101-102). This notion of meaning as open-endedness, as being rooted in intentional involvement, is at the heart of much of the work in the hermeneutical tradition as well. Gadamer (1981, p. 44) suggests that the meaning of a statement "... can be disclosed only if one traces its history of motivation and looks ahead to its implications." Rychlak (1976, 1977, 1981) has written extensively in a similar vein about the importance of "dialectical" reasoning and dialectical meaning in understanding human behavior and in accounting for such meaningful behaviors as acts of free will. Dialectical meanings are intrinsically expressions of possibility.

An action is meaningful to us then, because we understand it in terms of its possibilities. An act of love is a meaningful act; I can distinguish it from hate, or resentment or any number of other acts that are also possible in a given circumstance. An altruistic act is meaningful (a) to the extent that I understand it as it is distinct from egoism or ingratiating, etc., and (b) to the extent that it need not happen—the act might be different, or might not be done at all. Central to all meaningful action is an actor who must likewise be able to see and understand possibility, and further, must have genuine possibilities open to him or her in these very actions. Meaning is in this manner integrally bound up with human freedom. So-called volitional or "telic" acts are by their nature meaningful, and no act can be meaningful in the sense intended here if it is not an act of human freedom. The alternative to meaningfulness is simple necessity. Any account of human action which is based on simple necessity cannot be a meaningful account; a meaningful account must preserve and contribute to the understanding of possibility.

I will argue that, contrary to the thrust and presumption of much of psychology, this meaningfulness need not be sacrificed to science nor to sophistication. The question raised here is whether the cognitive account of human action is a meaningful account, or expressed in the other way, whether cognitive science can deal adequately with meaningful behavior.

### **The Nature of the Cognitive Account**

Cognitive psychology exists primarily as an impressive body of empirical observations, many of these of such a nature that it is very difficult for other approaches, notably behaviorism, to account for them adequately. Great advances have been made in areas of language, memory, and perception. These observations are held together by a rather loose set of theoretical propositions—more like a perspective or an approach than a theory. It is the nature of these propositions that needs to be examined.

It is in the realm of empirical studies of mental capacities that cognitive psychology has made its greatest contributions. The field has revealed much concerning how information can be measured, how information is (or is not) used by a person in certain proscribed settings, and how individuals might be constrained in their learning and thought by time, by capacity, or by aspects of the environment. An examination of the cognitive research literature leaves one impressed by the creativity, sophistication, and even the cleverness of the research. In this respect the cognitive perspective is above reproach—even from humanists.

As an example of this sort of research we might refer to the work of Sperling (1960) and similar findings by Averbach and Coriell (1961) on sensory memory. In earlier research an array of letters had been very briefly presented to subjects (for example, for 50 milliseconds); subjects were then asked to recall as much of the array as they could. No matter how many letters were actually presented, subjects could only recall four or five utilizing this “whole report procedure.” Sperling then devised a “partial report procedure” wherein subjects were asked to recall only a single row or column in the array. Subjects were cued as to which row or column they would be asked to recall (by a tone in Sperling’s work, and by a visual bar in the study of Averbach and Coriell). Recall was virtually perfect no matter which of the rows or columns were cued, indicating that all of the information in the array was available, but that it could not all be reported in the whole report procedure. Additionally it was found that the cue could follow the termination of the array by as much as 300 milliseconds with no decrement in performance.

This research led to the postulation of a “sensory memory” in which much information could be held, but only briefly while something else was being done to it. The explanation is rather mechanistic, but the postulation of the construct—sensory memory—is tied rather closely to the observation it is designed to explain. To propose the existence of a structure such as sensory memory may seem like a rather harmless bit of speculation about our cognitive capacity. We see here, however, the easy movement—evident in cognitive modeling—from observation to the postulation of some function that accounts for the observation, and finally, to the postulation of a structure to account for the function. Unless it is remembered that the meaning and indeed the existence of the structure is entirely restricted to the observation itself, the postulation of structure can easily lead to unwarranted reification of the functional and structural components of the model.

We should note that the behavior investigated in these studies—the recall of letters from a tachistoscopically presented array—is not a highly meaningful behavior. There is little or no social significance attached to it. It may well have some purely practical or technological relevance, but most people would not really *care* about it. Cognitive psychology has been very good at tracing the flow of information and discovering how information might be remembered and

used, and how cognition is limited by time and capacity under certain imposed constraints. The elaboration of these practical limitations on cognition is still the primary strength of the field.

