

Questioning the Darwinism that Lynch Presents as a Viable Basis for Humans to Pursue Science

Peter J. Taylor, University of Massachusetts Boston

Bill Lynch was a student and colleague of Steve Fuller in sociology and philosophy of science, co-editing a volume with him (and Thomas Brante) on scientific controversies in the early 1993. His appreciation of Fuller's thinking led him to write a wonderfully informative review of Fuller's interpretation of the origins and impact of Kuhn's extremely influential writing on the dynamics of science (Lynch 2003). Lynch's current contribution takes on a more recent book by Fuller (2008) in support of intelligent design, which, in brief (based on the Lynch's account), sees purposeful design of the natural world as necessary for humans to be motivated to seek knowledge in the systematic manner of science. (Social epistemology becomes theistic epistemology?) This effort is not so compelling to me.

Lynch's critique is not a social study of Fuller bringing philosophical and social studies of science into the legal dispute in the USA over the teaching of intelligent design, nor is it an assessment of the impact (or lack thereof) of Fuller's contribution to philosophical and social studies of science. Instead, Lynch presents Darwinism, as he construes it, as a viable basis, *contra* Fuller, for humans to pursue science.

Lynch's contribution is very long. As a reader with a background in evolutionary biology and science studies, I was not able to get through to the end, for the following reasons:

- 1) I needed to see Fuller's argument presented succinctly in a way that commanded enough respect to warrant a critique. Instead, the presentation of Fuller's argument left me unsure why Fuller would not argue the opposite, namely, that intelligent design, by positing a designing agency, inhibits science—why bother to investigate how the natural world works when some overarching agency can intervene to change that?
- 2) Moreover, I am skeptical that there is a singular institution called science. Instead, I am interested in teasing out the constellation of factors that shape any episode of systematic knowledge-making (or –disrupting) in a given place and social context (Taylor 2005). What would Lynch (and Fuller) offer as evidence to lead readers like me to accept their formulation?
- 3) I disagree with Lynch on some very basic concepts about Darwinism, in particular, a) evolution should be distinguished from natural selection and b) natural selection should be understood as a metaphor (Taylor 1998).

In brief:

- a) Yes, *On The Origin of Species* is about evolution, that is, about how the diversity of forms we observe are descended from common ancestors through a series of

modifications over time. But Darwin's purpose was not merely to establish that evolution existed; many before him had noted the changes in fossils from one layer to the next. As he wrote in the introduction, his central problem was to provide a mechanism for evolution that accounted for adaptation:

It is quite conceivable that a naturalist, reflecting on the mutual affinities of organic beings, on their embryological relations ... and other such facts, might come to the conclusion that each species had not been independently created, but had descended, like varieties, from other species. Nevertheless, such a conclusion, even if well founded, would be unsatisfactory, until it could be shown how the innumerable species inhabiting this world have been modified, so as to acquire that perfection of structure and coadaptation which most justly excites our admiration (Darwin 1859, 3).

In this light, it is not evolution by natural selection, as claimed by Lynch (2016, 29), but simply evolution that makes predictions about transitional fossils.

b) Yes, *On The Origin of Species* relies on close relation between artificial and natural selection. Chapter 1 in all its length serves to impress on readers that selection is effective under Man. Given that the same elements exist in Nature (variation, inheritance of some variants, differential survival, etc.), and act even more strongly (“natural selection is daily and hourly scrutinizing”, 84), selection should, according to this analogy, be effective under Nature. However, for Darwin there is no Selector in Nature. Unlike artificial selection, there is no agent that uses a criterion to select which organisms survive and reproduce. Darwin is leading readers to see the evolution of adapted organisms metaphorically *as if* there were a selector, not literally. In this light, it is misleading for Lynch to relate adaptations in nature and designs produced by humans (except perhaps in the special case where human designers use genetic algorithms).

If Lynch were to acknowledge and address the three issues above, his contribution would be longer still. My sense, however, is that his view of Darwinism is what drives his taking on of Fuller and so it would be difficult for him to satisfy a reader like me. I note that Lynch is generous to Fuller in taking his ideas seriously enough to compose a lengthy critique. Might I have been more generous to Lynch and even to Fuller, read their works fully, and responded in length? Perhaps, but, with other overdue work on my plate, let me simply invite both the defender and the opponent of Darwinism to consider my account of the limitations of Darwinism even on its home turf, that of explaining biological evolution (Taylor 1998). That article was meant to help clarify and strengthen the counter-arguments made to particular natural selective explanations of human behavior and social organization, such as male homosexuality, and clear some space for richer, social accounts of change and function. Intelligent design exponents be warned—not all science studies critics of Darwinism play into your hands.

Contact details: peter.taylor@umb.edu

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