

**Comments** on Harry Heft's *Ecological Psychology in Context: James Gibson, Roger Barker, and the Legacy of William James's Radical Empiricism* (2001, Erlbaum). // Tom Burke, Dept of Philosophy, Univ of South Carolina // William James Society at Eastern APA, 12/4/2004

A few years ago at an annual SAAP meeting John Lachs emphasized the importance of making American philosophy relevant to concrete social issues --- addressing real problems, as opposed to dwelling on abstract academic problems or mere historical studies. At that meeting he inaugurated a prize aimed at (quote) "advancing the American philosophical tradition toward [resolving] current personal, social, and political problems." The Ila and John Mellow Prize has since been awarded to papers exceptional at (quote)

developing the treasure house of methods and ideas beyond the stage they are found in the classical works of American philosophy, or [secondly] relating these ideas and methods to contemporary issues with a view to enhancing our understanding of current problems or our ability to resolve them.

I'm reminded of this as it strikes me that there is another obvious and important avenue by which classical American philosophy may make advancements toward resolving current problems and thus enhance its own relevance to contemporary thought. That is, namely, to relate the ideas and methods of classical American philosophy in progressive ways to current problems in the sciences. This, of course, motivated James in his early investigations of what was then the new science of psychology; and Heft's book shows how James's ideas are still alive and working in contemporary psychology --- specifically, in ecological psychology as based on the pioneering work of J. J. Gibson. James scholars should want to pursue this promising line of development of Jamesian ideas. Heft's book in fact confirms that there can be a fruitful dialogue between James scholars and ecological psychologists.

So what does James have to offer ecological psychology? Heft argues that Jamesian ideas have *already* influenced Gibson by way of E. B. Holt. Holt was James's student and Gibson's teacher. So the claim is that Gibson was indirectly but substantially influenced by Jamesian ideas as filtered through Holt. James's so-called radical empiricism was aimed at undercutting 17th- and 18th-century epistemological views --- views that still bedevil contemporary cognitive sciences. Built around the core notion of "pure experience," radical empiricism shifts the internal/external axis of experience so that traditional epistemological conundrums (such as brain-in-a-vat skepticism and idealistic solipsism) are not "solved" but are nonetheless rendered innocuous so that attention may be focused on more important

matters. On this view, our immediate empirical grasp of relations goes all the way down, rather than being imposed upon unary sensory data by some inner cognitive faculty. At the same time, "experience" goes all the way up --- so that thinking, reasoning, theorizing, are a kind of experience. Determining what all of that amounts to requires some work. But one thing it entails is that things like "knowledge" and "truth" are explained in terms of the workings of experience, and any "correspondence" worth bothering with between a mind and a world pertains to a functioning coherence between perceivable facts as they emerge in our experience and thinkable ideas as experienced in their workings to guide action --- all of this being above board, in terms of what is experience-able. One thing this means is that James's potential influence on Gibsonian ideas has not been exhausted. What James's shift of the epistemological axis still offers to ecological psychology is a foundation for articulating a broader psychology --- one that is not focused merely on the psychology of perception.

In turn, ecological psychology has something to offer James scholarship, not only by supporting it with a robust experimental program, but also because of a distinctive conceptual apparatus that can help to clarify and advance Jamesian ideas. Heft's book is good at laying some of this out. There are two key ideas in ecological psychology that could help to clarify the basic tenets of radical empiricism: one is the idea of invariants (and the extraction thereof), and the other is the idea of affordances (and the perception thereof). This essentially provides an alternative to a distinction between *sensation* and *perception*, though Gibson's distinction between invariants and affordances reaches further than that.

Heft deserves credit for his account of how *invariants* and the process of extracting invariants are closely linked to a key tenet of radical empiricism, namely, to James's claim that "relations between things ... are just as much matters of direct particular experience [as are] the things themselves." Ecological psychology takes seriously the idea that direct particular experience of relations goes all the way down, which is to say, all the way down. Relations between things, if traced far enough, are ultimately explained in terms of relations among relations --- where all along as well as *at bottom* what you have are extractable invariants. Invariants are detected or "extracted" only as products of our actions in the world --- only as constant relations among changing values of one or more variables associated with respective

ways of acting. This is especially compatible with James's enigmatic characterization of the *specious present* --- since the extraction of invariants requires duration, and yet an invariant indicates only the "now" of its extraction. In any case, there is nothing more fundamentally given than such invariant relations (nothing more immediate than are the instances of these relations being concretely extracted from ongoing activities); and nothing can legitimately count as ultimately "given" if it is not some such extracted invariant relation. Experience of relations thus goes all the way down *because* the extraction of invariants goes all the way down. This applies in particular to sensory data; but it just as well applies across the board to the givens in any kind of experience. This is something that James scholars need to investigate further.

