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BOOK REVIEWS

The Evolution of Consciousness, by Euan MacPhail, Oxford, England: Oxford University Press, 1998, 272 pp., $75.00 (hardcover), $29.95 (paper).

Reviewed by Charles Bazerman
Department of Education
University of California, Santa Barbara

Euan MacPhail's *The Evolution of Consciousness* is very far from the world of Vygotsky and activity theory. In many respects this book represents precisely those aspects of mainstream psychological research that sociocultural theory and research define themselves against: laboratory experiments to exhibit individual behavior; representational models of cognition; biological evolutionary explanations without awareness of cultural evolution; a modularized and self-contained, syntactically oriented language acquisition device that appears in a brief evolutionary moment; and mentalism apart from the situation and mediational tools through which intelligence is developed and exercised. Yet in taking up the topic of consciousness, MacPhail comes to a very Vygotskian conclusion, that emergence of language is coincident ontogenetically and phylogenetically with the emergence of a new form of thought, which MacPhail calls consciousness. MacPhail, by associating this linguistically mediated form of thought with consciousness, in fact, goes beyond Vygotsky's characterization of this new level of thought as mind. Although both recognize a wide range of thought and learning prior to and apart from language, MacPhail claims that pre-linguistic thought and learning occur without either consciousness of the self or of feelings, whereas Vygotsky's prelinguistic thought, though not extensively defined, seems to admit awareness of feeling and some sense of the self, even if not capable of being reflected on through the distance of symbols.

MacPhail is quite aware of how extreme his claims are and how scanty the evidence is for parts of his argument. The preface begins by defining the book as a provocation rather than a conclusive argument: "My aim in writing this book has been to pose questions rather than answer them—to provoke discussion, not end it." At several points he notes that readers are likely to find his claims extreme, his characterizations implausible, and some of his arguments not especially compelling (see, e.g., p. 228). In a number of places, after he presents evidence supporting views opposite to his, he has no counter-argument other than explaining that the most obvious (and unrefuted) interpretations are not the necessary ones. He expects incredulity as well as accusations of immorality and irresponsibility, prompted by his argument that infants and animals are not aware of pain even

Requests for reprints should be sent to Charles Bazerman, Chair, Department of Education, Gevirtz Graduate School of Education, University of California, Santa Barbara, Santa Barbara, CA 93106. E-mail: bazerman@education.ucsb.edu

though they have aversive responses. Such views, he is aware, could give aid and comfort to cruel practices to both animals and infants, and he ends the book with a number of arguments why people should not act precipitously or potentially cruelly on his claims.

The opening chapter consists of a philosophic analysis of consciousness and the criteria by which we might determine its existence. This is followed by an historical review of concepts of mind and consciousness in humans and animals in the world of philosophers from the time of the ancients until the late 18th century (chapter 2), during the early development of psychology from Locke through James (chapter 3), and during the period of behaviorism (chapter 4). Chapters 5, 6, and 7 then review current research (within mainline experimental psychology and cognitive science) on animal learning and thought in relation to human learning and thought; conscious versus unconscious processes; the role of language in conscious processes and memory; and the nature of self-perception, pain, pleasure, and other feelings. Chapter 8, the final chapter, pulls the argument together and examines potential roles of language in mental states and the sense of self. Much of the real nitty-gritty of the argument comes down to demonstrating that various forms of learning, memory, and intelligent behavior do not require consciousness, indeed occur under conditions demonstrably without consciousness (e.g., when learning occurs on the far side of a severed spinal cord; when people learn without conscious awareness of being exposed to materials learned because of subliminality, aphasia, or severing of lobes), and that there is a uniformity of intelligence throughout the animal kingdom extending from animals to which we usually attribute little intelligence, such as goldfish or birds, to those we consider most like us in awareness and intelligence, such as chimpanzees. MacPhail's point is not that chimpanzees are no smarter than goldfish, but that goldfish are as smart as chimpanzees, and the similarity of their intelligence indicates no evolutionary divide indicating the onset of a new capacity of consciousness. He sees the only divide to occur at the point of human language; that is, only humans seem to have a different kind of intelligence that appears to depend upon consciousness. Further, he explains apparent evidences of animal consciousness in terms that do not require consciousness for their behavioral relations, and he identifies phenomena that suggest lack of consciousness prior to the acquisition of language, such as the inability of people to recount consciously memories from infancy despite the well-established fact that infants do engage in long-term learning. At several points he notes that the only definitive way we can determine if a person or creature has consciousness is to ask and then listen to the linguistic self-report. This methodological dilemma, he implies, suggests an underlying empirical reality: No other form of behavior, even self-observation in mirrors, necessarily depends on consciousness, and if it is not needed, why should we assume that such a striking and novel system as consciousness to have evolved and be engaged in the behavior? Consciousness, he argues, is a consequence (and perhaps by-product) of the evolution of language ability.

