BEHAVIORAL PRAGMATISM IS A-ONTOLOGICAL, NOT ANTIREALIST: A REPLY TO TONNEAU

Dermot Barnes-Holmes National University of Ireland, Maynooth

ABSTRACT: Tonneau attributes an antirealist position to my writing. In my reply I argue that my position is not antirealist, but a-ontological. I subsequently consider the implications of Tonneau's core arguments in light of my a-ontological position and find that his claims do not apply to my work. Finally, I suggest an a-ontological approach to the realism controversy.

Key words: a-ontological, antirealism, behavior analysis, behavioral pragmatism

In his article Antirealist Arguments in Behavior Analysis, Tonneau (2005) claims that Barnes and Roche (1994, 1997) "have argued that the conceptual foundations of behavior analysis imply an antirealist view of the universe" (p. 55), but this antirealism exemplifies "logical confusions and [does] not derive from behavior analysis" (p. 56). In my reply I will first demonstrate that my position, which I now call Behavioral Pragmatism¹ (Barnes-Holmes, 2000, 2004), is best characterized as a-ontological rather than antirealist. Subsequently, I will consider the implications of each of Tonneau's core arguments in light of my a-ontological position and demonstrate, in each case, that his arguments do not apply to behavioral pragmatism. In closing, I suggest a behavioral pragmatist approach to the realism controversy.

Not Antirealism But A-Ontological

Antirealism comes in more than one variety, but in general it is characterized by an explicit opposition to the argument that scientific concepts or theories reflect, capture, refer, or correspond to an immutable, final, or absolute ontological reality. In providing a general description of antirealism, Bem and Looren de Jong (1997) suggest that at least two broad types may be discerned. The first grouping is composed of *constructionists* and *relativists* who deny that there is a reality independent of scientific theories and concepts; the second is composed of

AUTHOR'S NOTE: The author would like to thank an anonymous reviewer for the constructive and helpful comments that were provided on an earlier version of the current article. Please address all correspondence to Dermot Barnes-Holmes, Department of Psychology, National University of Ireland, Maynooth, Maynooth, Co. Kildare, Ireland. Email: Dermot.Barnes-Holmes@nuim.ie

¹ I consider Behavioral Pragmatism to be one example of what S. C. Hayes (1993) describes as functional contextualism.

instrumentalists who argue that scientific theories do not, in truth, mirror or correspond to reality, but are simply useful instruments for describing the world. When defined in this way, antirealism involves either denying a reality independent of scientific language or denying that scientific language corresponds to reality. In both cases the antirealist has something to say about the issue of ontological reality—either it does not exist independently of language or it does exist but language cannot capture it as it really is. The use of the term *antirealism* certainly seems appropriate here because both positions involve directly opposing the argument that scientific theories and concepts serve to mirror or capture an independent reality.

In contrast to antirealism, the a-ontological position of behavioral pragmatism is simply silent on the issue of ontology. This a-ontological position is made possible when scientific truth is defined *ultimately* in terms of achieving specific goals, thus rendering ontological issues irrelevant. In effect, no fundamental, final, or absolute assumptions are ever made concerning the nature or substance of a behavior-independent reality, and thus there is no basis for making ontological or anti-ontological claims because the assumptions are not there to support them. This position is not antirealist (at least in the traditional sense outlined above) because realist arguments are not directly opposed, and neither is it realist because realism is not affirmed. In adopting the a-ontological position of behavioral pragmatism one simply walks away from the realism controversy, *as a philosophical debate*, and approaches the issue behavior-analytically (e.g., see Barnes & Roche, 1997, p. 570). And as Tonneau himself points out, "a behavioral analysis of knowledge *per se*. . . is neutral with respect to the realism controversy" (p. 63).

