

# An Introduction to Intelligent Design

## A short discussion of the meaning of Intelligent Design

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### What is Intelligent Design?

Something has been intelligently designed when it is the end product of a thoughtful process that had that product in mind. In other words, intelligent design originates in a mind.

The 'intelligence' in Intelligent Design is an awareness, or consciousness, that is purposeful, that conceives of something it wants to see actualized and directs whatever activities are necessary to achieve that end. It doesn't have to be smart, and we might not understand its purpose. For example, the Smithsonian has presented intelligently-designed objects whose function, or intended function, is unknown to us. I say intended, because an object may have been a failure in the sense that it did not perform as its designer wanted it to. It could have been badly designed. These objects, however, are nonetheless artifactual, not products of the mindless interplay of wind, rain, gravity, etc (see figure 1).



Ancient artists chipped away the dark desert varnish coating the rocks, exposing lighter rock beneath. Their handiwork includes representations of human faces, bighorn sheep, antelope, birds, lizards, and snakes. The exact purpose and meaning of the designs and representations is unknown.

Figure 1. Objects can be clearly designed, but have an unknown purpose. These photographs of petroglyphs and a descriptive exhibit sign at Petrified Forest National Park, in Arizona, describe just such objects. Though blurry, this text reads: "Ancient artists chipped away the dark desert varnish coating the rocks, exposing lighter rock beneath. Their handiwork indicates representations of human faces, bighorn sheep, antelope, birds, lizards, and snakes. The exact purpose and meaning of the designs and representations is unknown." [emphasis added]. Left photograph from <http://www.nau.edu/library/speccoll/images/thumbs/8949.jpg>, right photograph by Casey Luskin, 6-24-02

How can we tell if something has been designed? Some of those tools in the Smithsonian are pretty crude, although they might have been really high-tech for their time. I'm trusting the archeologists on that one, that they can see design where the uninitiated might see merely an oddly-shaped lump of stone. An apparently random pattern of letters might be a coded message. Cryptographers detect and interpret codes. Space is full of radiation of various frequencies. We scan the skies for evidence that some of those waves have been emitted by an alien intelligence. We find a body at the bottom of a cliff. Did she slip on some loose rock while admiring the sunset, or did someone push her? We search for clues.

What about biology? Is there any reason why this subject should be exempt from similar scientific scrutiny, especially given that the staunchest materialists join the most fervent creationists in their admiration for the tensely balanced, finely tuned, apparently ingeniously complementary systems that, taken together, constitute life? Let us assume that there actually is no good reason for science to arbitrarily restrict the scope of its investigations just because the topic under discussion is living things rather than non-living. Could we, in principle, detect design in biological systems, if it were there? I don't see why not. We could, at least, try.

If you didn't know something was designed, how could you find out? As the foregoing examples illustrate, simply put, if there is low probability (as in complex living systems) coupled with a pre-existing pattern (or specification), there is design. The higher the information content of the specification, the more likely it is that intelligent agency is involved. No one contests the low probability of biological systems having arisen strictly by chance. It has been calculated that the odds of one protein molecule, a hundred amino acids long, coming into being by chance alone are approximately  $1 \times 10^{-65}$ th power.  $10$  to the  $65$ th approximates the number of atoms in the Milky Way. A single bacterial cell, which would have to be magnified over a million times to even be visible, contains 100 billion atoms. I think you see where this is going. Life is exceedingly improbable.

But low probability by itself is not enough to force an inference to design. The precise distribution of atoms in a given snowflake is extremely improbable, because all snowflakes are different and there are many of them. Snowflakes are also highly ordered and possess a somewhat complex, specified structure. Order is greatly valued in science, and rightly so. Science is a lawbound enterprise, which ensures (to the extent that it can) regularity and predictability in a complicated universe. The structure of snowflakes, while the probability of the exact conformation of each individual flake is quite low, is the infallibly predictable result of matter obeying the laws of chemistry and physics under certain conditions. Snowflakes, then, although low-probability and specified, are also low in information, because their specification is in the laws, which are always and everywhere the same. So now we have discussed chance, the very opposite of design, and law, which results in some design, although it's endlessly redundant, and has low information content.

A page filled randomly with letters of the alphabet is a low probability event. But the sentence: The quick brown fox jumped over the lazy dog, has more than a low probability. It is specified as well. There is no algorithm which could generate the sentence in a more economical form than the sentence itself. It obeys the rules and conventions governing the structure of communication in the English language. The rules of grammar and syntax are products of mind, invented to facilitate communication between English-speaking people. A properly phrased sentence, therefore, exhibits specified complexity, the hallmark of design.

So we're back to a mind. When Charles Darwin and his contemporaries were living, in fact pretty much up until Watson and Crick elucidated the structure of DNA, it was generally thought that living cells were made of something called protoplasm. Protoplasm was just a name given to the jello-like substance that seemed to be what cells were made of. When something is merely the result of chemical and physical laws and forces, like snowflakes or salt, there is no reason to infer agency. The laws and forces are sufficient to explain it. Today we know that a single cell is not the product of a simple chemical reaction. Even the very smallest cell is filled with exquisitely precise molecular machinery, highly complex and interdependent, to the extent that, in most cases, if even one machine were to cease functioning, cell death would occur very soon thereafter.

How do these machines come into existence? The cell's DNA specifies the construction of that protein-composed machinery. A transfer of information takes place. A lot of information. It is the specific sequencing of the four nucleotide bases on the strands of DNA that is responsible for all the diversity and complexity found throughout the living world. And this sequencing is not chemically ordained. Any of those nucleotides can bond with equal facility to any spot along the strand. Just as in a sentence in English, there is only one thing known capable of generating the highly improbable, information rich, specified complexity that is found in all living cells, and that is an intelligent agent.

The militantly atheistic Oxford zoologist, Richard Dawkins says this: "Biology is the study of complicated things that give the appearance of having been designed for a purpose". Even Charles Darwin marveled at "...that perfection of co-adaptation which justly excites our admiration". Since the machinery of life manifestly appears to have been designed, why not take design as a working hypothesis, subject it to rigorous scientific testing, and see where the chips fall?