



Why the Efficiency of Biological Organisms Cannot Be Explained by Evolution

Even atheistic scientists stipulate to the [appearance of design in biological organisms](#). [Richard Dawkins](#) would be the first to agree: “Biology is the study of complicated things that give the appearance of having been designed for a purpose.” One example of the appearance of design in molecular organisms has become the icon of the Intelligent Design movement. [Biochemist Michal Behe](#) wrote about the bacterial flagellum twenty years ago in his famous book, *Darwin’s Black Box*. The flagellum bears a striking resemblance to the rotary motors created by intelligent designers. [University of Utah Biology Professor David Blair](#) describes the amazing similarities: “An ensemble of over forty different kinds of proteins makes up the typical bacterial flagellum. These proteins function in concert as a literal rotary motor. The bacterial flagellum’s components stand as direct analogs to the parts of a man-made motor, including a rotor, stator, drive shaft, bushing, universal joint, and propeller.”



In my latest book, *God’s Crime Scene*, I describe [eight attributes of design and explain how the presence of these attribute is best explained by the activity of a designer](#). When these eight design characteristics are present in objects we observe in our world, we quickly infer a designer without reservation. As it turns out, the same attributes of design (dubious probability, echoes of familiarity, sophistication and intricacy, informational dependency, goal direction, natural inexplicability, efficiency/irreducible complexity, and decision/choice reflection) are present in bacterial flagella, making them prohibitively difficult to explain on the basis of chance mutations and the laws of physics or chemistry alone. Life at its simplest and most foundational level demonstrates a staggering level of efficient complexity.

The natural mechanisms of strict evolutionary processes can’t explain the flagellum for an important reason: these processes can’t account for efficient, irreducibly complex micro-machines. Darwinian evolution requires a *gradual* and *incremental* pathway to any finished micro-machine. Like complex structures built from LEGO building blocks, sophisticated micro-machines, if assembled through an additive process of natural selection, must come into existence *incrementally*—“block by block.”

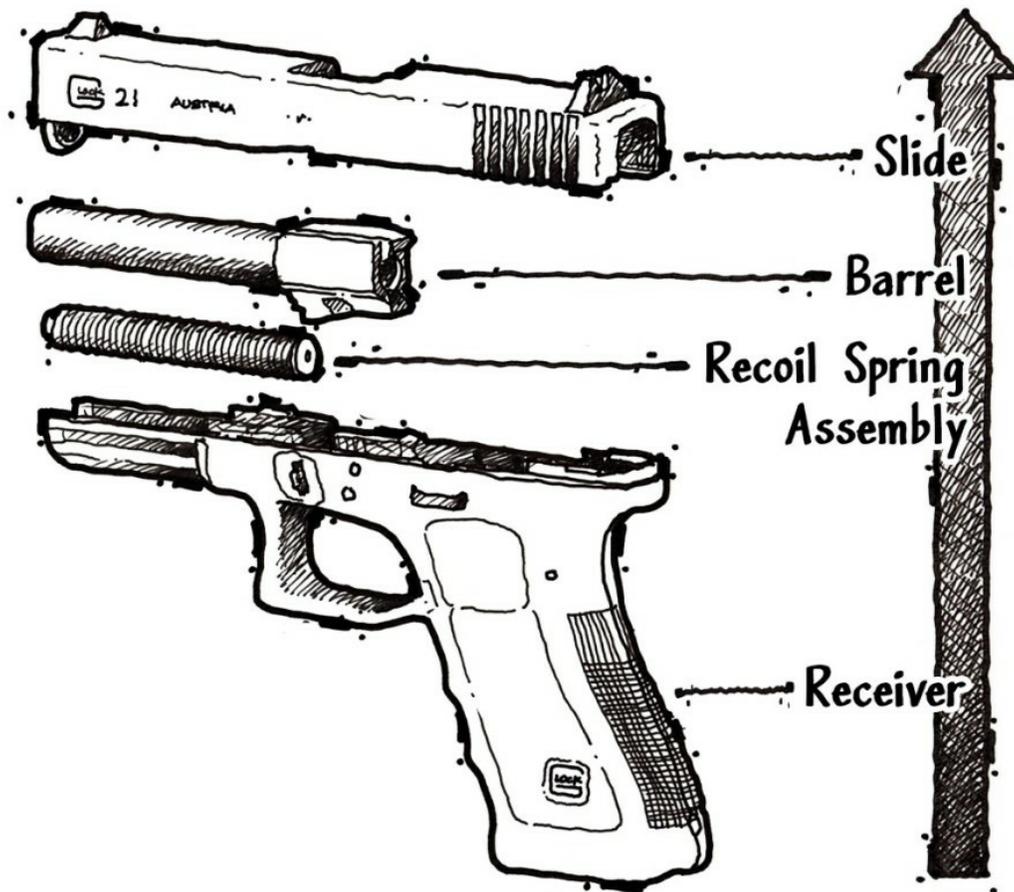
Committed as he is to the creative power of natural selection, Dawkins understands the necessity of gradualism and “incrementalism” in explaining the existence of micro-machines (such as the bacterial flagellum): “Evolution is very possibly not, in actual fact, always gradual. But it must be gradual when it is being used to explain the coming into existence of complicated, apparently designed objects, like eyes [or bacterial flagellum]. For if it is not gradual in these cases, it ceases to have any explanatory power at all.”

