

Opening the Black Box - Review

While Behe may think he has all the answers, contrary research has shown there are other answers worth consideration.

- Summary
 - Behe says Darwinian evolution can't be used as an explanation for life because it cannot account for irreducibly complex organisms, but research by Richard Lenski has shown there could be an explanation for these irreducibly complex organisms so Behe doesn't have to be quick to point to the supernatural.
 - Behe defines irreducible complexity by demonstrating its use in an example of a mousetrap.
 - The idea of the mousetrap to display irreducible complexity can be refuted because mousetraps cannot evolve and you can remove a part with it still working but not as efficient. This goes for living evolved organisms as well. As an example the base of the mousetrap could be removed and the remaining parts can be attached to the floor.
 - John H. McDonald disagrees that mousetraps are irreducibly complex, designed a series of animations to prove it, and acknowledges that it is only used as an analogy. McDonald shows how to make a system more complex but you can still modify it back into its simplest form.
 - With the use of a computer program called Avida, Lenski created digital organisms capable of self-replication, mutation, competition, and evolution as well as conducted knock out experiments, which both disprove the concept of an irreducibly complex structure.
 - Lenski found that the foundational role of the simpler functions as the origin of more complex ones was evident. He acknowledges that digital organisms aren't the same, but they go through the same processes. This data supports Darwin's theory of evolution, and disproves Behe's argument.
 - Behe claims Lenski's study has precious little biology, but doesn't go any further to convincingly disprove the study. His comments on the paper also show he is either intentionally or unintentionally misunderstanding it. Behe may argue in favor of intelligent design, however most of what he says comes from Creationistic ideologies.
 - Behe makes false assertions like how antibodies are irreducibly complex, but this is not true because they don't need to rely on other antibodies, they can function on their own. There are functions of the immune system that Behe didn't even bother to consider.
 - Rather than use hard evidence, Behe reverts to using metaphors and analogies to back up arguments, as well as failing to acknowledge studies that contradict his ideas. While these put scientific terms into accessible terminology, they don't prove any point.
- General Comments
 - An overall good paper. You are lacking many citations and a bibliography, so make sure you are citing the quotes correctly. You have many good

points, evidence, and sources, which make for a strong argument. Your thesis makes it seem you are trying to touch more on the different answers worth considering, but you focus more on Behe instead.

- Specific Comments

- P1

- This is a well-structured paragraph that sets up your paper well.
 - The use of the breaking of the mousetrap phrase can be taken out since it doesn't add much to the already long sentence.
 - Grammar
 - When using quotation marks, the punctuation always goes inside the quote marks. ("Darwin's Black Box,")
 - Commas are used to separate two independent clauses separated by a conjunction. Take out the comma after life "...universal explanation for all life because it..."
 - "...irreducibly complex organisms and that Behe..."

- P2

- Good introduction paragraph of irreducibly complex organisms.
 - Does Behe argue that all the parts must have "evolved" simultaneously, or rather that they were just designed. Be clear with your word choice when distinguishing between Behe's intelligent design and evolution.
 - Grammar
 - Always add punctuation at the end of a quote if its at the end of a sentence, usually it's a comma inside the quotation marks. (...cease functioning,")

- P3

- Unidentified words like "this, that, these" can leave the reader wondering what you are referring to. Make sure they know exactly what you mean by "this" in the first question.
 - Give the reasons why there are holes in Behe's mousetrap argument. It sounds as if you are listing the holes, so using "besides the fact that..." doesn't work in this context. If you take it out, your explanations of the holes works better.
 - You already stated that living creatures, and not manmade devices could adapt, so if you list that "hole" second, you can move more smoothly into this supporting evidence.
 - A conclusion sentencing summing up the reasons behind proving why Behe's argument is invalid would help the reader.

- P4

- Once you get a little past halfway, your argument becomes muddled. It is unclear what the evolution you are describing means. If you are able to pinpoint your argument by presenting this evidence, it will be clearer for how to phrase McDonald's work and the entirety of the paragraph.
 - Grammar
 - You need a citation for the quote.

- Again, “that” is unspecific.
 - “actually evolve, and **it** is...”
- P5
 - This new point is good and flows into the essay so far.
 - The only issue is the insertion of the “intelligent designer” at the end of the paragraph since it was never mentioned before. Either explain it more in paragraph 2 with the rest of Behe’s argument, or add more detail in this paragraph. Also explain the reasons why this pokes a hole in the ID argument, i.e. interpret Lenski’s results for yourself.
- P6
 - I had a little trouble understanding the first quote in this paragraph. It would make it easier for the reader if you were able to interpret this and explain your reasoning for inserting it into the paragraph.
 - Where is it shown that there are no missing links or lost descendants in this digital evolution? Isn’t there competition present? This is also the first time you introduce Darwin’s theory of evolution.
 - Which crucial concept are you referring to? Irreducible complexity? Be specific with your “this.”
 - Make a point rather than a question, it strengthens your argument: “it can’t be true in the face of...”
 - Grammar
 - “...structurally insignificant *can* evolve into... object with”
- P7
 - You accuse Behe of misunderstanding the article, but you should also add proof of how he does. Give an example from the book.
 - It is confusing to the reader if you introduce a new idea at the end of a paragraph, such as relating ID to creationism. Expand on this idea further and add a conclusion sentence.
 - Grammar
 - Remove the first “failed.”
 - Behe is the subject of your sentence, so rearrange the two clauses so the Behe one precedes the Lenski clause.
 - “instead **he chooses** to ignore...”
 - Take out “in truth, much of what” and just keep “The little that he has said...”
- P8
 - Good direction with the repudiation of Behe’s assertions.
 - If Behe had in fact considered these extra functions of antibodies, how would this have changed his analysis?
 - What would be his reasoning behind not fully recognizing the functions of antibodies? (He is able to make his argument appear stronger at the expense of the less informed reader.)
 - Grammar
 - Titles should be in italics: *Darwin’s Black Box*.

- No comma before because.
 - When inserting a quote in the middle of a sentence, make the first word lowercase.
 - When using quotes within quotes, use the single quote marks ('').
 - Use correct citations. Also, the information about antibodies isn't common knowledge. If you looked this up, it would be useful to use a citation for it.
- P9
 - Good conclusion. You hit all the points listed throughout your essay, and they flow nicely together.