A fair amount of work in cognitive psychology, especially in the 1960s and 1970s, was devoted to the formulation of larger, more complete models of human cognition which could account for our more complex human actions, including meaningful responses to our environment and socially relevant behaviors. An examination of a few of these models reveals three important characteristics of cognitive psychological accounts of human action. First, cognitivists have adopted or let stand the behavioristic metaphor of action. Human action is seen to be a sequence of occurrences beginning with things called "stimuli" and terminating with things called "responses" to those stimuli. There has been very little if any modification of this basic atomistic conception of what a human action is. Second, because of the S-R metaphor, the best that cognitive psychology has offered is a mediational model wherein many sophisticated processes and processors are interposed between the stimulus and the response which affect the response. Third, the act itself, and certainly any idiosyncrasy in it, is attributed to the nature or action of some extraordinary "box" or processor which must be seen to function very much like a complete and entire person. While some effort has gone into the delineation of these "control processes" (e.g., Shiffrin and Atkinson, 1969), they are from a theoretical point of view, and for the most part, left unexplored; their function is established as a kind of post hoc explanation for experimental observations, but their ontological status is left unexamined (here again we slide easily from observation through function to structure). These processes function very much like traditional homunculi, requiring all the characteristics of the person him- or herself in order to do their job adequately.

The third characteristic mentioned above can be observed in four exemplary cognitive models (Broadbent, 1958; Kahneman, 1973; Norman, 1968; Shiffrin and Atkinson, 1969). In an early model by Broadbent (1958), the flow of information is traced through the cognitive system. The model suggests that responses to stimuli are mediated by the "store of conditional probabilities of past events." Conditional probabilities of past events must surely be the results of the operation of the classical associationist laws of similarity and contiguity, the same explanatory laws on which all behavioristic theory rests. This model, at the level of response selection is entirely compatible with traditional behaviorism and really offers no theoretical advance of note. It simply gives due respect to the complexity of human behavior which traditional behaviorism did not.

Kahneman (1973) proposed a model of attention which in order to account for the actual production of complex cognitions, requires rather sophisticated functions, such as "enduring dispositions," "momentary intentions," and the "evaluation of demands on capacity." These are functions which seem more to describe the activities of whole people involved in the world, rather than some

isolable mechanistic property of whole people. Although observation of human attention seems to require functions such as these, it is, at this point, still very optimistic to presume that they can ever be adequately represented structurally. The movement from observation to structure is a rather precarious one.

In the model of cognition proposed by Norman (1968) we observe the postulated operation of a very intelligent "box" whose function is to impose on the other cognitive processes considerations of "pertinence." I would argue that decisions regarding pertinence and its proper imposition can only be reasonably made by an entity possessing all possible concerns, characteristics, and projects of real human beings. The system must contain then either the real and entire person, or an extraordinary homunculus. Again the slide—from observation of what people do cognitively to what structure must be presumed in order to account for what they do—leads to conceptual problems.

In the model of cognition proposed by Shiffrin and Atkinson (1969) a greater attempt is made to clarify the nature of the same type of "control processes" postulated in the other models. These processes, for example, "analyze stimuli," "alter biases of sensory channels," "operate heuristically on stored information," and "set decision criteria." Such "control" processes seem sufficiently complex, however, to require an additional set of processes to govern their correct implementation and we soon have a potential for an infinite regress of processes. The processes also seem sufficiently relevant to human life that they could not be effectively imposed, in the production of a meaningful act, by any entity without the history, intentions, and wisdom of a real person.

Although cognitive psychologists have in recent years become more restrained in their model-building, preferring to work on smaller chunks of the problem, it does not appear that they have made substantive changes in the received view of human action. These earlier models are useful to illustrate the basic question for cognitive psychology if it is to offer an account of meaningful human action. This question is framed in terms of two alternatives: (1) if the "box" or "control processor" is purely a metaphor for the person, then we simply have a homunculus in the machine and cognitive psychology has very little to say about meaningful human actions such as choice, love, altruism, and the like; the cognitive answer becomes, "the person acts, based on information;" (2) if the "box" or "control processor" really is a mechanism, we have a serious problem in dealing with meaningful actions because meaning becomes lost in necessity. Under this alternative, cognitive psychology contributes nothing fundamentally different from behaviorism or other mechanistic accounts.