Dawkins recognizes the power *irreducible complexity* has to falsify naturalistic explanations (like any combination of chance, natural law, or natural selection). Even [Charles Darwin](#) recognized this dilemma when he wrote *On the Origin of Species*: “If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down”.

The flagellum has dozens of necessary, interactive, inter-reliant pieces. With just one less part, the flagellum fails to operate as the efficient motor needed to provide motility to the bacterium.

The irreducible complexity of this large assemblage of pieces means the finished design of the flagellum must be constructed in one sweeping step; it cannot be assembled over several generations, unless the prior intermediate micro-machines also offer some advantage to the bacterium. If they *don't* offer an advantage, and are instead a misshapen liability, or simply an unnecessary addition, natural selection will not favor the presence of the structure within the organism. In other words, natural selection will not “select” the “intermediates” to allow for further additions. Efficient, irreducibly complex structures point most reasonably to an intelligent designer. Philosopher and mathematician, [William Dembski](#), puts it this way: “Once intelligence is out of the picture, evolution, as Darwin notes . . . has to be gradual. You can't just magically materialize completely new structures out of nowhere. There has to be path-dependence. You have to get there by some gradual route from something that already exists.”

GLOCK 21 Assembly Order

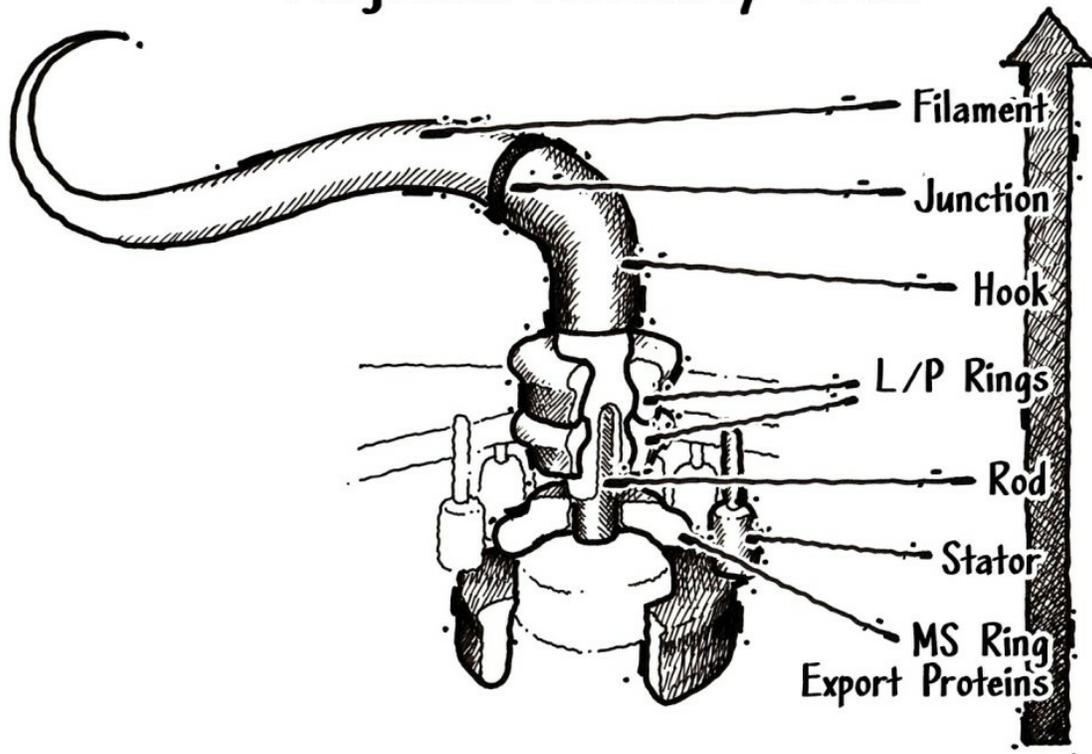


Illustrations from *God's Crime Scene*

New officers at our police agency are issued Glock Model 21 handguns. We prefer these pistols for a number of reasons, including the fact they're constructed from a smaller number of moving parts than other models. As a result, they're much easier to disassemble and clean, and far less likely to breakdown.

Even at a minimum level of complexity (relative to other handguns), the design inferences are obvious. My Glock 21 is irreducibly complex; the removal of just one piece in the overall assembly will not only render the weapon inoperative, but may, in fact, make it deadly to operate, especially for the officer trying to use it. The irreducible complexity of the handgun betrays the intelligent design of its creator. No process of chance, natural law (or even natural selection) can account for the Glock 21.

Flagellum Assembly Order



In a similar way, intelligent causation most reasonably accounts for the irreducibly complex nature of the bacterial flagellum, and alternative explanations relying on some evolutionary combination of chance, natural law or natural selection cannot. Dembski again: “Indeed, the other side has not even been able to imagine a putative evolutionary pathway, to say nothing of providing a detailed, step-by-step, fully articulated, testable evolutionary pathway to the flagellum.”

The most obvious and reasonable inference seems to be elusive to naturalists who try to account for the appearance of design in biological organisms. No explanation employing the laws of physics or chemistry from “inside the room” of the natural universe is adequate. The appearance of design in biology is yet another evidence demonstrating the existence of an “external” Divine Designer. This brief summary of evidence for design is excerpted from [God's Crime Scene](#), Chapter Four – Signs of Design: Is There Evidence of An Artist?

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