In response, Tonneau might argue that the statements he quoted from my work were clearly antirealist. Certainly, the quotations in his article, when taken out of context, seem to be antirealist (as defined above), but when appropriately contextualized this is not the case. Take, for example, the following statement:

If we talk of a *real*, *physical* universe, we are saying that stimuli have some form of existence beyond our behavior; this clearly contradicts behavior-analytic epistemology, in which there can be no stimuli (i.e., a physical universe) if there is no organism to provide responses that define those stimuli. (Barnes & Roche, 1994, p. 165)

The latter half of the quotation is concerned with epistemology (assumptions about knowledge), not ontology (assumptions about reality), and thus no antirealist claim is implied, insofar as antirealism involves the explicit denial of, or lack of reference to, an ontological reality. Perhaps inserting "known," as in "there can be no *known* stimuli" would have helped clarify the non-ontological basis of the claim, but in the wider context of the 1994 article this seems redundant. The distinction between ontology and epistemology was outlined at the beginning of the article, and moreover it is later suggested that comparing ontological and epistemological issues directly is inappropriate because ontology and epistemology are different domains, and thus direct comparison is a category mistake. The argument continues that the apparent contradiction between behavior-analytic

ontology and epistemology is better characterized as a paradox (i.e., contrary to expectation) because in other approaches ontology is consistent with epistemology. Finally, it is argued that treating the "contradiction" as a paradox may serve to transform a mechanistic ontology into a contextualistic ontology, which I will argue below is an a-ontological position. The critical point, however, is that in abstracting out a specific sentence from the article without placing it in its appropriate context, Tonneau incorrectly characterizes my position as unquestionably antirealist.

Consider another quotation that Tonneau isolates as an apparent example of antirealism: "the fundamental nature of the universe (or reality) exists as a behavioral event" (Barnes & Roche, 1994, p. 167). On its own, this statement appears to make an ontological claim—that the only reality is behavior. At the end of the same section, however, a concluding caveat is provided:

Finally, it is important to recognize that this form of contextualistic ontology is no more "true" or "final" than any other alternative. The truth of contextualistic ontology within behavior analysis will always depend upon the consequences arising from its use. In effect, contextualistic ontology is itself a behavioral interaction. Beyond this we can say no more. (p. 168)

With this concluding statement, therefore, the sentence isolated by Tonneau, and indeed what is described as contextualistic ontology itself, are rendered a-ontological in that the truth-value of both are to be established behavior-analytically (based on contingent consequences) and beyond this nothing more can be said (i.e., any talk of a fundamental, final, and absolute ontological reality is irrelevant).

Perhaps the conceptual density of the 1994 publication, which was a short reply to a brief commentary on a target article, may have failed to make the foregoing a-ontological position absolutely clear to the reader. In subsequent articles, however, which Tonneau also cites, the a-ontological nature of my position is stated baldly and repeatedly. For example, when discussing the issue of truth in behavior analysis the following paragraph may be found in Barnes and Roche (1997):

When confronted with the problem of truth in behavior analysis, the most typical response is to point out that we never attempt to construct a scientific analysis that corresponds to an extant, ontological reality. Instead, behavior analysis is concerned only with a pragmatic version of the truth. From this perspective, truth is defined simply in terms of prediction and control (i.e., successful working). If a scientific statement is useful in helping the behavioral scientist to achieve the goals of prediction and control, with some degree of scope and precision, the statement is considered true. . . . *The correspondence between the scientific statement and an ontological reality is completely irrelevant.* (p. 547, emphasis added)

In this quotation the existence or non-existence of an ontological reality, or the ability or inability to refer to it, are not addressed. Rather, such issues are deemed

irrelevant. And in case the reader missed the point the following footnote was linked to this very paragraph:

To define truth as "useful in achieving certain goals" is to define truth behaviorally (e.g., having a goal and trying to achieve it are behavioral events). The truth of a behavior-analytic statement must, therefore, be defined within a particular behavioral stream, and as such a truth statement is always inherently historical and context specific. From this perspective, ontology is simply irrelevant because the behavior analyst has no grounds on which to speak of hidden essences and underlying realities. That does not mean that *ontological talk* must be abandoned, however, because it may be useful at times to speak ontologically. With that caveat, the pragmatic behavior analyst takes the view that we cannot take ontological talk (or any talk) literally as it applies to an underlying philosophy of science or an underlying reality, because truth is just successful working—no more and no less. (p. 547)

Once again, the existence of an ontological reality, or possible references to it, are neither affirmed nor denied—rather, they are treated as irrelevant because the behavioral-pragmatic approach to truth is not concerned with ontological issues (note, however, that *ontological talk* is permitted if it is deemed to be useful—I shall return to this issue subsequently).

