

Perspectives on Meaning

So let us return to the question of how to construct a mental science around the concept of meaning and the processes by which meanings are created and negotiated within a community.

—Jerome Bruner, 1990

BRUNER'S CALL FOR constructing a mental science around the concept of meaning implies two central ideas: that meaning is crucial in understanding how human minds "work," and that meanings are created by communities and not only by individuals. These are powerful suggestions that point toward a new foundation for developmental cognitive psychology. Bruner was of course one of the pioneers of modern cognitive science and a major contributor to studies of infancy and language acquisition from the 1960s through the 1990s. In the work quoted above he also notes that contemporary cognitive science has left "unexplained and somewhat obscured the very large issues that inspired the cognitive revolution" (p. 10). Many of those issues involve the social and cultural bases of cognition, toward which much of Bruner's own work has been devoted.

In this chapter I begin by noting the failings of cognitive science in the eyes of its critics. I then consider some of the roots of a different, more pragmatic and cultural-theoretical approach, connecting those strands to contemporary work, evolutionary, developmental, and cultural, with an emphasis on the systems approaches to theories in developmental psychology.

How Cognitive Science Missed the Meaning

While Bruner, like many others, embraced cognitive psychology at its outset, his expression of disenchantment reflects the sense that its ini-

tial promise of uncovering the “thinking machine” behind human activity has been betrayed by its strict adherence to the computational models of mechanics and operations. From its beginning in the 1950s, cognitive scientists adopted the model of the digital computer, along with information theory and theories of information processing that take “inputs” and produce “outputs” through mechanical operations. Both computation and information are meaning neutral, and deliberately so. With this model, the processor passes information from one state to another, but it cannot determine what is worth processing. Meaning must therefore be imposed on the basic model from outside; it cannot be derived from it.

The computational model is suited to the “solipsistic mind” (Fodor, 1981), that is, the mind as a unit to be studied independent of its context in the body or its situation in the world. The underlying assumption of cognitive theory has always been that of a real world of preidentified objects, properties, and situations, independent of any individual’s specific point of view. This assumption supports the belief in the correspondence between the real world and internal universal concepts. The ideal research goal in this paradigm is the discovery of general operations that apply to any problem.

This model of cognition is flawed, however, and especially so when it is applied to the problems of cognitive development (see Clark, 1997; Hutchins, 1996, for general critiques). The computer model is not suited to natural cognition in a number of ways: its assumption of universals does not take into account different perspectives and positions with respect to perceptions and concepts of things in the world; it leaves meaning and content outside its neutral operations, to be added on; it does not allow for the influence of social and cultural conditions on its operations, nor does it take account of embodiment. Moreover, the computer model is a “top-down” process requiring the a priori stipulation of rules and representations, but work in robotics has demonstrated that knowledge of the environment can be assembled in a “bottom-up” process through action in the environment. Much of human cognition takes place in terms of social problem solving, where shared or situated knowledge processes are in play rather than individual rule following.

The “closed mind” view is often defended on methodological grounds by those who argue that to determine the parameters within

which the mind operates, it is necessary to strongly constrain sources of variability. But in the end the variability that appears in the world and in the mind is not explained, it is simply ignored. The most serious problem, though, is that this model lies outside the natural world; there is no explanation of its biological evolution in the form of symbolic representations (Bickhard, 2002) or computations (Hendriks-Jansen, 1996), and there is no explanation of its development. Computers do not grow or change, but children do. For all of these reasons the computer model is particularly ill suited to developmental purposes, however well it has served research to date and continues to do so, now enriched with neurocognitive imaging techniques.

Analysis of the psychological and sociological reasons for relying on computational cognitive science models of cognitive development, as well as its theoretical appeal, would be a worthwhile project, but one I cannot undertake here. These developmental issues have been addressed insightfully by Bickhard (1987, 2002) and by Hendriks-Jansen (1996), and from a more general perspective by Clark (1997) and Hutchins (1996). I will return briefly to the developmental implications at a later point in this chapter.

Looking Back: Is Pragmatism a Meaningful Alternative?

