

Review of: "Femmes finales: natural selection, physiology, and the return of the repressed"

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This is an interesting and worthy article. I'm familiar with some of the author's other recent work in the history and philosophy of biology, notably his book *From Darwin to Derrida* (2020). Like this article, the book doesn't aim for an exhaustive history of its subject, instead it supports an essentially philosophical and scientific argument with well chosen examples, primarily from the 19th century.

The spine of the article is a discussion of teleology in evolutionary biology and the role of Darwin in either banishing or accommodating it. This is very well trod ground. But the author manages to provide some interesting context, especially in the exploration of Whewell's views and the recognition of a separate history of teleology among physiologists.

In general, the range of sources were well chosen. One minor nitpick: Peter Hoffman's *Life's Ratchets* is a fine popular introduction to molecular biology; I'm not sure it's a particularly well chosen source for the history of biology.

I have one stylistic criticism, regarding brevity. I thought some of the quotations from sources could have been trimmed while retaining their import. And perhaps some of the opening passages playing-up the theme of gendered metaphors were slightly extraneous to the rest of the article. This doesn't detract from the argument.

My only criticism of the argument is that there was perhaps a glossing over of those biologists and philosophers who outright deny teleology even in its figurative usage (e.g. David Hanke, Alex Rosenberg) even when describing human, apparently purposeful, behaviour. Such commentators — who are a minority but I number myself among them — would be immune to the criticisms of the mechanists given in the conclusion. But again, the overall argument wasn't particularly harmed and this remains a fascinating contribution to a storied debate.

Finally I'll note one other absence. Because no book let alone article can contain everything about a topic, I do feel that reviewers' comments that focus on what is missing are lame. So please consider this a discussion point or comment, rather than criticism. It strikes me that a lot of the modern day (since the 1980s) chariness around teleology can be explained partly by the presence of the Intelligent Design movement and other creationist or anti-science groups. Some biologists, including well-known popularisers like Dawkins, have clearly modified their language so they can achieve two things: (1) emphasise the non-supernatural explanatory power of natural selection but still (2) deny ammunition to religious critics who say that Darwinism is an ideology of purposelessness. This doesn't explicitly contradict anything in the present article but does add some context.

