

## Questions Posed by Teleology for Cognitive Psychology; Introduction and Comments

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A series of articles is introduced which question the prevailing assumption that cognitive psychology has introduced a new paradigm for the study of human behavior. The proposition is forwarded that only a teleological psychology, grounded in empirical studies of the dialectical processes of cognition, can legitimately make such a claim. This argument is furthered by the ensuing articles and examples of experimental studies of dialectical cognitive functioning.

Modern cognitive psychology has been hailed by some of its proponents for its success in introducing a new paradigm to the field (Reynolds and Flagg, 1983; Segal and Lachman, 1972). The following four articles dispute that claim. Expanded and refined from papers delivered as a symposium at the convention of the American Psychological Association, they offer a bold critique of the existing postulates of cognitive psychology. More positively, they also suggest, and illustrate, a way out of the corner into which, according to this view, cognitive psychologists have painted themselves.

Let us begin with the critique. It is stated well by Professor Rychlak in the lead article. While it is true that cognitive psychology addresses itself to the empirical study of the processes and structures of human consciousness, does cognitivism really represent that radical a departure from an exclusively experimental analysis of behavior? This previous paradigm assumed and sought for a direct causal link between present behavior and the previous history of environmental reinforcement. That link is now depicted by the cognitivists as existing more often between present behavior and cognitive events such as expectations, attributions, personal constructs, cognitive schemata, learned strategies, and the like.

However—and here is the rub—these cognitive phenomena are, in turn, seen as a direct product or effect of previous environmental input. The real paradigm here is one of linear, direct causality (efficient causality, to use the term favored by Rychlak) between antecedent events and present consequences.

There remains a strict, mechanical determinism. Mind is studied, to be sure, but as the "tabula rasa" of the early associationists, inscribed by the experiences of the past. This is merely behaviorism once removed.

This state of affairs might be no more than disappointing, if that were all. One could simply ask, "So what?" and go on to develop the cognitive program, ignoring the claims of a fresh new paradigm for psychology. It is the contention of the present authors, however, that the old paradigm is inadequate. This direct, linear, demonstrative course can account for some, but by no means all of our uniquely human experiences of cognition and action. By argument and demonstration, our authors attack this model on several fronts, and from both the "input" and "output" ends.

What is the alternative, or "way out" of this treadmill? The necessary corrective, according to this group of authors, is to be found in a return to the humanistic, commonsense view of human agency; men and women as telic organisms, purposeful in their activities, goal-directed and goal-directing. To Rychlak, this means re-introducing the Aristotelian notion of final causality. Williams avoids using that particular philosophical framework, favoring instead a more phenomenological language: human agents as centers of "intentionality," subjects as "intending" objects in their phenomenal world.

However the semantics are resolved, the issue remains the same. Subjective or cognitive "inputs" to behavior are not always determined by past experience alone. There are "subject-contributed" variables which must be taken into account that are wholly or partially independent of previous experience, such as volition or the process of dialectical consciousness to be described below.

In answer to the frequently voiced objection that final causality or intentionality implies the addition of new energy into a system, it should be noted that human organisms as active agents or centers of intentionality function by *directing existing energies* toward chosen goals (including, of course, those energies available to the agent as an energy system itself). No violation of the Laws of Thermodynamics is involved.

A clear illustration of this directional phenomenon is given by John Weakland, the family systems and communications theorist, in his portrayal of the command aspect of human language. He states that "unlike physical influence, in which a passive object is moved by and in proportion to the magnitude of an external force, communicational influence operates by activating and directing the energy of the receiver of a message. Therefore, small signals may easily have large effects . . ." (Weakland, 1976, p. 117). The uttered command "Charge!" requires very little physical energy. Its "effects" can in no way be explained by the amount of energy involved in producing the utterance. It does, however, mobilize enormous existing energies toward a goal (e.g., overpowering opposing forces) which, when attained, may change the entire course of history.

The actual application of the physical forces involved constitutes the efficient cause of any such historical change. The final cause exists in the minds of the

protagonists as reasons for unleashing such forces, and "merely" directs the mobilization of existing energies toward the attainment of their purposes.

The restoration of this "teleological" or "intentional" aspect of human cognition and behavior does indeed constitute a new paradigm, a more humanistic, anti-mechanistic approach. But our authors, in offering this alternative, carry it a step further. Professor Rychlak, years ago, had sensed the inadequacy of vague appeals to the purposeful, goal-directed nature of human activity that marked the efforts of earlier humanistic psychologists. His contribution, then as now, lay in focusing on the long-overlooked phenomenon of *dialectical cognition*, a property of human consciousness that exists alongside the *demonstrative* aspect embodied in the computer analogies employed in cognitive psychology.

