

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

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This paper traces the history of two sexualized metaphors (the “barren virgin” and the “mistress” metaphor) in the biological sciences, and in the process, paints a vivid picture of differing views about teleology and “final causes” in 19th and 20th century biology. Overall, I found the paper insightful, informative, and enjoyable to read.

In my view, there are two distinctions that might be worth stressing. The first is the distinction between organismic and cosmic teleology that is introduced in section 3.6 as the difference “between the final causes of organismic parts and the final cause of all things”. Interestingly, it seems that the “barren virgin” metaphor is applied to both types of teleology, while the “mistress” metaphor is used exclusively to describe the first (organismic) type. I think it might be helpful to point this out (see also Stephen Mann’s comment).

The second distinction I have in mind is the distinction between naturalized organismic teleology (“teleonomy”) and fundamental, irreducible organismic teleology. For instance, Darwin himself seems to be a clear proponent of naturalized teleology, who takes the purposes of organismic parts to be grounded in selectional history, while Asa Gray is much more ambiguous on this point. Or, to take another example, the “mistress” that Colin Pittendrigh wants to get “out of the closet” is naturalized teleology, while the “mistress” that Otto Loewi refers to is teleology of the fundamental, irreducible kind, etc.

Finally, it is in connection with the topic of naturalized organismic teleology that I have one minor criticism to make. In section 5, the author discusses “non-purposive” (i.e., non-teleological) CR functions and contrasts them with “purposive” (i.e., teleological) SE functions. This may suggest to the reader that the only possible naturalistic account of teleological functions (and, ipso facto, of organismic teleology) is an account that appeals to selectional history. However, there are a number of alternative (non-SE) accounts that also aim to naturalize teleological functions, e.g., the “goal-contribution theory” (Boorse 1976, 2002), the “propensity theory” (Bigelow & Pargetter 1987) and the organizational account (Mossio et al. 2009) (see Garson 2016 for a survey). Proponents of these theories need not (and typically do not) deny that many or even most of the function-bearing traits of an organism are the products of natural selection, they merely deny that the functions of these traits are partly *constituted* by selectional history.

That said, I do agree that the SE approach is the most well-developed and probably also the most promising way to naturalize teleological functions.

References

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