

The Dead Hand: Commentary on Baars on contrastive analysis

Bruce Mangan

Institute of Cognitive Studies
University of California, Berkeley
California 94720
USA

mangan@cogsci.berkeley.edu

Copyright (c) Bruce Mangan 1995

PSYCHE, 1(14), January 1995

<http://psyche.cs.monash.edu.au/v2/psyche-1-14-mangan.html>

Keywords: behaviorism; consciousness; contrastive analysis; first-person; functionalism; third-person.

Abstract. Behaviorism still threatens consciousness research. On the surface, Baars' "contrastive analysis" may look as if it reduces first-person consciousness to a third-person construct. But once its tacit behaviorism is isolated and overcome, contrastive analysis turns out to give empirical support to the *primacy* of the first-person stance for the scientific investigation of consciousness.

1.1 As a pragmatic method for organizing experimental results, contrastive analysis is extremely useful. It underlies Baars' *A Cognitive Theory of Consciousness* (1988), in my opinion the most important single book on consciousness since William James' *Principles of Psychology* (1890). But to grasp the great strength of Baars' method as he uses it, it is best to read his book.

1.2 Paradoxically, Baars' "A Thoroughly Empirical Approach to Consciousness" ([1994](#)) rests on a *theoretical* elaboration of contrastive analysis. This moves Baars toward a philosophical (or at least methodological) tar-baby: the first-person/third-person dispute that now sticks to so much thinking about consciousness.

1.3 In his theoretical treatment of contrastive analysis, Baars at times *seems* to reduce the notion of first-person consciousness to a third-person construct. On my first reading, I was inclined to interpret this point as Max Velmans ([1994](#)) does. Velmans writes that Baars' contrastive analysis looks like it makes consciousness "just a construct within an

information processing theory" (Velmans, 1994, [section 1.3](#)). But it is one thing to *equate* consciousness with certain operations in a third-person methodology; it is quite another to use the first-person sense of conscious experience as the basis of a *subsidiary* third-person experimental research program. The former interpretation would, among other things, make Baars a gross functionalist, and open up just the sort of philosophical can of worms that Baars wants (rightly or wrongly) to keep tightly closed. The later interpretation, which I think the correct one, means that *the results of contrastive analysis increase support for the SCIENTIFIC validity of the first-person standpoint*. This has the consequence of undercutting functionalism, and more generally helps to extricate research on consciousness from the tacit influence of behaviorism and its gratuitous assumptions: e.g., that as a science, psychology *must* be a third-person enterprise and *must* always rest on an experimental foundation.

1.4 The dead hand of behaviorism still deforms the study of consciousness. In this case, behaviorism is the unacknowledged source of the terminology and assumptions which make Baars look like a reductive functionalist; and tacit behaviorism also works in other ways to obscure the implications of Baars' method, even, perhaps, from Baars himself.

1.5 Baars is, above all, concerned with justifying the application of contrastive analysis to experimental psychology. Current experimental psychology is, in the main, the direct descendent of behaviorism, and in many ways still follows behaviorist conceptions. The difference between today's "cognitive" experimental psychology and radical behaviorism is extremely small *relative* to the difference between behaviorism and the research methods (e.g. James') that it supplanted. Today's cognitive experimentalism and less radical forms of behaviorism hardly differ at all. Over sixty years ago the behaviorist Tolman (1932) was willing to use internal, mental constructs for theoretical purposes. Experimental psychology now simply has more technical tools than Tolman did --- chief among them a better set of cognitive modeling techniques and the possibility for computer simulation.

1.6 I should note that from Baars' standpoint the transition from behaviorism to cognitivism was a substantial break, not a slight shift of emphasis. (See Baars' [1986] excellent book on the history of the cognitive revolution.) We differ here by virtue of our different frames of reference. If the Soviet Union under Stalin were one's starting point, Khruchev's reforms would look substantial and Gorbachev's truly "revolutionary." But the underlying Marxist-Leninist structure of the Soviet state in fact stayed intact during these changes. In the same way, Baars seems to take radical behaviorism to be the natural point of comparison, and so even slight movement toward the study of cognition and, ultimately, consciousness, will indeed seem "revolutionary." Nevertheless, the underlying behaviorist assumptions have changed very little, and experimental psychology is still, at best, quasi- behaviorist.