As one final example of the expression of my a-ontological position consider the following footnote that also appeared in Barnes and Roche (1997):

When the behavior analyst utters a pragmatic truth statement. . .it may appear as *if* he or she is discriminating a correspondence between the statement and the event. However, if the behavior analyst is asked whether the statement does, in fact, reflect or *correspond* to the event he or she may simply reply; "I don't know and I don't care—I found making the statement useful, and that is all that matters." (p. 561)

The critical point here is that when asked about an ontological issue the reply is "I don't know..." Ontological reality, or the possibility that one's talk corresponds to that reality, is neither affirmed nor denied—ontology is simply irrelevant when truth is defined *ultimately* in terms of achieving specific pre-analytic goals. This is exactly the a-ontological position that I have adopted in my philosophical, experimental, and applied endeavors within the science of behavior analysis. And, as indicated previously, Tonneau seems to share my a-ontological view of the discipline when he writes: "a behavioral analysis of knowledge *per se*...is neutral with respect to the realism controversy" (p. 63).

At this point one might reasonably ask why Tonneau described my position as antirealist rather than a-ontological. I am certainly willing to consider the possibility that my writing was unclear in making this distinction, and if so I hope that this reply clarifies matters. On balance, it should be noted that I have tended not to use the term "antirealism" to describe my position, but I have characterized my view as "a-ontological" (Barnes-Holmes, 2000, p. 199; 2003, p. 149). Similarly, I have deliberately used the term "*non*realist" (Barnes-Holmes, 2003, p.

146) to distinguish my position from *anti*realism. The former indicates *not* realist (i.e., a-ontological), whereas the latter indicates *against* or *opposing* realism. Nevertheless, perhaps Tonneau would argue that any position that is not realist is, *ipso facto*, antirealist (i.e., in the realism controversy one cannot be "agnostic"). If this is Tonneau's view, then one can readily see why he characterized my position as antirealist.² Be that as it may, it remains the case that Tonneau failed to present the a-ontological or agnostic character of my work with respect to the realism controversy, and thus I have attempted to correct this misrepresentation in the foregoing material.

Implications for Tonneau's Argument

The critical point, as I now see it, is as follows. If we accept that behavioral pragmatism is not usefully characterized as antirealist (at least in the traditional sense) but a-ontological, what are the implications for the substance of Tonneau's argument? In effect, does Tonneau's refutation of antirealist conclusions in behavior analysis also apply to the a-ontological position I have described? To address this question I will now focus on the key points he raises in his article from the a-ontological position of behavioral pragmatism.

Relations and Properties

In distinguishing between *relational* and *constitutive* properties Tonneau appeals to philosophy, which may be useful at times, but he also admits that philosophers have differing views in this area and the relevant distinctions are not clear cut (pp. 57-58). In any case, for the behavioral pragmatist the explanatory mode of discourse is typically behavior-analytic, not philosophical-at least in the traditional sense (Barnes-Holmes, 2004). From the behavioral pragmatist perspective, making a distinction between relational and constitutive or intrinsic properties involves a complex set of discriminations that occur in the behavioral streams of scientists and philosophers who use those terms. Such complex discriminations may help behavior analysts to achieve their analytic goals, and indeed I have been involved in developing a behavioral theory of human language and cognition (Relational Frame Theory; Hayes, Barnes-Holmes, & Roche, 2001) that draws heavily on broadly similar discriminations (i.e., the distinction between nonarbitrary and arbitrary stimulus relations). It remains the case, however, at least for behavioral pragmatism, that talking about constitutive properties is no more or less ontological than talking about relational properties. Such talk is approached behavior-analytically using technical concepts such as the "tact." This analytic unit simply indicates a probabilistic correlation between a class of stimuli and a class of responses that was established by the contingencies prevailing in a verbal community (Skinner, 1957, p. 115). The tact, by definition, indicates nothing about

