

Letter to Nereyda III

Making evolution simple

By and Based on the Books of Robert J. Cormier (www.thefaithkit.org)
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Letter to Nereyda III

Making evolution simple

Dear Nereyda,

Like my last two letters to you, the purpose of this one is stated by its subtitle.

Like my last two letters to you, this is another attempt to explain things without lots of historical background and other information not everyone needs.

Evolution shouldn't shock people, Nereyda, because we see it all the time. Certainly we've seen the evolution of the automobile, of football, and of society in general. As living things "grow up," we see them change with time, and we see them "develop." In other words, with time they get more complex, capable, and even beautiful. Therefore, it really shouldn't surprise us that the world itself, and life within it, has been subject to development over the course of billions of years!

After all, we've learned to look for natural explanations for the things in nature; and evolution would be a natural way to get from a bunch of stardust that coalesced into our planet all the way to the world of diverse and complex creatures we see today.

Besides this, there is evidence. Most famously there are the remains of creatures that, not only no longer exist, but also look like primitive versions of the creatures that, today, do exist. Then there is the fact that all the creatures that do exist can be grouped into larger and larger categories—cats, mammals, warm-blooded animals, animals...—that plainly indicate a common ancestor from which the categories of today branched off at different times in the past. How about the fact that humans have a tailbone, and that when we are embryos we have a tail!?

The question is, How do we explain evolution? Let's start from the beginning—the origin of life itself! Here's what we notice: If you have a lot of chemicals sloshing around, some of them will stick together and form something bigger. As some of these new big things continue to get bigger,

some will stumble onto a process by which they reproduce themselves. Because they reproduce themselves, their offspring have time to get more complicated. Some *will* get more complicated because they can. In other words, if you have a bunch of things going through the motions that makes them what they are, some of them will stumble onto processes that make them more complicated. Now, we have the beginnings of the beginnings of cells; nature had billions of years to bring this about.

But development itself was just beginning. Why? The simple answer is: Any structural improvements that helped primitive creatures to survive, *and have offspring*, was more likely to become part of what they passed on to their offspring.

And where do these “improvements” come from? Here people sometimes get confused because, like lots of natural phenomena—like the forces that make mountains—there is no one answer.

One famous mechanism is this: If one creature has several offspring, no two will be exactly alike. Some will be stronger or weaker in certain ways. It’s just an accident of the process of reproduction. Nonetheless, the stronger one will be more likely to survive and have offspring and pass on their special strength. In time, this strength grows into an ability to do new things. (Certainly, as we ourselves get stronger, smarter, etc., our muscles, brains, etc., come to do new things.)

It is also clear that, during its lifetime, a creature can learn things, and change structurally, in ways it can pass onto its offspring. This, plainly, is where animal instincts come from!

One way this might happen is this: We know that, the way most creatures developed, there is a constant “turnover” in the cells that make up their bodies. We also know that cells themselves are always undergoing changes. Perhaps “good” changes, changes that help a creature to survive and thrive, are “remembered” by its structure thanks to the chemicals that come with longer life or greater energy. Don’t we during our own life notice the quiet accumulation of good habits that comes from experiencing, often unconsciously, that this or that is a better way of doing things? Of course, a precise scientific description of such a mechanism is currently lacking, but the science of evolution is just beginning!

Almost certainly such a mechanism is there to be discovered. Humanity's growth in faith and love—the reason for creation—is mainly driven by things we gain through experience during our lifetime. Wouldn't it be right and beautiful if this process were a natural extension of the same process that gave us life in the first place? Wouldn't it be right and beautiful if our very existence were the product of generations and generations of lives, onto death, spent learning?!

One last thing: For obvious reasons, different environments give rise to different evolutionary developments. In different environments different improvements will aid a species' survival. This was the observation that first led to the scientific study of evolution, and it is still a fine explanation for the diversity of life today.

Dear reader,

If, perhaps, you might like to read the first and second letters to Nereyda, just go to the Christian Materialism menu of www.thefaithkit.org/panorama2.