1.7 Behaviorism maintained that the methods it supplanted were bankrupt, but this is very questionable. Baars ([1994](#)) also seems to echo the behaviorist version of history when he writes of "the endless philosophical debate about consciousness [that] helped trigger the behaviorist revolution" ([abstract](#)). And Baars' reading of Nagel shows, I think, a feeling

on Baars' part that philosophy in itself is a source of confusion, not help. Yet for the great consciousness researchers active just before the rise of behaviorism (e.g., William James, Ernst Mach, Ewald Hering) philosophy was part of a very catholic method of investigating consciousness and, notably, its relation to neural activity. In retrospect, their method turned out to have been remarkably successful; certainly more successful than behaviorism turned out to be. Men like James, Hering and Mach are part of a largely forgotten Golden Age of consciousness research. And, significantly, they each brought a version of first-person method to science, and achieved substantial results with it -- even if we only use third-person criterion to judge their first-person methodological efficacy. (For elaboration of, and evidence for, the above assertions, see Mangan, 1993, and [1.15](#) below.)

1.8 Watson insisted that on the "assumption that there is such a thing as consciousness and that we can analyze it by introspection, we find as many analyses as there are individual psychologists" (Watson, 1930, p. 5). This is the infamous "intractability" argument so often used against introspection. It is false both as a matter of logic and of evidence. Logically, the mere existence of what may seem to be an intractable question in a field of study hardly means that the question OR the field is to be abandoned. Arguments about the existence of atoms went on quite literally for millennia and well into the 19th century. Should the notion of an atom, then, have been abandoned altogether? Should the much more inclusive attempt to understand the physical world (of which atomic theory was one part) have been abandoned? Even if, for sake of argument, it could be shown that some questions in introspective psychology were intractable, this would hardly mean that introspection *in general* was suspect, any more than it would mean that the experimental method as such is suspect because it cannot now resolve important scientific questions in, for example, cosmology. Nor am I aware of any study showing that the degree of philosophical controversy about consciousness in the late 19th Century was notably greater than for similar scientific and philosophical controversies, say, a century earlier or a century later.

1.9 It was not controversy *in* philosophy that behaviorism found so objectionable, but the inclusion of philosophy at all. Behaviorism just *asserted* that a scientific psychology had to be narrowly defined and rest on a strict experimental basis. It must never be forgotten that the early behaviorists could not point to any major research accomplishments of their own to justify their method. The behaviorists simply *promised* loudly and often that they could do much better science by, among other things, breaking the extremely close traditional link between what we today call psychology and philosophy. This meant that the proven methods of the 19th Century philosopher/scientists were abandoned. Behaviorism in fact failed; very few interested in consciousness research will dispute this. The behaviorist exclusion of philosophy, especially in the study of consciousness, is then justified neither by research success nor cogent argument. Philosophy and psychology have good reason to coalesce into an integrated method of consciousness research, since this has *already* proven its scientific value. Yet here, again, lingering behaviorism obscures a promising research direction.

1.10 Watson's ability as a scientist is questionable, but on one point there is universal agreement: he was a *propagandist* of genius. And as with so many 20th Century revolutionaries, Watson yearned to found a movement and recruit true believers to a cause. In this context, Watson's rhetoric triumphed: The first page of his *Behaviorism* begins by distinguishing "introspective or subjective psychology, and behaviorism or objective psychology" (Watson, 1930, p. 1). "Subjective psychology [James being used as a prominent example] claimed that *consciousness is the subject matter of psychology*. Behaviorism, on the contrary, claims that consciousness is neither a definite nor a usable concept. The behaviorist, who has been trained always as an experimentalist, holds ... that belief in the existence of consciousness goes back to the ancient days of superstition and magic." (Watson, 1930, p. 2; his emphasis; see his Chapter 1 for many pages in a similar vein.)

1.11 The result of these founding assumptions is that experimental psychology, even today, has probably the single most reactionary attitude toward the study of consciousness of any discipline. As a trained experimental psychologist, Baars showed real courage in exploring consciousness when virtually all his colleagues considered it the domain of cranks. In effect, Baars is finally answering Watson's challenge *within* a field that is still largely conditioned by Watson's assumptions. Above all, Baars' contrastive analysis shows that consciousness IS, contrary to Watson, a "definite" and a "usable" concept.

1.12 This background helps explain why Baars (1994) at times writes about consciousness as if it were a "theoretical entity" ([abstract](#)), an "inferred construct" or "explanatory construct" ([section 1.3](#)), and otherwise handles consciousness as if it were a sort of discovery arrived at via theoretical reasoning, and subject to all the vicissitudes a purely theoretical entity is heir to. (Note that this stance does NOT presume that consciousness is a robust phenomenon of nature *about which* we theorize, construct scientific explanations, etc.) Here Baars simply follows the logical positivist and operationalist notions of scientific theory adopted by behaviorism (and continued by the so-called "functionalists" to this day; see Dennett, 1993). But it is also clear that Baars wants to fully acknowledge consciousness in the good, old-fashioned, intuitive, introspective and *realist* sense: he refers to "consciousness AS SUCH" ([section 1.6](#)), "consciousness per se" and "'real' consciousness" ([section 2.1](#)). And this is the meaning of consciousness Baars invokes in the first sentence of his introduction: "You, the reader, are now conscious of the words in your visual focus" ([section 1.0](#)). Here is consciousness as THE direct fact of human existence and the *least* dubious reality.