 $^{^2}$ I would find it difficult, however, to square an argument against the possibility of an agnostic position with Tonneau's statement that a behavioral analysis of knowledge is *neutral* with respect to the realism controversy.

the ontological existence or non-existence of stimuli and responses, or their bearers, in some behavior-independent domain.³ The same a-ontological status applies, of course, to all functional-analytic concepts in behavior analysis.

But what of Tonneau's example of John and his marital status? The tact "John" may continue to be reinforced by the verbal community when the tact "husband" is no longer reinforced with respect to John (i.e., following his divorce), but the longer survival value of a particular tact, relative to other tacts, has no ontological implications for the tacted stimulus or its bearer. Of course, one is free to argue that longer surviving tacts *refer* to constitutive properties and shorter ones refer to relations, but this conclusion is not derived directly from the concept of the tact *per se*. In any case, a behavioral pragmatist approach to such an argument would be to ask what purpose it serves, which might also involve subjecting the argument itself to a behavioral analysis. Such an approach, of course, is entirely consistent with the a-ontological character of behavioral pragmatism.

A Linguistic Confusion

Tonneau argues that I have confused relational (or functional-analytic) properties with their bearers, or drawn the "fallacious inference that if an entity has some relational property then it does not have any physical property" (p. 60). This is not the case, however. As argued above, the a-ontological position of behavioral pragmatism argues neither for nor against an independent reality, and thus the existence or non-existence of behavior-independent physical properties is irrelevant. And even when ontological talk is employed, such as "the universe can only ever exist in behavior" (Barnes & Roche, 1994, p. 168), it carries no ontological weight because its truth-value is to be determined by its usefulness in achieving specific goals. In this case, the statement was part of a complex verbal stimulus (i.e., the entire article) that served to orient the reader toward a possible contradiction (or paradox) in making ontological claims when our science assumes that all knowledge is behavioral (note also that the immediately preceding context for the statement was focused on "talk about the universe," not its ontology). The statement was not used, therefore, to deny, in some literal sense, the ontological existence of a nonbehavioral universe. Rather, it was used to highlight an example of verbal behavior within the discipline that might be deemed contradictory or paradoxical and to suggest a possible strategy for resolving the problem—the actual ontological existence or non-existence of a nonbehavioral reality was simply

³ Analyzing a particular tact relation may well involve employing scientific instruments to measure particular features of the tacted stimulus with some degree of precision, such as identifying the range of wavelengths that control the response "red" under certain conditions. Doing so, however, neither proves nor disproves the ontological, non-behavioral existence of the color red in terms of specific wavelengths (or quale, or photons, or superstrings, etc.). Indeed, if proving or disproving the ontological existence of objects and events simply involved measuring the physical properties that control tacts, behavior analysis would be the ultimate science and philosophy.

irrelevant to the argument. Once again, therefore, this is entirely consistent with the a-ontological approach of behavioral pragmatism.

Physical and Functional Characterizations

Tonneau suggests that the following sentence is problematic: "in behavior analysis, all events are known or defined in terms of behavioral functions, rather than as physical things that exist independently of behavior" (Barnes & Roche, 1997, p. 545). Specifically, Tonneau argues that if "Barnes and Roche mean that behavior analysts do not or cannot characterize stimulus instances in physical terms, then the claim being made is false" (p. 60). Obviously, behavior analysts frequently speak and write as if their verbal responses refer to or correspond to an ontological reality. As argued previously, however, such talk is simply used by the behavioral pragmatist to serve the achievement of specific goals and thus no ontological weight is carried by such talk. I should also point out that if the realist controversy could be settled simply by pointing to the ubiquity of ontological talk there would be no controversy! But, of course, the relevant issues are not so simple (L. J. Hayes, 1993; see also Barnes-Holmes, 2000).⁴

