

2 Review: The theory of evolution has been widely regarded by biologists as a means of explaining the characteristics of existing forms of life.

Thesis

The thesis is that: “Behe gathers support for the theory of intelligent design by misunderstanding the concept of natural selection, and wrongly assuming that neo-Darwinism is the only reasonable explanation for the present complexity of life given the relatively short history of the earth.” The thesis is easily identifiable, coherent, and is effective at setting up potential arguments in the body paragraphs.

Arguments

Paragraph 1: “*The theory of evolution has been widely regarded...*” The intro paragraph is well written and there is a easy to follow progression. However, If neo- Darwinism states that evolution occurs through natural selection alone, how can it be used interchangeably with the modern evolutionary synthesis that incorporates genetics?

Paragraph 2: “*The theory of evolution as understood...*” What is the logical fallacy? This paragraph is confusing and irrelevant if not further developed. How is the second statement possibly true and why is it completely fallacious?

Paragraph 3: “*Yet Behe finds issue with NS (natural selection)...*” What is the intensional fallacy? Behe accepts that evolution can explain some biological systems but finds issue with natural selection as a means of producing irreducibly complex systems. “Evolution does not necessarily use natural selection”- author contradicts him/herself. It was stated in paragraph 1 that evolution occurs solely through natural selection. The author fails to make the distinction between neo-Darwinism and the modern evolutionary synthesis. If a distinction is not made, the reader will naturally assume that evolution and neo-darwinism are the same thing resulting in the above mentioned contradiction.

Paragraph 4: “*Behe’s accusation of natural selection’s impotency...*” The author includes cites two scientist with similar views on natural selection as Behe to demonstrate that they concede to the existence of evolution, but only on a microevolutionary scale. The author also references an effective piano analogy to describe the proposed constraints of natural selection. Also the last sentence acts as a good transition into the next paragraph.

Paragraph 5: “*Changes in a population’s phenotype...*” The author cites the result of a study of flies exposed with ether to highlight the point that an organisms phenotype can change without an adaption to an environment. The paragraph effectively articulates the authors main point and provides good support for his or her argument.

Paragraph 6: *“The reaction of the fruit flies to the ether...”* The fruit flies were not becoming more suited for their environment, they were only reacting to their environment. This supports the argument that phenotypes can exist in a population without any adaptive advantage as long as it is not maladaptive. This is a solid argument that further supports the authors position.

Paragraph 7: *“A phenotype is not necessarily indicative of an adaptation...”* The first sentence sounds redundant (fifth paragraph). Author describes the Behe argument of irreducible complexity which is used as evidence against evolution. This paragraph is setting up the argument in the next paragraph by giving background of an opposing viewpoint that is going to be later refuted/expounded (paragraph 8).

Paragraph 8: *“The bacteria E. coli can naturally break down the sugar lactose...”* The author cites another study to bring attention to the fact that there are constraints on selectability. The wording, however, is dense and not easily comprehensible. What are the implications of constraints on selectability?

Paragraph 9: *“External constraints on selectability also exist...”* The example of the zebra stripes is effective at illustrating the point of “the ascent of the abundant” to support external constraints on selectability. The authors argument that natural selection is not the only scientific explanation for the complexity of life is adequately supported.

Paragraph 10: *“There is evidence that some seemingly complex characteristics...”* The Fibonacci spiral is used as an example of a complex relationship/characteristic that is too ubiquitous in nature for it to be a product of evolution. At first it appears that the author is shooting himself/herself in the foot by conceding that evolution cannot explain such complexity in nature. However, the author offers the alternative explanation of elaborate self organizing interaction on the molecular level as witnessed in experiments. The idea is fascinating and effectively supports the authors position.

Paragraph 11: *“Behe makes a case for intelligent design...”* The conclusion is concise and adequately sums up the paper. The author incorporates various points from the preceding paragraph to restate his/her position and the argument refuting Behe’s attack on evolution/natural selection.

Structure

The paper is well written and the paragraphs seem to flow fairly well. The structure of the paragraphs are good, however, more transitional phrase should be implemented to add to the fluidity of the paper. A title should be included to make the paper look more professional and to provide the reader with some idea of what to expect. The arguments are relevant and the author does a good job at relating them back to the thesis.

Language and Mechanics

The word “dearth” sounds awkward even though it is used correctly. There are minor mechanical mistakes with apostrophes and periods at the end of sentence as evident in the second paragraph. There is also ambiguity in the second paragraph in the second and third sentence in reference to “observation” and “claim” respectively. Also in the second paragraph, the word understood (in the first sentence) should be replaced (proposed?). In the third paragraph, natural selection should not be abbreviated by NS, its not that long. If it were a word like chlorofluorocarbons (CFC’s), then an abbreviation would be appropriate. In the fourth paragraph, the word “they” is ambiguous and there are three apostrophes in the ninth paragraph.

Final Thoughts

The author is very familiar with the topic of discussion and presents coherent arguments with supporting evidence. The writing style is advanced yet