Furthermore, James himself acknowledged a problem inherent in his conception of pure experience concerning the possibility of "two minds" experiencing one and the same object. Heft shows how the idea of extracting invariant information from ambient sensory arrays essentially solves this problem. Namely, different individuals can have access to one and the same ambient sensory array and thus can detect the same invariants in that ambient array. Perspective matters, of course; but one and the same invariant may be extracted from different perspectives --- whether we are talking about one individual in different perspectives, or different individuals with more or less the same abilities to act in the world.

The notion of *affordances*, on the other hand, pertains to factors in our experience that James may not have clearly distinguished or adequately emphasized. From the standpoint of ecological psychology and contrary to James, it is not accurate to say that *things* are perceived. Nor are *invariants* perceived; they are simply detected in or extracted from the flux of experience. Rather, it is more appropriate to say that what we perceive are affordances --- affordances of a world around us as manifest in our experience. On this account we need to re-think what we mean by "perception" --- to accommodate the idea that we are capable of perception insofar as we become attuned (or adapted) to regularities in a dynamic world --- regularities that have functional significance and point directly to the world's dynamic potentials for us by virtue of our engrained attunements to what serves our needs. This is not idealism. It is operational or functional perspectivism. Affordances are

percepts rather than ideas or concepts. In perceiving a cup *as a cup*, as opposed to sensing merely colors and shapes, we *perceive* its graspability, its liftability, its capacity to convey drinkable liquids from point to point, and so forth. We as well as frogs may sense a fly as a moving, buzzing spot in our ambient sensory field; but a frog will *perceive* the spot as food while we perceive annoyance, potential filth, and so on. Perception is thus "direct" in that it results from the automatic operation of such attunements. The fly *is* food for a frog, while it *is* nothing but an annoyance for us. Likewise, a rock or log or box under certain circumstances is not just *perceived as* a chair but it *is* a chair insofar as it may function as one in those circumstances. Thus it is not just that affordances are perceived but that they are always the core content of what is perceived. All of this operates at the level of perceived facts in our experience; and it has everything to do with how our experience develops depth and structure beyond the alleged booming buzzing confusion of the raw experience of an infant. This ties in with James's treatments of habit, association, imagination, memory, instinct, and so on; but it offers an important intermediate level of analysis and explanation between the extremes of sensation and conception that beg for some kind of unification in James's thought.

The fact, though, that ecological psychology may improve certain problematic or poorly developed features of James's radical empiricism raises a question as to whether the latter by itself is an adequate philosophical foundation for ecological psychology. "An emerging conceptual foundation for an ecological approach in psychology," if it were to draw on pragmatist thought at all, may want to consider the work of other classical pragmatists as well. In that case, the issue is not just what did or did not influence Gibson but rather what may or may not inform present understanding and future developments of both ecological psychology and classical American pragmatism at large.

In particular: the notion of "pure experience" is problematic. I prefer Dewey's more naturalistic talk of life-activities (in terms of organism-environment interactions or transactions) as a better way to begin an account of human experience, in place of James's notion of pure experience. We still get the requisite shift of the epistemological inner/outer axis, but without subjectivist or idealist connotations of the term "pure experience."

Dewey and Mead also add a factor of directedness or aboutness that is all but absent in James's depiction of pure experience. This factor explains the episodic nature of experience by way of a claim that experience is variously directed toward resolving particular breakdowns or addressing particular disturbances in a normal flow of experience. Without begging the question, this introduces a notion of context or "situation" that is key to making sense of the selective and projective nature of perception and thought, whereas James (and Gibson, for that matter) seem to acknowledge only that there is such a thing as focused attention with no accounting for that fact otherwise.

Likewise, Mead's evolutionary social psychology can only bolster ecological psychology's focus on epigenetic evolutionary processes and on a pressing need to formulate an ecological-psychological theory of mind and self-consciousness. Two chapters of Heft's book are devoted to showing a close alliance between ecological psychology and the ecobehavioral social psychology of Roger G. Barker. Such considerations point to the importance of socio-cultural processes in human experience --- moving beyond perception and physical environments to cultural ecology and its role in a wider-ranging account of human cognition and knowledge. The emphasis here goes beyond just the systemic reciprocity of physical environments and perceiving organisms to include social networks and "socially distributed cognition." This latter kind of consideration is all but absent in James's various writings on radical empiricism, whereas it is the central consideration in Mead's pragmatist psychology.

The point here is not to detract from the value of James's thought, but to emphasize the fact that James has influenced others besides Gibson who have also developed those ideas in productive ways. Even if specific details of radical empiricism are incomplete or downright wrong, something very much like it is needed to get beyond the morass of modern epistemological problems that bedevil behaviorist and recent cognitivist approaches to psychology --- especially if the latter is conceived only in terms of the computational and representational theory of mind that has held sway since the 1980s. Gibsonians have been fighting that battle for decades and should find only allies among the classical pragmatists.

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**Review:** *Ecological Psychology in Context: James Gibson, Roger Barker, and the Legacy of William James's Radical Empiricism*, Harry Heft (2001, Lawrence Erlbaum Associates, \$55).