It is also important to note that the so-called *problematic* quotation starts with the phrase "in behavior analysis." This phrase was used to highlight the technical or explanatory concepts of behavior analysis. Indeed, the example of the metal wedge that follows focused specifically on the use of such concepts, but Tonneau once again appears to have ignored the context of the quotation. In any case, the point is straightforward. A behavior analyst may well ask a colleague, for example, "Can you see it?" when adjusting the property of a stimulus that is to be used in an experiment, but in doing so the scientist is not explaining, in behavioral terms, the emission of the question itself. From a common-sense or mentalistic perspective, the use of the word "it," for instance, may be explained in terms of an intentional act of reference, or verbal correspondence, to an ontologically real physical event (as in the example of the mental wedge that Tonneau describes). In contrast, a behavior-analytic description or explanation may employ concepts such as the *tact* or relational frame (e.g., Barnes-Holmes, Barnes-Holmes, & Cullinan, 2000) to characterize the functional relation between "it" and the stimulus. Functional relations, at least in behavior analysis, are correlational, and no mentalistic, cognitive, or intentional act of reference from the response to an ontologically real stimulus is implied when functional-analytic terms are used in a behavioral explanation.

For the behavioral pragmatist, therefore, a technical analysis of ontological talk will be cast in terms of patterns of stimulus-response-stimulus interactions, not

⁴ The realism controversy is indeed complex, and a more complete reply to Tonneau's article would involve working through many of the philosophical issues surrounding the concepts of reality and truth from a behavior-analytic perspective. However, much of this material has already been published (e.g., Barnes-Holmes, 2000; L. J. Hayes, 1993) and reworking it here would be largely redundant. I will leave it to the reader, therefore, to consult this earlier work in judging the value of Tonneau's article (or, indeed, my reply).

semantic reference, literal meaning, or some form of word-referent correspondence. The procedural instruction "set the tone to between x and y cycles per second," for example, could be interpreted as a relational network of derived stimulus relations (Barnes-Holmes, Hayes, & Dymond, 2001; Barnes-Holmes, O'Hora, et. al., 2001) or an instructional stimulus composed of tacts, intraverbals, relational autoclitics, and the like (Skinner, 1957), or perhaps a combination of both interpretations (Barnes-Holmes, et. al., 2000). In neither case, however, is semantic reference or literal correspondence to an ontological reality included as part of the explanatory nomenclature. The technical terms of behavior analysis are simply empty with respect to ontological reality, and thus neither realism nor antirealism is implied.

It must be stressed, however, that the ontological emptiness of technical terms in behavior analysis does not preclude the use of ontological talk by a behavioral pragmatist. The writing of method and report sections in journal articles, and indeed much day-to-day scientific activity, involves using the common-sense language of cognitive reference, understanding, and so forth. The distinguishing feature of behavioral pragmatism is not the absence of ontological talk, which, as argued previously, is completely acceptable if it serves a particular goal. Rather, behavioral pragmatism is distinguished, in part, by its lack of concern with the fundamental nature of reality. For the behavioral pragmatist the goal of science is the construction of increasingly organized systems of verbal rules that allow analytic goals to be accomplished with precision, scope, and depth, and based on verifiable experience (S. C. Haves, 1993). If the behavioral pragmatist is asked to comment on whether or not such verbal rules actually reflect, capture, or refer to a non-behavioral ontological reality, the scientist simply has nothing to say on the matter, except perhaps "addressing such a question takes me outside the purposes of my science."

Can Two Persons Know the Same Thing?