The latter alternative is, I believe, the dominant one in the cognitive movement. Cognitive psychologists, for the most part, do not want mentalistic homunculi to have the determining role in the rational system any more than the behaviorist does. In order to support the accuracy of this characterization of cognitive psychology it will be necessary to examine its underlying theoretical and philosophical assumptions. The purpose of the examination is two-fold: first, to

be clear about the mechanistic or non-mechanistic assumptions in order to be clear about the nature of the cognitive account of human action; and second, given these assumptions, to be clear about whether a meaningful account of meaningful human action is indeed possible.

### **The Nature of the Cognitive Account of Human Action**

In the philosophical defense of cognitivism, two distinguishable but interrelated traditions are commonly invoked. The first is structuralism. This philosophical justification is perhaps most clearly articulated in the Piagetian tradition. Cognitive psychology is a manifestation of philosophical structuralism (Williams, 1978), and as such it shares the characteristics of structuralist systems (see DeGeorge and DeGeorge, 1972; Gardner, 1973; Lane, 1970).

The principle attribute of a structuralist system is that structure is necessary in any account of, but independent of, human consciousness. The meaning of human action is, therefore, given in terms of a structural system which is simply necessary, based on the interaction of hard-wired potentials and environmental conditions. Meaningful human action of the sort being discussed here, based on possibility rather than necessity, is lost from such a system.

It would take another substantial article to make the arguments which the refutation of structuralism requires. The purpose of this treatment, however, is to explore the other philosophical defense of cognitivism which comes more directly from the Anglo-American tradition. There have not been many philosophical treatments of cognitive psychology by those who are primarily identified as psychologists. Here I will deal with the treatments offered by Mischel (1975, 1977) and Dennett (1978). These treatments are careful and complete, and influential in the field. In the course of an examination of the philosophical assumptions on which cognitive psychology is built, I will describe the problems it encounters in accounting for meaningful human action, articulate the humanistic concern, and argue that the cognitive account of meaningful human action is thoroughly mechanistic, not meaningful, and therefore inadequate.

#### *The Language of Intention*

One of the widely recognized weaknesses of behaviorism is its unwillingness or inability to account for complex mental events. It also eschews mentalistic terms in its explanations. Cognitive psychology, in contrast, has legitimized the products and processes of the mind as objects of study and as explanations of behavior. Cognitive psychologists are, for the most part, willing to talk of such things as beliefs, desires, and even intentions and goals, and to give them a determining role in our behaviors.

Dennett (1978, p. 3), for example, speaks of an "intentional system" as any system whose behavior, at least part of the time, can be explained and predicted

by ascribing intentions, beliefs, desires, etc., to it. It does not matter what the system is made of—flesh and blood, or microchips—rather, it matters which language best allows us to explain and predict. Mischel (1975, p. 195) makes a similar point suggesting that computer behavior can legitimately be explained in intentional terms. The example which runs throughout Dennett's book is that of a chess-playing computer. The best strategy for playing chess against the computer would be to treat it and react to it as a rational and even a teleological system.

Cognitive theorists usually will quickly point out that we need not assume that the system really embodies these mental states, nor even that such states really exist. Intentionality is a feature of the language used to optimize predictability; it is given no ontological status. Explaining behavior in terms of intentionality, desires, and beliefs is largely a matter of taking out what Dennett refers to as "intelligence loans" (Dennett, 1978, p. 12) to help us predict and explain, and which we will be obliged to repay later when the full mechanistic story is uncovered. We can, in effect, speak *as if* an organism possesses desires and intentions, and doing so will probably improve our prediction for sufficiently complex organisms and systems. Dennett (1978, p. 9) refers to this way of theorizing as a sort of "conceptually innocent anthropomorphizing."

#### *The Assumption of Rationality*

It is implicit in most work in cognitive psychology, and explicit for Dennett (1978, p. 11) that the organism which can be spoken of as having beliefs is rational in that if it believes  $p$ ,  $q$ , and  $r$ , it will believe what follows from  $p$ ,  $q$ , and  $r$ . Otherwise, the organism might do something "utterly stupid," and we will have no predictive advantage from our ascriptions of rationality. Intentional systems—human beings included—are thus assumed to follow the rules of logic.

