Intelligent Design and Evolution Awareness Center

FAQ:
How do we Detect Design?

The Short Answer: We detect design by looking for the tell-tale signs that an intelligent agent acted. Intelligent agents tend to produce specified complexity when they act. We can then seek to detect design by looking for that specified complexity. Using an "explanatory filter" helps us to use normal logic to infer where design was a cause involved in creating an object. Design also could makes other predictions which can also help us to detect design.

The Long Answer:
When intelligent agents act they produce specified complexity. We know this because we understand that when intelligent agents act, they use choice. An essay by William Dembksi lays out in detail how we can understand the products of intelligent design by examining how designers work:

> To see why CSI [complex-specified information] is a reliable indicator of design, we need to examine the nature of intelligent causation. The principal characteristic of intelligent causation is *directed contingency*, or what we call *choice*. Whenever an intelligent cause acts, it chooses from a range of competing possibilities. This is true not just of humans, but of animals as well as extra-terrestrial intelligences. A rat navigating a maze must choose whether to go right or left at various points in the maze. When SETI (Search for Extra-Terrestrial Intelligence) researchers attempt to discover intelligence in the extra-terrestrial radio transmissions they are monitoring, they assume an extra-terrestrial intelligence could have chosen any number of possible radio transmissions, and then attempt to match the transmissions they observe with certain patterns as opposed to others (patterns that presumably are markers of intelligence). Whenever a human being utters meaningful speech, a choice is made from a range of possible sound-combinations that might have been uttered. Intelligent causation always entails discrimination, choosing certain things, ruling out others. Given this characterization of intelligent causes, the crucial question is how to recognize their operation. Intelligent causes act by making a choice.
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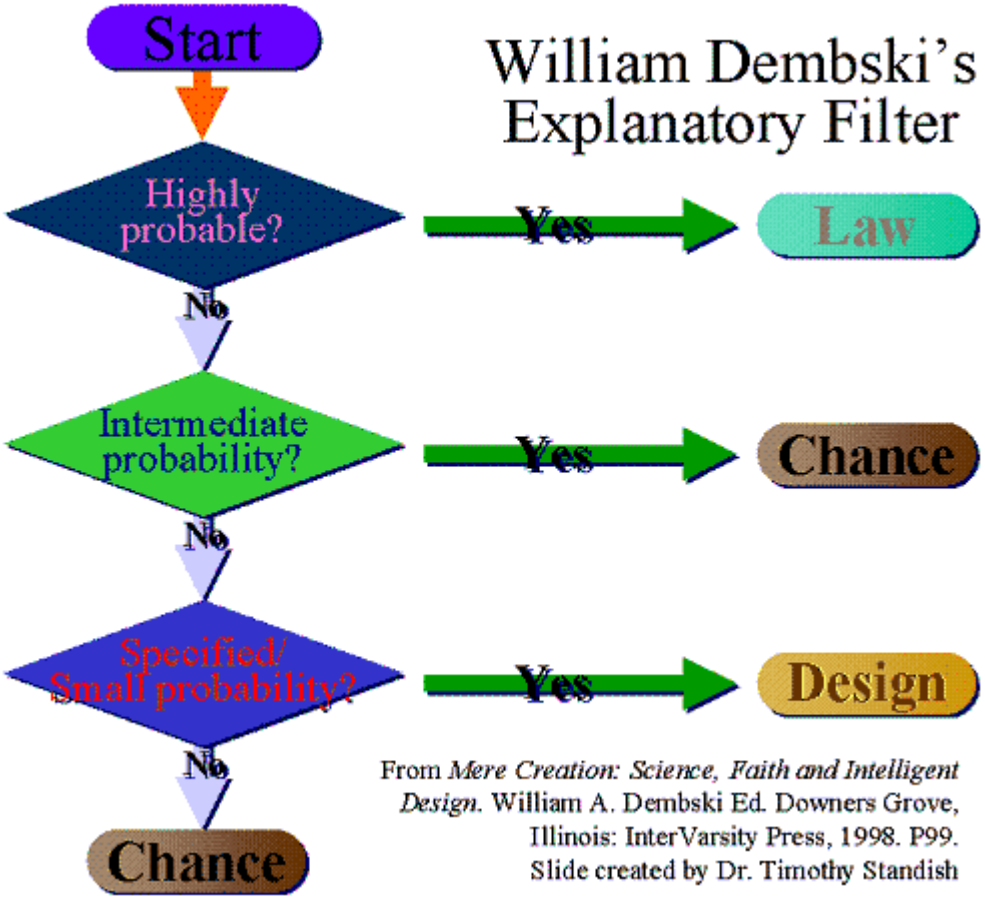
> CSI is a reliable indicator of design because its recognition coincides with how we recognize intelligent causation generally. In general, to recognize intelligent causation we must establish that one from a range of competing possibilities was actualized, determine which possibilities were excluded, and then specify the possibility that was actualized. What's more, the competing possibilities that were excluded must be live possibilities, sufficiently numerous so that specifying the possibility that was actualized cannot be attributed to chance. In terms of probability, this means that the possibility that was specified is highly improbable. In terms of complexity, this means that the possibility that was specified is highly complex. All the elements in the general scheme for recognizing intelligent causation (i.e., Actualization-Exclusion-Specification) find their counterpart in complex specified information-CSI. CSI pinpoints what we need to be looking for when we detect design. (Intelligent Design as a Theory of Information, by William Dembski at "http://www.arn.org/docs/dembski/wd_idtheory.htm")