In the Barnes and Roche (1997) article the example of two drivers reacting to the same red traffic light was considered, and because two distinct discriminative functions are involved it was suggested "in a sense, there are two red lights—one in each behavioral stream" (p. 546). Tonneau argues that this statement provides another example of confusing relational with constitutive properties. As should be clear by now, however, the statement was not ontological but a technical, behavior-analytic claim (hence the use of the phrase, *in a sense*). That is, there are two red lights in the sense that there are two separate discriminative functions. The ontological existence or non-existence of one or two red lights in the example is irrelevant to a technical behavior analysis. To appreciate the nature of this irrelevance, imagine that the entire universe and everything we supposedly know about it was shown to be a dream or highly advanced computer program (as portrayed in the Hollywood film series *The Matrix*). Provided that the dream or program continued as before, such a revelation would not diminish the established usefulness of the technical terms in behavior analysis. The concept of a

discriminative stimulus, for example, could still be used in exactly the same way in the *dream* or the *Matrix* even though common-sense assumptions about the fundamental nature of reality had been completely destroyed. It is in this sense that the technical nomenclature of behavior analysis is a-ontological.

The Prisoner Variant

Tonneau argues that no antirealist implications arise from the "assumption, uncontroversial among behavior analysts, that knowing is a behavioral phenomenon" (p. 62). Once again, I would agree with him, and in fact I made this argument in the very article that he cites (Barnes-Holmes, 2003). But Tonneau again fails to provide the wider context of the quotation that he uses to brand my position as antirealist. The relevant quotation concerns the argument that even behavior-analytic knowledge is behavioral (i.e., reflexive) and thus the behavior analyst has no grounds on which to make ontological claims; "not even the behavioral scientist can escape his or her behavioral stream and make direct nonbehavioral contact with an ontological reality" (Barnes-Holmes, 2003, p. 148). Although this statement could be interpreted as antirealist, a few lines later it is qualified: "On balance, stating that radical behaviorism is inherently reflexive also may be defined as a behavioral event, and thus any ontological claims with regard to its reflexivity can be seen as contradicting its own reflexivity. . . . A radical behaviorist solution to this conundrum involves embracing what I have called behavioral pragmatism" (pp. 148-149). Thus within a few lines of my apparently antirealist statement the a-ontological position of behavioral pragmatism is affirmed, which, as I have argued, is neither antirealist nor realist in character. Once again, therefore, Tonneau ignored a critically important qualifying statement, but I shall return to this issue subsequently. At this point I will turn to a second issue that arises in this section of his article.

In discussing the behavioral nature of knowledge Tonneau argues as follows:

We may know an object E by reacting to E with B, thereby knowing E itself without being locked in B. A behavioral conception of knowing ("I know E to the extent that I react to it") is perfectly compatible with direct realism about E, and the world in general. True, in order to know my environment I must behave, but this does not imply that I know my behavior instead of the environment. (p. 63)

I found this statement problematic because it appears to introduce a mentalistic agent who comes to "know" stimuli or responses—I am assuming that E and B refer to these terms, respectively. As far as I am aware, however, the technical nomenclature of behavior analysis does not include a mentalistic entity or cognitive agent who engages in "knowing" about things, real or unreal. Indeed, knowledge claims in behavior analysis are interpreted as purely behavioral affairs. For example, the phrase "I know" in the statement "I know it is a red light" might be interpreted as a member of a qualifying autoclitic response class that is established and maintained by the consequences provided by the wider verbal

community (Skinner, 1957). In effect, the autoclitic is a purely functional concept and is not used scientifically to infer cognitive or mentalistic knowledge states about an ontological reality on behalf of the speaker. Needless to say, this approach to knowledge claims is entirely consistent with the a-ontological approach of behavioral pragmatism.

As an aside, I was genuinely perplexed by Tonneau's argument in this section of his article. As far as I can tell, it amounts to the claim that stimuli can be known directly (by reacting in some way) if we accept the existence of a knowing agent who knows stimuli directly. This argument is so far removed from my view of behavior analysis that I can only conclude that I have misunderstood in some way.