This book traces the influence of William James's radical empiricism, by way of E. B. Holt's neorealism, on James Gibson's ecological psychology. Gibson was Holt's student at Princeton, while Holt was James's student at Harvard. That entails nothing by itself; but Heft traces theoretical and philosophical connections that place radical empiricism at the core of "an emerging conceptual foundation for an ecological approach in psychology," arguing that radical-empiricist themes filtered their way to Gibson's thought more or less intact by way of James's influence on Holt. The result is an excellent exposition of pragmatist foundations for ecological psychology---a must-read for anyone involved in debates concerning pragmatist approaches to epistemology or post-behaviorist, post-cognitivist psychology.

The book is organized into three main parts. The first part surveys James's radical empiricism, drawing as much on *Principles of Psychology* as on the later *Essays in Radical Empiricism*. This survey centers on James's dynamic, anti-dualist conception of "pure experience" with its focus on the evolving, unitary, systemic reciprocity of environments and perceiving, thinking, social organisms that inhabit them. Heft clearly explains what it is that makes James's empiricism *radical*, namely, the idea that relations (structure, order) are "just as much matters of direct particular experience" as are things that stand in such relations (rather than being imposed on experience by a separate cognitive faculty). Heft highlights the radical-empiricist principle that perception is direct (a key notion in ecological psychology) along with the idea of the coordinated coalescence (continuity) of perceptual and conceptual experience. Holt's neorealism is also summarized in this first part of the book, particularly in terms of the various aspects of James's views that Holt preserves, given that Holt will be cited repeatedly in later chapters as a connecting link between James and Gibson.

The second part of the book summarizes the basic features of Gibson's ecological psychology, along with running comparisons and contrasts with radical empiricism. This includes an instructive account of the key idea of *affordances* as properties of an environment having "perceived functional significance" for an individual. Affordances are percepts rather than concepts. In perceiving a cup *as a cup*, as opposed to sensing merely colors and shapes, *we perceive* its graspability, its liftability, its ability to convey drinkable liquids from point to point, and so forth. Thus it is not just the case that affordances are perceived but that they are always the core content of what is perceived. A second distinctive idea in ecological psychology is that of *invariants* as stimulus information, where the detection or extraction of invariant information in changing ambient sensory arrays yields the rawest information available to the perceiving individual. Detection of invariants and perception of affordances are thus Gibson's alternatives to a traditional (and problematic) distinction between sensation and perception. Heft shows how radical empiricism provides independent philosophical backing for these key ideas, in turn showing how ecological psychology can help to shore up some weaknesses in radical empiricism. For instance, James himself acknowledged a problem inherent in his conception of pure experience concerning the possibility of "two minds" experiencing one and the same object. Heft shows how the idea of extracting invariant information from ambient sensory arrays essentially solves this problem (162--169). Likewise, James's analysis of time and the notion of the temporally extended

character of the experienced present is rather sketchy. Heft shows how this analysis can be clarified as a straightforward consequence of the idea that perception fundamentally involves the detection of invariants that can be revealed only in contexts of temporally extended change (174--183).

The third part of the book considers the relationship of ecological psychology to other schools of thought besides radical empiricism. It is argued that Gestalt psychology, while an influence on Gibson, is basically opposed to ecological psychology insofar as the latter grew out of radical empiricism while the former retained a "traditional dualist formulation through its Kantian roots." Two chapters are also devoted to showing a close alliance between ecological psychology and the ecobehavioral social psychology of Roger G. Barker. This leads to a more general discussion of the importance of sociocultural processes in human experience---moving beyond perception and physical environments to cultural ecology and its role in a wider-ranging account of human cognition and knowledge. The emphasis here goes beyond just the systemic reciprocity of physical environments and perceiving organisms to include social networks and "socially distributed cognition." This latter kind of consideration is all but absent in James's various writings on radical empiricism.

If we assume, then, that Heft establishes that James's radical empiricism had definite influences on Gibson's ecological psychology, we are left with at least two questions. Namely, is James's radical empiricism essentially correct so far as it goes; and if so, is it an adequate philosophical foundation for ecological psychology?

If the first question is answered negatively, then this book does not bode well for ecological psychology. Heft supplies extended arguments in favor of a positive answer. Even if specific details of radical empiricism are incomplete or even downright wrong, something very much like it is needed to get beyond the morass of modern epistemological problems that bedevil behaviorist and recent cognitivist approaches to psychology (if the latter is conceived only in terms of the computational-representational theory of mind that has held sway since the 1980s, being hardly more than modern empiricist psychology with a computer metaphor in place of a steam-engine metaphor).

The fact, though, that ecological psychology is able to correct and improve certain problematic or poorly developed features of James's radical empiricism suggests that an answer to the second question may be only partly positive. With no room really to pursue this question, we are led to a cryptic and unsatisfactory final observation that "an emerging conceptual foundation for an ecological approach in psychology," if it were to draw on pragmatist thought at all, may also do well to include the work of other classical pragmatists. In that case, the issue is no longer what did or did not influence Gibson but rather what may or may not inform present understanding and future developments of ecological psychology.