#### *The Procedure of Explanation*

The fundamental question for Dennett, and I believe for cognitive psychology in general, is "What is the nature of intelligence (our capacity for intelligent behavior)?" The fundamental task is to explain this behavior. Dennett insists that the explanation cannot be given in terms of intelligence itself, such as in an appeal to a Creator, or an homunculus, or even to mental states themselves such as belief or desire. Such explanations simply invoke what they are meant to explain, thus begging the question, and offering really no explanation at all. All of the mental states which cognitive psychology has legitimized in psychological explanations are thus primarily "intelligence loans." We borrow them to aid in interacting with intentional systems (like human beings), to aid in predicting,



and in communicating. Ultimately, they will be paid back in mechanistic coin. Dennett suggests

... Skinner is right also to look for purely mechanistic regularities in the activities of his subjects, but there is little reason to suppose they will be on the surface in gross behavior. . . . Rather we will find whatever mechanistic regularities there are in the functioning of internal systems whose design approaches the optimal (relative to some ends). In seeking knowledge of internal design our most promising tactic is to take out intelligence-loans, endow peripheral and internal events with content and then look for mechanisms that will function appropriately with such "messages" so that we may pay back the loans. (Dennett, 1978, p. 15)

### *The Fundamental Type of Explanation*

It is clear in Dennett's work, and I believe this accurately characterizes the work of most cognitive psychologists, and certainly the cognitive model itself, that the only acceptable explanation for intelligence that does not beg the question is a mechanistic one. The only legitimate account of intelligent human action will be one form or another of what has been called "The Law of Effect;" the same principle which, in behaviorism, underlies any concept of reinforcement (Dennett, 1978, p. 72).

Dennett ties the generalized Law of Effect to the principle of natural selection which he considers to be the most sophisticated and adequate explanation of behavior available. Natural selection has very successfully explained a certain type of intelligence, found in the natural world—the intelligence that is manifest in "tropistic" and "instinctual" behavioral control.

We see the mechanical bias in this line of argument as we note that the power of mechanistic explanation is mechanism itself, because only such mechanism—according to Dennett—does not "beg the question" of the nature of intelligence. Dennett (1978, p. 73) acknowledges further that such mechanistic principles are meaningless; they must be "utterly independent of 'meaning' or 'purpose.'" The proper explanation of intelligent behavior

... assumes a world that is *absurd* in the existentialist's sense of the term: not ludicrous but pointless, and this assumption is a necessary condition of any non-question-begging account of *purpose*. (Dennett, 1978, p. 73)

It seems clear from the foregoing treatment of Dennett's and Mischel's works, that mechanism is the underlying philosophical basis of cognitive science. This is the foundation it shares with behaviorism. The concepts of intention, belief and desire, are clearly not to be taken seriously, except as intelligence-loans. This gives them a *type* of epiphenomenal status; they are real enough, but their reality is grounded in a very superficial and abstract language of description, not in the ontology of the human being. These telic concepts are taken to be the necessary products of the cognitive system itself; but they are simply necessary in the sense that brute matter is simply necessary. It simply is what it is,

necessitated by its very nature manifest in abstract law or metaphysical categories. The simply necessary can have no meaning (see Faulconer and Williams, 1985).

The nature of our cognitive apparatus is explained by Mischel in these terms:

We can therefore, look to the physical sciences for an explanation of the development and material embodiment of such a mental apparatus. In other words, the mental apparatus is not a nonphysical addition to the organism, but consists of those species-specific mental, or cognitive, powers which organisms have in virtue of their biological nature . . . But, the cognitive powers . . . are not "occult," because we presume that they will some day be explained from the point of view of extensional, physical theory in a way that may make no reference to agents and their powers. (Mischel, 1975, p. 197)

A similar hope is expressed by Dennett:

If we are to have an adequate *analysis* of creativity, invention, intelligence, it must be one in which intelligence is analyzed into something none of whose parts is intelligence, and at that level of analysis, of course, no "self" worth identifying can survive. (Dennett, 1978, p. 89)

### Can Cognitive Psychology Offer a Meaningful Account of Meaningful Behavior?

What does so-called cognitive science have to offer psychology? I contend that it can not, and does not offer an explanatory scheme that is different enough from that offered by behaviorism to remedy those inadequacies in the behavioristic account which fomented the cognitive movement. The cognitive account is based, either on structuralism or naturalistic mechanism. Cognitivism is more sophisticated than behaviorism, less restrictive, and probably more fun, but in terms of an understanding of human beings and their most important and meaningful behaviors, it pays new debts in old coin. It is important for psychologists—and many (e.g., Rychlak, 1975, 1977) have tried to stress this for a number of years—to realize that the language of cognitive psychology seduces us into thinking that it is more humanistic and less deterministic and mechanistic than it truly is. For some, pervasive mechanism will be cognitivism's chief virtue; for others, it will be its central problem.

It would require more space than is available here to provide a complete refutation of the reductive mechanistic argument that cognitivism makes. Space will, however, permit brief analysis of the sources of the inadequacy of the cognitive account, particularly as they impact on the meaningfulness of human actions and of the account itself.