Conclusion

In the concluding section of his article Tonneau points out that his sole purpose was to refute the argument that antirealism follows "from any coherent practice or theory of behavior analysis" (p. 64). As I have shown, however, his arguments against antirealism do not apply to the a-ontological position that I have described. I suspect, however, that Tonneau will not be particularly satisfied with my response. Although he acknowledges the neutrality of the behavioral analysis of knowledge with respect to the realism controversy, he seems keen to push forward the "realist hypothesis" (p. 56) to the point of introducing the concept of a mentalistic agent who "knows" stimuli directly. I cannot help but conclude, therefore, that my characterization of behavioral pragmatism as a-ontological will not be enough for Tonneau. What he is really working towards is the promotion of realism, not neutrality. I will return to this issue in the next section.

Epilogue

In this final section I will point out yet another way in which Tonneau has misrepresented my work and I will then question the value of the current debate itself within the science of behavior analysis.

Another Misrepresentation

Tonneau tars me with the brush of philosophical absolutism when he attributes the following conclusion to me and other so called antirealists: "behavior analysis is, or must be, antirealist" (p. 56). Regardless of how one defines antirealism, I have never argued that behavior analysis *is* or *must* be anything. Although I have suggested that certain assumptions lead to certain conclusions, I do not believe that only those assumptions *must* be adopted. In fact, the a-ontological approach to behavior analysis that I have described in my work has always been offered as just one of a number of philosophical positions that might be adopted within the discipline. In the Barnes and Roche (1994) article, for example, four philosophical positions were examined and possible pros and cons of each were briefly considered. The article did not end with a final edict that demanded only one option be accepted. Similarly, the Barnes and Roche (1997)

article ended with the statement "*In the current context*, therefore, we find behavioral reflexivity to be a true and welcome feature of behavior analytic epistemology" (p. 570, emphasis added). In effect, the truth or value of the thesis was presented as contingent on a specific context and was not therefore a final or absolutist argument. Consider also that in the Barnes-Holmes (2000) article I wrote:

We appear to have a choice, therefore, between living with the discomfort created by there being no absolute point to science, beyond that provided by our own goal statements, or living with the philosophical problems or verbal inconsistencies created by the assumption that scientific talk corresponds (at least potentially) to an external reality. (p. 200)

Even if one disagrees with the nature of the choice, nonetheless a choice is clearly being offered. Finally, in a recent article I concluded:

Although I have argued that the concept [of behavioral pragmatism] may be of some value in helping us to clarify our fundamental assumptions and facilitate and focus our discussions on the relevant issues within the science of behavior analysis, my rendition of behavioral pragmatism should be seen as simply another instance of verbal behavior that may or may not produce the desired outcome. (Barnes-Holmes, 2004, pp. 115-116)

Once again, this statement is not a final edict on what behavior analysis *is* or *must be*, but instead offers one possible philosophical strategy that may or may not work.

Given the foregoing statements, and indeed others that I could quote from my various articles, I was again left questioning Tonneau's fundamental misinterpretation of my work—how could he get so much of it so wrong? As indicated previously, I suspect that Tonneau's agenda was not simply to refute antirealist arguments within behavior analysis but to promote or protect realism within the discipline. And one way in which to do this is to burn a straw man of absolutist antirealism, thus leaving behind the putative default option—realism. In my view, however, I think that an open and clear proclamation of his realist position, and how it relates directly to the various traditions within behavior analysis, would be more worthwhile than chasing the white elephant of antirealism around the pages of *Behavior and Philosophy*. Naturally, if I am mistaken, and Tonneau is not seeking to promote realism within behavior analysis, I apologize unreservedly. But in any case I have some doubts about the value of the current debate itself, to which I will now turn.

Are We Arguing Over the Shadow of an Ass?

At this point, I suspect that the typical behavior-analytic reader may well be thinking that Tonneau and Barnes-Holmes are "arguing over the shadow of an ass." And to be frank, I would have some sympathy with this view. A key purpose behind what I call behavioral pragmatism was to side-step the realism controversy

in behavior analysis, a controversy which seems to have raged both in philosophy and science for quite some time with no clear resolution in sight.

The basic question that behavioral pragmatism poses is this—can a behavior analyst conduct his or her science simply by working toward the achievement of clearly stated, personal, pre-analytic scientific goals while remaining free of the conceptual and philosophical burdens of the realism controversy? Behavioral pragmatism does not answer this question for the individual behavior analyst—it simply suggests some possible choices and reasons why one choice might be preferred over another.