The book asks to be treated as a philosophical and psychological provocation, eliciting counter evidence and counter arguments. As neither a psychologist nor a philosopher, I am neither adequately knowledgeable nor technically competent to evaluate the evidence and argument, nor am I particularly motivated to pretend to sort out the business of these professions. From my outsider's position, however, it is gratifying to see a researcher drawing only on individualist experimental psychology and representational cognitive science and finding that the evidence leads him to conclusions that stand at the threshhold of the sociocultural vision, even if he does not notice the relevance of that vision. MacPhail's intellectual universe is so far from that of sociocultural psychology that he never cites Vygotsky or Luria or any other socioculturalist. Indeed, he treats the

relation between language and higher modes of thought as his own idiosyncratic invention. Yet even within his world of mainline experimental psychology he finds evidence that the mediation of language initiates a new mode of thought.

MacPhail's characterization of thought with and without language challenges us to think what exactly it is that we mean by consciousness and how language plays a role in it. He points out that learning and creative problem solving do not need the ability to stand apart from our thoughts in order for us to reflectively notice that we are thinking. He also points out that attractive and aversive reactions to stimuli do not require us to notice our internal state or external behavior consciously. In using language we learn to stand apart from what we are doing and think about what it is we are doing, and to respond to that perception. He also provides evidence that even in language-skilled humans many kinds of perceptions, thought, and actions seem to be carried out entirely apart from our system of languaging and reflection, outside of our consciousness. It is as though language, as a new and late-arrived invention, is only partly integrated with the rest of our thoughts and nervous system, transforming those aspects of thought that it comes into contact with but leaving untouched those thoughts it knows nothing of. Thus, if mind or consciousness is dependent on language, but certain aspects of thought are not brought under the sway of language, then those aspects of thought remain outside mind or consciousness. Further, if language only partially or inadequately captures those things we know and think about in other ways, our conscious thought or mind may be able to tell only a partial story that is not nearly as attuned to our circumstances, problems, and needs as our non-conscious impulses.

This picture suggests to me the great problems that language brings with it. In many ways language is an elegant development. But it is also a crude one, unable to capture all the detail, nuance, and delicacy of our experience; nor can it capture the wisdom of all our perceptions and embodied estimates of our situations, or capture the full cleverness or the spontaneity of our actions. Yet language is imperial, appearing to conquer all, and leading us to act as bluntly as our words—they have the bullying effect of Groucho Marx who asked his victim: "Who are you going to believe—me ..... or your own eyes?" Many, if not most, people readily believe that the only knowable world, the only world we can think about, is the world we can consciously formulate. This conundrum is at the heart of many issues in theology, philosophy, psychology, language studies, and literary theory.

Those of us who write and teach writing are aware of how difficult the struggle is to make language do our bidding, to make our words serve our embodied lives rather than have words mislead us into the stupidities of our crude formulations. If language writes us, it is our fault for trusting language too much. MacPhail's analysis not only leads us to greater clarity in thinking about what consciousness might be, but it also creates new respect for all we are able to do without the taint of consciousness. After all, we could be as smart as goldfish without even thinking about it. And if MacPhail is right, that is not such a stupid thing.