

In Chapter 8 of *Sex and Death*, Sterelny and Griffiths argue that sometimes organisms can be seen as superorganisms, yet they do not introduce a strong method for differentiating between individual organisms and superorganisms. They introduce the idea of physical boundaries to differentiate between the two, but admit that “Nothing seems to make one boundary right and the other wrong.” This seems to me to be a weak method for differentiation. How can they justify viewing evolution in terms of superorganisms if this is the case?

[Following Mayr] what if species are truly only artefacts of the human mind, reflecting nothing truly empirical in nature but only the subjective whims of humans with questionable motivations for making sense of the world around them. We are categorizers, from Linneus on, but does this really reflect what's going on in nature?

Is morphology still a valid means of distinguishing species? Is the use of genetic techniques really a valid replacement for the traditional approach given the debates over the nature of genes and coding for traits and the subjectivity of researchers examining minute polymorphisms in massive sequences of code? How can a synthesis of morphology and genomics be obtained for taxonomic ends?

It seems to me that nothing will adequately sort all organisms [into species]. Perhaps the very notion of species is specious. How can we speak of speciation when we cannot define species? How can we talk about the origin of species if "species" is an amorphous nebula of meaning that stretches when it needs to accommodate a deficiency in the previous usage. Perhaps this is why evolution as a theory is so hard to argue against -- it doesn't REALLY say anything new.

To me a character trait like altruism in humans seems to come more from environmental influences and upbringing than genetics and as such could probably be presented as an example in support of the non genocentric view. With many complex traits it is almost or entirely impossible to tell whether they have a genetic cause or are created by the environment.

Is it necessary to have an evolutionary theory that works for all life, or are some creatures so different than others that perhaps their methods (and levels) of replication and interaction are too different to fit under one theory?

If there is no single accurate definition for a species, is this disagreement harmful for evolutionary biology?

How does a statistical probability affect an organisms behavior? Does natural selection essentially do the calculations and act in such a manner that is statistically favorable to genes that somehow produce this behavior? Do "selfish" genes that somehow promote altruistic behavior simply get selected for?

if both siblings are capable of reproducing and passing on their own genes, how/at what point does instinct/behavior/genes kick in and tell one to care for another's offspring? Why does behavior change in one organism and not the other?

There's been a lot of discussion of singularity or multiplicity of kinds of units of selection, and no-one seems to talk about the possibilities (heuristic and otherwise) of multiple selections or multiple mechanisms of selection. I'm not sure if I can make this idea clear yet, but the metaphorical picture in which "nature selects" implies a single, active subject (nature), and this metaphorization of nature seems to play some part in the structure of these debates.