What this approach offers, then, is the opportunity to avoid the well-worn philosophical debates in the realism controversy and to focus attention on the *psychology* of realism versus antirealism, which is where, I believe, behavior analysis and its concepts might be of some use. For example, what behavioral functions do the verbal networks we call realism and antirealism serve in philosophy and science? Do these networks affect the scientific behavior of practicing behavior analysts or are they largely verbal epiphenomena that serve only to distract, frustrate, or entertain? Does realism provide important motivative functions for some behavior analysts by endowing their scientific activities with "fundamental meaning"? And if so, why are antirealists and "agnostics" apparently motivated without such meaning?

For me, addressing these and other related questions would be far more interesting than spending yet more time beside the philosophically stagnant pool of the realism controversy. And in a sense, this approach to the controversy—to study its impact in a specific behavioral domain—is a behavioral pragmatist solution to the controversy itself. Rather than affirming or denying ontological reality *per se*, the behavioral pragmatist side-steps the philosophical quagmire and chooses instead to subject the debate itself to a behavior analysis, thus providing a "living" example of the a-ontological strategy of behavioral pragmatism.

References

- Barnes, D., & Roche, B. (1994). Mechanistic ontology and contextualistic epistemology: A contradiction within behavior analysis. *The Behavior Analyst*, 17, 165-168.
- Barnes, D., & Roche, B. (1997). A behavior-analytic approach to behavioral reflexivity. *The Psychological Record*, 47, 543-572.
- Barnes-Holmes, D. (2000). Behavioral pragmatism: No place for reality and truth. *The Behavior Analyst*, 23, 191-202.
- Barnes-Holmes, D. (2003). For the radical behaviorist biological events are not biological and public events are not public. *Behavior and Philosophy*, *31*, 145-150.
- Barnes-Holmes, D. (2004). A reply to Leigland's "Is a new version of philosophical pragmatism necessary? A reply to Barnes-Holmes." *The Behavior Analyst*, 27, 113-116.
- Barnes-Holmes, D., Barnes-Holmes, Y., & Cullinan, V. (2000). Relational frame theory and Skinner's Verbal behavior: A possible synthesis. The Behavior Analyst, 23, 69-84.
- Barnes-Holmes, D., Hayes, S. C., & Dymond, S. (2001). Self and self-directed rules. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory: A post-*

Skinnerian account of human language and cognition (pp. 119-139). New York: Kluwer/Plenum.

- Barnes-Holmes, D., O'Hora, D., Roche, B., Hayes, S. C., Bisset, R. T., & Lyddy, F. (2001). Understanding and verbal regulation. In S. C. Hayes, D. Barnes-Holmes, & B. Roche (Eds.), *Relational frame theory: A post-Skinnerian account of human language and cognition* (pp. 103-117). New York: Kluwer/Plenum.
- Bem, S., & Looren de Jong, H. (1997). *Theoretical issues in psychology: An introduction*. London: Sage.
- Hayes, L. J. (1993). Reality and truth. In S. C. Hayes, L. J. Hayes, H. W. Reese, & T. R. Sarbin (Eds.), *Varieties of scientific contextualism* (pp. 11-27). Reno, NV: Context Press.
- Hayes, S. C. (1993). Analytic goals and the varieties of scientific contextualism. In S. C. Hayes, L. J. Hayes, H. W. Reese, & T. R. Sarbin (Eds.), *Varieties of scientific contextualism* (pp. 11-27). Reno, NV: Context Press.
- Hayes, S. C., Barnes-Holmes, D., & Roche, B. (2001). *Relational frame theory: A post-Skinnerian account of human language and cognition.* New York: Kluwer/Plenum.
- Skinner, B. F. (1957). Verbal behavior. New York: Appleton-Century-Crofts.
- Tonneau, F. (2005). Antirealist arguments in behavior analysis. *Behavior and Philosophy*, 33, 55-65.