#### *The Loss of Meaning*

The cognitive account loses the meaning of human actions. As Dennett expresses it, the appropriate explanatory principle for intelligent action must be "pointless" and "utterly independent of meaning." If we assume human behavior to be really meaningful, on the cognitive account that meaning must necessarily

come from nothing. This is the intellectual form of "creation *ex nihilo*." The other alternative is that human actions do not really have meaning after all. Meaning itself in this case becomes illusory. Either way, as seen from the cognitive perspective, it is difficult to claim that human actions really mean anything.

In any mechanistic system, whatever principles are taken to be the basis of explanation are simply necessary, as the natural world is simply necessary. We do not ask, for example, why the law of gravity exists, nor what it means. We do not ask what an atom means. Such things are simply the necessary manifestations of the atemporal and necessary categories or principles which are presumed to be at the core of reality. All questions of meaning double back on themselves. The answer is always a description of observed properties, but the properties are what give rise to the questions in the first place.

What exists as simply necessary does not exist in terms of possibility, and therefore has little meaningfulness in the human world. To ask what an action means, would be like asking "What does a stone mean (Faulconer and Williams, 1985)?" We, as meaning endowing organisms might endow such a referent with meaningfulness, and our use of language does this necessarily. But if our meaning endowing capacity itself is a "simply necessary" mechanism, there is no possibility in the very meanings we might give, and no real meaning—just illusion.

In an explanatory system built on mechanistic necessity, human qualities such as freedom, belief, or desire become merely aspects of the language of description and heuristic aids to prediction. A human being can be spoken of in terms of these qualities, but we can have no confidence in the ontological status of the qualities. The meaning of these human terms on the level of descriptive language is very different from what it is at the level of ontology. This change in meaning is described by sociolinguistics as "relexicalization." It involves "using a term with a set of ontological presumptions radically different from its transparent use" (Harré, 1984, pp. 17-18). This relexicalization endows the terms of cognitive psychology with thing-like (necessary) status.

One question of major importance to the argument presented here is whether this loss of meaning is the necessary cost of arriving at scientific or "real" truth about ourselves. I contend that it is possible to have a psychology which does not sacrifice the meaning of human action. Much of the work of Rychlak and others would support this contention. The mechanistic ground is not the only firm one for psychology.

### *Begging the Question*

Dennett remains adamant that the *only* type of explanation that will not beg the question "What is intelligence?" is a mechanistic/biological one. I suggest that whether or not one's position is flawed by question begging depends

precisely on what question is being asked. Built into Dennett's question, and into cognitive accounts, are the criteria for what sort of answer will be accepted. Dennett is demanding already in his asking of the question that an acceptable answer will be mechanistic and reductive, this because of his grounding in a particular metaphysic—the metaphysic of things (Faulconer and Williams, 1985), or what Rychlak (1977) has called the Lockean Model. Such is not a necessary view of the world, and of what constitutes evidence—only one possible position. It merely seems to be necessary because of the sort of question the cognitivist asks, and what is assumed while asking it.

If we were to begin with a different question, being more careful not to allow our presuppositions to take on the status of necessity, we might very well end up with a psychology which is not mechanistic, and yet we would not be begging the question. It is not a logical fallacy to beg someone else's question, we need only worry about our own. We might begin, for example, with Heidegger's (1959) question: "Why is there something (*essents*) instead of nothing?" This question leads Heidegger explicitly away from mechanism, and I do not think it is a less basic nor a less important question than Dennett's. Rychlak (1977) has formulated a consistent and predictive theory of human learning and behavior without ending up in mechanism, because his question is different, and his grounding is different. At this point, in the absence (and it may be a permanent absence) of the coin of surety in the mechanistic account with which to pay one's intelligence loans, mechanistic cognitive psychology also begs the question because it must assume what it undertakes to prove, i.e., the existence of explanatory mechanisms themselves. To claim that all other accounts beg the question is, at present, hubris rather than science.

Can cognitive psychology in its prominent, mechanistic form offer a meaningful account of meaningful human action? I have argued in this article that it cannot, that by its very nature it is precluded from doing so. Meaningful action demands possibility rather than necessity, and it demands a telic being, one for whom the world is given in terms of possibility. Both of these are obviated by the cognitive model. Alternatively, I will suggest that the meaningfulness of human actions can and should be taken seriously. Meaningfulness must be the starting point of our psychology rather than, as current cognitive science would have it, a mere side effect of our linguistic activity.

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