Some critiques of contemporary cognitive science look back toward ideas that flourished before the advent of cognitive science and even before behaviorism took over psychology and much of social thought. They remind us that the quest for an experiential psychology is not unprecedented; it has strong roots from which to graft a new plant, roots that go back more than a century.

American Pragmatism Then and Now

Philosophical pragmatism, the legacy of William James, C. S. Peirce, and John Dewey at the turn of the twentieth century, incorporated key ideas of nineteenth-century Darwinian evolution. Pragmatists viewed human knowledge as deriving from the practical goals of everyday existence, and rejected the classical idealism of Plato, Descartes, and Kant. From the pragmatic perspective, knowing derives from action and remains action-oriented, expressed in the pragmatists’ aphorism “knowl-

edge as use." Knowledge is "not a copy of something that exists independently of its being known," but "an instrument or organ of successful action." It follows that things "are what they are experienced as" (successive quotes from Menand, 2001, p. 361). This aphorism places concepts in the meaningful center of human goals and activities. And because human activities are situated in communities of actors, meaning belongs to the community as well as to the individual. More than a century later, pragmatism still appears radical in its opposition to representationalism and the dualisms of subject and object, mind and body, nature and nurture or genes and environment, all still present in current theories and debates.

For the developmentalist, John Dewey is a critical figure in this tradition. Dewey asserted that experience is the basis for thought. In modern cognitive terms, this might be restated as a claim that procedural knowledge (or implicit memory) precedes the capacity for the declarative or metarepresentational knowledge (explicit memory) useful in conscious thought processes such as problem solving. However, the distinction between conscious and unconscious processes was not significant for Dewey; thinking was presumed to be a characteristic of consciousness. Reflective thought, Dewey asserted, is not an apriority to knowledge but a "vital activity" (Dewey, 1981, p. 200; original text 1910). In writings that seem to prefigure twentieth-century phenomenologists, Dewey took note of the "psychologist's fallacy," namely, the "confusion of experience as it is to the one experiencing with what the psychologist makes out of it with his reflective analysis" (p. 165). This fallacy—assuming one's own interpretive perspective to be the same as that of one's research subjects—is all too attractive, even to developmental psychologists today who are tempted to impose their own interpretations of reality on the children they study.

William James introduced the term "radical empiricism" for the idea that knowing is "a functional relation in experience" between a knower and what is known, including relations as well as objects (Heft, 2001, p. 37). The concept of experience in Dewey or James is equivalent to the role that "activity" plays in some modern works; the older term has the added advantage of emphasizing subjectivity, with the admitted disadvantage of deemphasizing action. C. S. Peirce, the third member of the pragmatist group, is most notable now as the American founder of

semiotics, the science of signs, and his work in this area remains alive today, often quoted if not widely read (see Chapter 5).

To sum up the pragmatist's creed: knowing is derived from experience, not a copy of something independent of the experiencer but a function of action, carrying meaning for the individual because of its relation to his or her goals. This relation precedes reflective thought directed to what is known. This orientation is consistent with the Darwinian evolutionary theory that reigned among scientists of the early twentieth century, and it remains so today.

Looking for Meaning in Phenomenology

Ideas not dissimilar to those of the American pragmatists emerged in Europe during the first half of the twentieth century in the philosophical phenomenology of Husserl, Heidegger, and Merleau-Ponty, among others. Heidegger's explication of the everydayness of "being in the world," in contrast to the objective theoretical stance assumed in classical philosophy, mirrored Dewey's theme of experience as prior to reflective thought. Heidegger also placed great emphasis on the embeddedness of experience in culture and the social practices of human life. Dreyfus (1991, p. 23) paraphrases this theme in Heidegger as follows: babies "begin to exist as they are socialized into the understanding of what it is to be a human being that is already contained in social practices." Heidegger viewed the basic mode of being human as "inhabiting" the world. Inhabiting implies that the world is not an object but is part of the self, and thus transforms the relation of self to objects in the world. This mode of "being" in the world avoids the very idea of a relation between a separate subject and object, as both are part of the same phenomenal position.

