Reply

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David Boonin-Vail has enlisted my support for Eliot Sober's position against the *a priori* use of parsimony considerations in assessing the plausibility of hypotheses. The position, with which I tentatively agree, is stated by Sober as follows:

> When a scientist uses the idea [of parsimony], it has meaning only because it is embedded in a very specific context of inquiry. Only because of a set of background assumptions does parsimony connect with plausibility in a particular research problem. What makes parsimony reasonable in one context therefore may have nothing in common with why it matters in another. The philosopher's mistake is to think that there is a single global principle that spans diverse scientific matters.[1]

I believe that it is compatible with this to say that there are several kinds of parsimony, and that there may be serious doubts about which kind will properly apply in any given case, or even about what counts as parsimony. One might also wish to make distinctions between parsimony, simplicity, modesty, and related notions. However, for the purposes of this response I hope that such distinctions will not be crucial, and for the sake of brevity I will lump them together under the term 'parsimony' (although I believe that 'simplicity' is the most inclusive of the terms). Also, for the sake of brevity, I will avoid giving a taxonomy of parsimony and will instead pick out four types that are of interest here:

1. the appeal to "lower" ontological levels (or perhaps lower levels of organization);

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2. the preference for reducing the kinds of entities appealed to in an explanation;

3. the appeal to the simplicity of the models used to explain the phenomena in question (simpler models being preferable); and

4. the preference for single unifying explanations over multiple separate ones, even in cases where the multiple ones, *considered separately*, are more simple in form than the unifying one.

Harrison and G. C. Williams both make appeals to type-1 parsimony, that based on ontological levels. It is not obvious why this would be a form of parsimony at all, since ontological levels seem to have no immediate conceptual connection to parsimony. There may be logical connections to be made, but these must be argued for, and I would guess that such argument would in fact link level-parsimony to a parsimony of a more fundamental sort. I believe that Harrison, for example, roots his case primarily in a type-2 parsimony, i.e. by arguing that since we do not need extra entities such as pain states, we should not infer them. In the cases under discussion, Boonin-Vail indicates that level-parsimony is also parasitic on a type-3 parsimony: lower-level explanations are more parsimonious *because* they are simpler in form than higher-level ones. When applied to the matter of pain, this leads to the response that Boonin-Vail has ghost-authored for Harrison: Explanations appealing to pain states, because they appeal to higher-order phenomena, are more complex than explanations that appeal to hard-wiring, which is a lower-level phenomenon. Since pain states are more complex, explanations appealing to them are less parsimonious and should therefore be abandoned in favor of hard-wiring explanations.[2]

I will answer this argument as I might ghost-author a response for Donald Griffin, using a variation of type-3 parsimony or perhaps a type-4 parsimony (i.e. one appealing to unifying explanations, as follows:

It may be true that for *any particular instance* of behavior, *considered separately*, a hard-wired response mechanism is simpler than one appealing to some conscious state, painful or otherwise. However, in order to explain the *entire ensemble* of an organism's responses to its environment, a corresponding ensemble of hard-wired mechanisms may be unreasonably cumbersome. This, of course, would depend on the

organism. I suspect that a jellyfish or a clam, which would have a limited amount and variety of sensory information to integrate, and an anatomically limited set of responses available, would be quite parsimoniously hard-wired. However, most vertebrates, and some invertebrates, such as cephalopods and some arthropods, have a much greater amount and variety of sensory information, and a much greater anatomical range of responses, available. Although it is not known what threshold level of complexity is required to produce conscious states, it would be unjustified to conclude, without independent evidence, that it is greater than the total complexity involved in hard-wiring a typical vertebrate behavioral repertoire. If I were to give a quick aprioristic answer to the objection, I would say that it committed the fallacy of composition.

As Boonin-Vail says, however, Harrison might be stubbornly aprioristic in response. But even if Harrison is as *aprioristic* as Boonin-Vail claims, and is willing to ignore empirical evidence, he would still face the problem of defending his choice of one *a priori* application of a particular type of parsimony over another possible application that leads to an opposing conclusion. He could not responsibly "hide behind" another parsimony claim. If Sober and Boonin-Vail are correct (and I believe that they are), a defense of his choice would force him to pay attention to the concrete purposes and to the particular empirical circumstances of that application.

Notes

[1] Eliot Sober, "Let's Razor Ockham's Razor," pp. 73-93 in *Explanation and its Limits*, ed. D. Knowles (Cambridge: Cambridge Univ. Press, 1990), p. 77.

[2] David Boonin-Vail, "Parsimony Made Simple: Rosenfeld on Harrison and Animal Pain," pp. 4-5.

Books Received

Richard D. Ryder
PAINISM
Ethics, Animal Rights and Environmentalism
Cardiff: University of Wales College of Cardiff, Centre for Applied Ethics, 1992
15p
paper/no price stated

Danny Wilson
CURING YOUR DOG'S BAD HABITS
Treating Behavioral Problems
New York: Sterling Publishing Co., Inc., 1993
103p, index
$9.95 paper