1.13 Now at times Baars does seem to handle these two senses of consciousness by reducing the realist, first-person notion (i.e., consciousness "as it is") to the operational, third-person notion (i.e., consciousness as an "inferred" theoretical entity). Consider, for example, what we might call Baars' (1994) thesis statement: "The question is whether conscious and unconscious processes can be usefully treated as inferred constructs expressed in [information processing] language" ([abstract](#)). But I think we can take this way of putting things to be an artifact of the (at least) quasi-behaviorist audience Baars is accustomed to addressing.

1.14 In any case, as a logical matter, showing experimental psychologists how to incorporate consciousness into their existing theoretical apparatus does not imply that this is the ONLY way the scientific investigation of consciousness must proceed. There is, then, no full reduction in the technical sense. Furthermore, a little consideration by those familiar with consciousness research should make it clear that the behaviorist presumptions about the nature of science are simply wrong: *science is not co-extensive with experimental method OR the third-person stance*. And it is not necessary to argue this point theoretically. We can show IN FACT that this is the case, i.e., show an unquestioned case of a successful scientific investigation of consciousness that demanded neither psychological experiment nor an exclusively third-person approach.

1.15 We need look no further than to Baars' epigraphs for a researcher who satisfies this demand. I trust few readers doubt that James achieved a powerful scientific understanding of consciousness. Baars (1988) himself has demonstrated this in many ways. But James' scientific approach was completely different from that of experimental psychology. As noted above, James used a "mixed" method (Mangan, 1993) drawing primarily on first-person introspection, buttressed by many other considerations from neurophysiology to traditional philosophy. James found the experimental method in psychology all but useless, calling it "microscopic psychology" *even* when it was still "asking every moment for introspective data" (1890/1918, p. 192).

1.16 We can avoid the appearance of reducing consciousness to a third-person construct by changing a single word in Baars' thesis statement. "Conscious and unconscious processes are *corroborated* by information processing constructs." Here "corroborated" replaces Baars' "inferred." Our first-person sense of consciousness is certainly not "inferred" by third-person means. Just the opposite, as I think Baars would agree.

1.17 Contrastive analysis is an *inductive* method, based on our intuitive understanding of what it is like to be conscious. *It is only by virtue of this intuitive foundation that we are able to pick out areas of third-person experimental research that look like they point to first-person consciousness*. Otherwise we would have no more reason to take, say, the attention literature to be relevant to consciousness than the experimental literature on digestion. Again, contrastive analysis must always turn on an antecedent first-person sense about which experimental findings capture conscious processes. Third-person experimental findings -- selected by first-person consciousness -- show common characteristics (e.g., chunking limits; one consistent interpretation at a time in focal attention), and a systematic structural contrast with otherwise similar processes that do not seem to be conscious (e.g., relatively unlimited processing capacity; simultaneous but contradictory interpretations at the unconscious level). The first-person stance is, then, hardly an "inferred" construct of third-person experiments. And as the result of an inductive process, third-person findings about consciousness are, as a logical matter, restricted accordingly.

1.18 Watson took the study of consciousness to be intractable. Baars' method directly refutes this and all other forms of the "intractability" canard. Besides showing that the scientific analysis of consciousness is not only possible but actual, contrastive analysis

shows that the first-person stance is indispensable. It is not simply "complementary" (Velmans, 1994, [section 1.8](#)). The first-person stance is the foundation of the scientific investigation of consciousness.

References

Baars, B. (1986) *The Cognitive Revolution in Psychology* New York: The Guilford Press

Baars, B. (1988) *A Cognitive Theory of Consciousness* Cambridge, UK: Cambridge University Press.

[Baars, B. J. \(1994\) A thoroughly empirical approach to consciousness. PSYCHE 1\(6\) \[80 paragraphs\]](#) Filename: psyche-94-1-6-contrastive-1-baars

Dennett, D. (1993) "Caveat Emptor" *Consciousness and Cognition*, 2 48-57

James, W. (1890/1918) *The Principles of Psychology* Vol. I. New York: Henry Holt & Co.

Mangan, B. (1993) "Taking Phenomenology seriously: The fringe and its implications for cognitive research" *Consciousness and Cognition*, 2 89-108.

Tolman, E. (1932) *Purposive Behavior in Animals and Men* New York: Appleton-Century-Crofts.

[Velmans, Max. \(1994\) A thoroughly empirical first-person approach to consciousness: Commentary on Baars on contrastive analysis. PSYCHE, 1\(12\), \[8 paragraphs\]](#) Filename: psyche-94-1-12-contrastive-5-velmans

Watson, J. (1930/1970) *Behaviorism* New York: W.W. Norton & Inc.