Was Darwin a Materialist?

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Darwin was not a materialist in the contemporary sense

However, it did not play a significant role in his scientific theorising

Orthodoxy says Darwin the materialist developed a materialist theory of evolution. I will argue that this is a mistake:

* Darwin was not a materialist in the contemporary sense
* Darwin did have some sympathy for a different kind of materialism
* In context, Darwin’s materialism was in one way particularly radical
* However, it did not play a significant role in his scientific theorising

“Why should Darwin have been able to develop such a thoroughgoing materialism at a time when the vast majority of his contemporaries were still committed to design and the unique spiritual status of man?” —Peter Bowler, *Evolution: The History of an Idea*
What is Materialism?

A first distinction:

* **Global Existence Materialism**
  Everything that exists is material.

* **Local Existence Materialism**
  Everything that exists in some domain is material.

* **Global Methodological Materialism**
  All explanations should only employ material causes.

* **Local Methodological Materialism**
  All explanations in some domain should only employ material causes.
What is Materialism?

A second distinction:

* Was Darwin a materialist (in any sense)?
* Was Darwin's theory (in the Origin) materialist (in any sense)?

Don’t confuse these questions!

Stephen Jay Gould (Ever Since Darwin) asks: “Why has Darwin been so hard to grasp?” , and answers that “the stumbling block lies [...] in the radical philosophical content of Darwin's message”, which includes the claim that “Darwin applied a consistent philosophy of materialism to his interpretation of nature”. But Darwin being a materialist does not entail that Darwin’s theory is materialist.
What is Materialism?

A third distinction:

- **Passive Materialism**
  Matter is essentially non-living and non-mental.

- **Active Materialism**
  Matter is not essentially non-living and non-mental.

The moral so far—we have many questions, not one.
Materialism in our sense means global existence materialism (and sometimes local existence materialism about the mental), with a passive conception of matter.

This is not what the term meant in Darwin’s time, when it was sometimes used in a way that implied certain moral and political commitments, sometimes used as a synonym for atheism, and often used to describe forms of active materialism.

The question whether Darwin was a materialist in our sense is simply answered: he was not. On the assumption that God is not material, global existence materialism implies atheism—and Darwin was never an atheist.
Darwin’s Materialism

* A more complex and interesting question is whether Darwin endorsed *local existence materialism* in the domain of the *biological* or the *psychological*.

* In Darwin’s notebooks, begun aboard the *Beagle* in 1836 and concluded in 1840, we find Darwin exploring forms of *active materialism* about both.
Darwin’s Materialism: Biology

* In one passage, Darwin flirts with a classic argument for an active conception of matter:

“Will any inorganic substance cause such monstrous growth as oak galls or rose buds galls. — is it not effect of superadded vital influence?” (Notebook A: Geology)

* In another, Darwin considers a conservation principle governing active matter, which links complexity with species duration:

“The living atoms having definite existence, those that have undergone the greatest number of changes towards perfection (namely mammalia) must have a shorter duration, than the more constant” (The Red Notebook)
Likewise, in the Old and Useless Notes, Darwin flirted with active materialism about the mind, though here he was more hesitant:

“thought, however unintelligible it may be seems as much function of organ, as bile of liver.— ? is the attraction of carbon, hydrogen in certain definite proportions (different from what takes place out of bodies) really less wonderful than thoughts.— One organic body likes one kind more than another— What is matter? The whole a mystery.”

“We see a particle move one to another, & (or conceive it) & that is all we know of attraction. but we cannot see an atom think: they are as incongruous as blue & weight: all that can be said that thought & organization run in a parallel series”
Darwin’s Materialism

- In sum, in the years between the *Beagle* and the *Origin*, Darwin leaned towards *local existence materialism*, with an *active* conception of matter, in the domains of both the *biological* and the *psychological*.

- Nevertheless, Darwin did not see how to push these lines of thought far enough to develop a scientific theory of either life or mind. He despaired at understanding the nature of matter, and concluded that at best we could determine that thoughts run in parallel with brain organisation.
Materialism and Atheism

- An active rather than passive conception of matter was in fact more radical in Darwin’s time, since it was taken to be more likely to lead to atheism. This was because it undermined two forms of argument from design that relied on the limitations of passive matter:

  - First, an argument endorsed by e.g. John Locke. Since matter essentially lacks both motion and thought, their existence points towards an initial creative force.

  - Second, an argument endorsed by e.g. Charles Bonnet and Albrecht von Haller. On the preformation theory of reproduction, every individual begins as a pre-organised “seed” of matter, which again points towards an initial creative act.
Materialism and Darwin’s Science

By the time Darwin set out, in his essays of 1842 and 1844, an initial abstract of the theory eventually published in the Origin, the section on instinct simply sets aside the question of materialism:

“the facts and reasoning advanced in this chapter do not apply to the first origin of the senses, or of the chief mental attributes, such as of memory, attention, reasoning, &c, &c, by which most or all of the great related groups are characterised, any more than they apply to the first origin of life, or growth, or the power of reproduction”.
By the time of the publication of the *Descent of Man* (1871), he did not simply set the question of materialism aside, but expressed scepticism that it was tractable:

“In what manner the mental powers were first developed in the lowest organisms is as hopeless an enquiry as how life itself first originated. These are problems for the distant future, if ever they are to be solved by man”
Materialism and Darwin’s Science

- For Darwin’s theory to work, all that was required was that there be heritable differences in fitness in a population—and as he rightly recognised, we can determine that this is the case without having any theory at all of what grounds inheritance.

- Darwin’s theory, then, was *neutral* on the question of materialism.

- In seeing this, we better appreciate Darwin’s particular genius, which in part consisted in a disciplined focus on questions that were scientifically tractable, given the evidence at his disposal. The pattern and process of evolution fell within his reach. The question of materialism, he rightly saw, did not.
Further Reading

- Darwin’s *Notebooks*. http://goo.gl/XDbDI