Nonetheless, Dreyfus comments, "if we step back from involved activity and become reflective, detached observers, we cannot help seeing ourselves as subjects contemplating objects" (Dreyfus, 1991, p. 45, on Heidegger). As the involved subject, the object is part of the involvement; one must remove oneself from the involved activity in order to view oneself and the object as separate. In contrast to the experiential knowing of inhabiting, the reflective stance results in a mode of theoretical knowledge—the mode that traditional philosophy (and psy-

chology) has attempted to explicate. However, as Heidegger, Merleau-Ponty, and Dewey all insist, theoretical or reflective knowing *presupposes* practical “involved” knowing. This claim is basic to the foundation of an experiential or pragmatic psychology, with a special application to development.

The French philosopher Merleau-Ponty elaborated similar ideas in terms of the “primacy of perception”: “The experience of perception is our presence at the moment when things, truths, values are constituted for us; . . . perception is a nascent *logos*; . . . it summons us to the tasks of knowledge and action” (Merleau-Ponty, 1964 p. xv). This proposition is illuminated by Merleau-Ponty’s description of the development of the layers or orders of consciousness in the infant and child. In this vein he proposed an early order of organized experience constituted of whole configurations rather than or prior to an assembly of parts. “What classical academic psychology calls ‘functions of cognition’—intelligence, perception, imagination, etc.—when more closely examined, lead us back to *an activity that is prior to cognition* properly so called, a function of *organizing experiences that imposes on certain totalities the configuration and the kind of equilibrium* that are possible under the corporeal and social conditions of the child himself” (pp. 98–99, emphasis added). Here Merleau-Ponty, like Dewey and Heidegger, makes it clear that a level of organization precedes that of reflective cognition, and he invokes the constraints of both the body (corporeal) and the social world on what the child may make of the whole of an experience.

At the same time that the pragmatists and phenomenologists emphasized the basic level of direct perception and knowing that comes from dwelling in the world as given, they also emphasized that for humans, the world as given is constituted by culture realized through social practices. The culture and the world are there before the individual experiences them.

The later philosophy of Ludwig Wittgenstein, whose intellectual roots were in pre-World War I Vienna but whose mature linguistic philosophy emerged in post-World War II Cambridge (Wittgenstein, 1953), centered language and meaning in social practices. Unlike the phenomenologists and pragmatists, he emphasized the futility of gaining meaning through introspection or private thought. Grasping the meaning of a word, from Wittgenstein’s perspective, is a matter of organizing experiences of language *as it is used by other speakers* (Chapter

5). But to grasp meaning in terms of the use of a word is in some way to deny the personal meaning that a word might have for the individual. Herein lies a dilemma that reverberates in the development of the child. Each of the philosophers cited here confronted and ultimately rejected the subject-object problem of classical philosophy that serves as the foundation for studies of cognition in psychology—including developmental psychology—up to the present time. Each also attempted to reconcile the place of humans within the biological evolutionary scheme and, at the same time, within the cultural milieu and social practices that constitute the “world” for humans. These are hallmarks of pragmatism, with its basis in experience.

Is there a Remnant of Pragmatic Psychology Today?

Although pragmatism fell on hard ground when behaviorism took over psychology during the early and middle years of the twentieth century, remnants survived. G. H. Mead, a follower of James and Dewey at the University of Chicago, wrote as a “social behaviorist” during the 1920s and 1930s (see Mead, 1934). His conception of the natural and social origins of the concept of self has continued to be influential through most of the succeeding years. The roots of the ecological psychology of J. J. Gibson and his followers also appear to lie in James’s pragmatism (Heft, 2001). Gibson’s (1979) theory holds that the visual and other perceptual systems are designed to directly detect structure in the world; thus perceptual knowledge of the environment needs no intermediate representation or categorical interpretation. Roger Barker’s psychology of everyday life and Fritz Heider’s social psychology, both worked out in the 1930s and 1940s, also reflect influences of early pragmatism (Heft, 2001). Although Heider’s work continues to be cited by social psychologists, Barker’s studies of the minutiae of daily life among children in the Midwest have largely vanished into time.¹

With these partial exceptions, the psychology that might have flourished in the wake of James’s and Dewey’s call for psychological pragmatism was aborted in the early decades of the twentieth century. Behaviorism, the new ruling psychology, rejected the dualisms of classical philosophy simply by ruling the mind out of psychology (Watson, 1913). In contrast, when cognitive psychology won out over behaviorism in the 1960s, it took a different route by ruling out the body and

keeping only the mind. More recent calls for an “embodied cognition” or “situated cognition” have attempted to keep the mind in place while adding to it the body and its functions, as well as the environment. However, simply adding the body and the social or material environment to a preexisting mind is insufficient for a developmental psychology. Evolutionary theory also disappeared from psychology after the early years of the twentieth century and did not reappear in force until sociobiology emerged, in the form of a radical evolutionary psychology during the 1980s.