Awareness of this phenomenon can be traced back as far as Socrates and the classical Greek thinkers, Plato and Aristotle; and to all neo-Platonic and neo-Aristotelian philosophers as well. It occurs very prominently in the thought of Kant and Hegel. It was, however, largely overlooked by the thinkers who were to have a major impact on the philosophy of science that undergirds modern psychological theorizing. These were the British associationists and empiricists, who, following John Locke, depicted the human mind as a blank slate, a passive recipient of experience, with little or no activity proper to itself.

The nature of dialectical cognition is the focus of much that follows in the ensuing articles and will not be belabored here. For our present purposes we need only note that those who stress it ascribe to human consciousness a type of process or activity that issues from the mind itself, innately, independent of inputs from prior experience. We have, as the ancients taught us, an *active* intellect as well as a passive one. We do not just respond to reality in a passive, recipient mode. We actively confront it, construe it in different ways, play with alternative possibilities, analogize, and in the extreme case, even entertain completely opposite premises from those that sensory experience seems to force upon us. Demonstrative cognition is used primarily to put these alternate possibilities to the test.

Starting from the given that dialectical cognition exists, it becomes immediately clear that the human mind must *choose* among the alternatives it generates, and pursue in thought and action the consequences of the decisions it makes. The alternatives chosen are the "reasons for the sake of which" we choose to act. They set the directions we intend to take. It is this process that marks us as innately telic organisms. And so it is in the phenomenon of dialectical cognition that several of these authors anchor the teleological activity of the human organism.

This is a shrewd move, though not the only possible one (cf. Tateson, [1982] for an approach based on the phenomenon of reflexive consciousness). It has, moreover, the added advantage of suggesting an entirely new program of empirical research, a program to investigate a cognitive process not only parallel, but antecedent to the demonstrative, linear kinds of processes currently being

studied. Such a program had already been inaugurated by Professor Rychlak and his associates under the rubric of Logical Learning Theory (Rychlak, 1977). His more recent attempts to tackle the dialectical process itself are recounted in the lead article of this series. The final article, by Lamiell and Durbeck, extends the implications of dialectical cognition to an empirical study of cognitive prototypes in what approaches the elusive ideal of an "experimentum crucis." This is an exciting development displaying, as it does, a cogent response to the oft-repeated call for a scientifically rigorous humanistic psychology (Child, 1973; Howard, 1986; Rychlak, 1977; Tateson, 1982).

The burden of Professor Rychlak's article has already been indicated throughout this introduction. After giving a brief account of the historical fate of the role of dialectical cognition in Western thought, he posits the dialectical process as grounding the teleological nature of much human activity. Rychlak's article ends with a summary of the empirical program fostered by his Logical Learning Theory, including the more recent attempts to study the dialectical process itself. (In the area of psychopathology, oppositional disorders in childhood and passive-aggressive personality disorders in adulthood suggest themselves to me as extremes worth studying for further validation of dialectical process.)

Brent Slife next examines the so-called "input" end of cognitive processing, with special emphasis on the construct of *metacognition*. He points up quite graphically the potential problem of an infinite regress implicit in current explanations of *executive functions* and *feedback loops*, and shows how an understanding of dialectical cognition, with its teleological implications, can help theorists avoid that particular trap. His description of the process of dialectical reasoning as not just generating polar opposites to given input from the environment, but other possible alternatives as well, is an interesting addition to that construct as it is usually presented. It suggests the possibility of anchoring the mysterious property of the reflexivity of human consciousness, our ability to be aware of our awareness, in more observable phenomena.

Richard Williams focuses our attention on the output, action end of human cognition. While giving credit where credit is due to modern cognitive psychology, he points up clearly the source of humanistic unease: the substitution of an SOR mediational model for an SR one to explain human action. By filling the "black box" with previously reinforced contents, we merely push the linear, efficient causes of behavior back to a more remote past. Cognitive behavior modification is the current practical application of this approach, and it is admittedly a useful contribution. Again, however, dialectical processes are left out of the picture. How they can be brought in again is an intriguing question to which Williams addresses himself.

His analysis of the "intelligence loans" advocated by Dennett and Mischel I find compelling. Williams underlines the logical consequence of their use of such "intelligence loans:" meaning itself is rendered ultimately meaningless, a mere epiphenomenon of neural activity. If this be so, what then is the

meaningfulness of cognitive psychology itself, or any human endeavor in the area of meaningful thought? Certainly this seems to catch modern cognitive psychology on the horns of a dilemma.

Finally, the article by James Lamiell and Patricia Durbeck gives us an excellent illustration of a rigorous empirical test of an hypothesis generated from humanistic theory. Emphasizing once more the poverty of an input-output metaphor of human cognitive functioning, the authors demonstrate quite forcefully the superiority of a model based on the premise of dialectical reasoning in the generation of cognitive prototypes. Their methodology is creative and unique. And their work provides a further illustration of the application of a truly *new* paradigm to the field of cognitive psychology.

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