In summary, Dembski notes that intelligent agents can choose from one of many competing possibilities. If the choice made is unlikely to occur and sufficiently complex, then we can attribute that choice to design. This comes from our understanding of how intelligent agents operate--not from a

negative argument against evolution. In *The Design Inference*, Dembski lays out a three-part "user-friendly" explanatory filter which we can use to detect intelligent design:



This explanatory filter recognizes that there are three causes for things: chance, law and design. The premise behind the filter is the positive prediction of design that designers tend to build complex things with low probability that correspond to a specified pattern. In biology, this could be an irreducibly complex structure which fulfills some biological function. This filter helps ensure that we detect design only when it is warranted. If something is high probability, we may ascribe it to a law. If something is intermediate probability, we may ascribe it to chance. But if it is specified and low probability, then this is the tell-tale sign that we are dealing with something that is designed. In these high information-situations, intelligent design theorist Stephen C. Meyer also emphasizes why intelligent design is the right explanation:

> "Experience teaches that information-rich systems … invariable result from intelligent causes, not naturalistic ones. Yet origin-of-life biology has artificially limited its explanatory search to the naturalistic nodes of causation … chance and necessity. Finding the best explanation, however, requires invoking causes that have the power to produce the effect in question. When it comes to information, we know of only one such cause. For this reason, the biology of the information age now requires a new science of design.
> (Stephen C. Meyer, *Mere Creation*, pg. 140).
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> "Indeed, in all cases where we know the causal origin of 'high information content,' experience has shown that intelligent design played a causal role."
> (Stephen C. Meyer, DNA and Other Designs)

> "Intelligent design provides a sufficient causal explanation for the origin of large amounts of information, since we have considerable experience of intelligent agents generating informational configurations of matter."
> (Meyer S. C. et. al., "The Cambrian Explosion: Biology's Big Bang," in *Darwinism, Design, and Public Education*, edited by J. A. Campbell and S. C. Meyer (Michigan State University Press, 2003)

Intelligent design is thus a cause sufficient to produce the high levels of information, i.e. irreducible complexity, found in biology. Intelligent design is not merely a negative argument against evolution, but is inferred because of its positive predictions of how we understand designers to operate.

There are other examples of mutually exclusive predictions of design and descent, as is explained in the tables below. In each example, intelligent design is inferred because it makes positive predictions that match the evidence, despite the fact that descent makes the exact opposite prediction (which is not met by the evidence).

Comparing Intelligent Design and Common Descent using their Positive Predictions:

Table 1. Ways Designers Act When Designing (Observations):
(1) Take many parts and arrange them in highly specified and complex patterns which perform a specific function.
(2) Rapidly infuse any amounts of genetic information into the biosphere, including large amounts, such that at times rapid morphological or genetic changes could occur in populations.
(3) 'Re-use parts' over-and-over in different types of organisms (design upon a common blueprint).
(4) Be said to typically NOT create completely functionless objects or parts (although we may sometimes think something is functionless, but not realize its true function).

Table 2. Predictions of Design (Hypothesis):
(1) High information content machine-like irreducibly complex structures will be found.
(2) Forms will be found in the fossil record that appear suddenly and without any precursors.
(3) Genes and functional parts will be re-used in different unrelated organisms.
(4) The genetic code will NOT contain much discarded genetic baggage code or functionless "junk DNA".

Table 3. Predictions of Descent
(1) High information content machine-like irreducibly complex structures will NOT be found.
(2) Forms will appear in the fossil record as a gradual progression with transitional series
(3) Genes and functional parts will reflect those inherited through ancestry, and are only shared by related organisms.
(4) The genetic code will contain much discarded genetic baggage code or functionless "junk DNA".

Table 4. Comparing the Evidence (Experiment and Conclusion):				
Line of Evidence	**Prediction of Darwinian evolution**	**Prediction from intelligent design**	**Data**	**Best explaining hypothesis:**
1. Biochemical complexity	High information content machine-like irreducibly complex structures will NOT be found.	High information content machine-like irreducibly complex structures will be found.	High information content machine-like irreducibly complex structures are commonly found.	Design.
2. Fossil Record	Forms will appear in the fossil record as a gradual progression with transitional series.	Forms will appear in the fossil record suddenly and without any precursors.	Forms tend to appear in the fossil record suddenly and without any precursors.	Design.
3. Distribution of Molecular & Morphological Characteristics	Genes and functional parts will reflect those inherited through ancestry, and are only shared by related organisms.	Genes, DNA sequences, and functional parts will be re-used in different unrelated organisms.	Genes and functional parts often are not distributed in a manner predicted by ancestry, and are often found in clearly unrelated organisms.	Design.
4. Biochemical Functionality	The genetic code will contain much discarded genetic baggage code or functionless "junk DNA."	The genetic code will NOT contain much discarded genetic baggage code or functionless "junk DNA."	Increased knowledge of genetics has created a strong trend towards functionality for "junk-DNA"; examples of DNA of unknown function persist, but function may be expected or explained under a design paradigm.	Design.

There are thus various examples where design makes positive predictions, but Darwinian evolution coincidentally makes the exact opposite prediction. Design proponents do not argue against evolution merely because that is what proves design, but because in these special cases, the falsification of evolution also entails a matched positive prediction of intelligent design theory, because intelligent design predicts the exact opposite of evolution. We thus detect intelligent design through findings its positive predictions based upon the way we understand intelligent agents to operate.