Its contemporary absence in psychology notwithstanding, pragmatism has experienced a revival over the past twenty years in the social sciences and humanities, as both philosophy and social movement (Dickstein, 1998). Despite the difference in emphasis between the original propositions of James and Dewey and those of today’s pragmatism, which has strong connections to postmodernism, they do share common themes and great strengths. Kloppenborg (1998, p. 111) characterizes these as pragmatism’s “denial of absolutes, its admission of uncertainty, and its resolute commitment to the continuing vitality of the ideal of democracy as a way of life.” Whereas historians, political scientists, sociologists, humanists, and philosophers of science, art, politics, and language are all represented in the Dickstein (1998) volume on the reemergence of pragmatism, the absence of psychologists is striking. Equally striking is the almost complete absence of references to pragmatism in contemporary theoretical discourse in psychology.²

Nonetheless, despite the absence of a coherent theoretical movement and the continued dominance of the solipsistic-mind model of cognition, there are clear signals of a renewal of interest in experiential ideas within psychology. Emphasis on the embodiment of cognition, first asserted by Varela, Thompson, and Rosch (1991), has gained new interest from neurocognitive research connecting cognition to emotion (Damasio, 1999), action (Clark, 1997), consciousness (Edelman and Tononi, 2000), and self (LeDoux, Debiec, and Moss, 2002). Robot designs enabling the establishment of “knowing” without representation, through action in environments, and the relation of this work to dynamic systems in general and human development in particular, have had quite a wide impact, in part at least through Clark’s (1997) presentation of the evidence. Indeed one can find intricate connections in the renewed interest in evolutionary biology—whether from a soci-

obiological perspective or a more comparative and cultural one—with a broadened idea of cognition that emphasizes the place of the cognizer as agent in the ecological world.

Preceding these recent trends are several strands of “contextualism” (e.g., Bronfenbrenner and Morris, 1998; Lerner and Kauffman, 1985), citing the relevance of social contexts for development, learning, and thought. Contextualism rests on the presumption that behavior is modulated by its context, where context may be very small-scale, in terms of a particular discourse, or as large as a cultural milieu. This perspective provides an important constraint on the universality of behavioral rules, but it does not reach into the actual construction of thought, of concepts, categories, rules, relations—all of the cognitive baggage that people carry with them across contexts. Contextualism has now been adopted into the larger world of cognition in the idea of “situated cognition,” with roots in a number of different traditions.

Several other revisions of the cognitive model have been put forth in recent years. The ecological position taken by followers of Gibson places emphasis on the structured environment and the perceptual systems that are designed to “pick up” its structure (Heft, 2001; Reed, 1996). In a related view, Barsalou proposes that “a perceptual theory of knowledge can implement a fully functional conceptual system” (1999, p. 577, abstract; see also Prinz, 2002). Others put emphasis on action (Glenberg, 1997; McClamrock, 1995). These proposals address basic issues brought out in Hendriks-Jansen’s (1996) critique of contemporary computational cognitive science, as well as Bickhard’s (2002), but they do not converge on developmental solutions to the general cognitive problem.

In brief, the many proposals for “fixing” the contemporary field of cognitive science all tend toward a situated, embodied pragmatics. My contention is that such a move must involve a full-bodied experiential developmental psychology wherein perception and cognition are the evolved tools of adaptation to varied environments. Human self-interests are conditioned on the realities of ecological, social, and cultural experience. Following the lead of Hendriks-Jansen, Bickhard, and others, a developmental psychological pragmatics must emphasize experience from the perspective of the individual agent (child or adult), providing an integrated perspective that is missing from cognitive development theories that follow the perspective-free principles artic-

