INTELLIGENT DESIGN

PROBABILITY, PATTERN, AND DESIGN

An object or an event is usually recognized to be designed when two things come together:

▶ *probability*

It must be very improbable that the object or event could have existed without some intelligent being deliberately causing it.

▶ *pattern*

The event or object follows a particular pattern, a pattern that some intelligent being would reasonably want to create.

Something can be in a recognizable pattern without it being very improbable. For example, suppose you are sitting at your desk working on your computer. You open a new word processing document and suddenly feel a drop of water hit the top of your head. You look up and see water condensing on a pipe above your desk. You leave your desk to tell the maintenance staff that something is wrong and then return to your desk. When you return, you see the letters "hi" on the screen of your computer. You might guess that someone deliberately typed them. But if you find several new water drops on the desk around your computer and splashes of water on your keyboard, you might conclude that two falling water drops just happened to hit the keys "h" and "i" while you were gone. (Don't try this at home—the water drops might not be strong enough to hit the keys, but they might damage the electronics!) While the word "hi" looks like a pattern, it is not especially improbable that falling water drops would create that pattern. You would probably conclude that no one designed that event—especially if you have other reasons to believe that no one came near your desk while you were gone.

Something can be very improbable without forming a recognizable pattern. Suppose, in the previous example, that you returned to your keyboard to find the symbols "fk4jl2tmx;w,aoff9" or "9xkgdi83;a;c95,sd" or "v71/;ae-1dk5ssmgo" on your computer screen. If you saw water drops on your desk and splashes on your keyboard, you would probably conclude that water drops just randomly fell on your keyboard. By itself, each one of those strings of 17 characters is very improbable. About 1028 (a one followed by 28 zeros) different

strings of 17 characters could have been generated by water drops hitting the keyboard. So the odds of getting any one in particular are about 1 in 1028. But while the particular string of characters on your screen is very improbable, the string of characters doesn't form any particular pattern. The vast majority of possible strings of 17 characters show no pattern. Since you can't think of any reason why someone would choose to type an apparently random string of characters, you would probably conclude that no one designed that event—especially if you have other reasons to believe that no one came near your desk while you were gone.

Suppose, instead, you returned to find the symbols "Caroline was here" on your computer screen. This is a recognizable pattern. It is reasonable to believe that someone would choose to type this deliberately, even if no one named Caroline is in the building. And it is very improbable that such a long string of characters would form any recognizable pattern unless someone did it deliberately. You would probably conclude that someone did design that event even if you found water drops on the desk and splashes on the keyboard and even if you have some reason to believe that no one came near your desk while you were gone. It is far more reasonable to believe that someone snuck in and deliberately hit these keys than to believe that falling water drops just happened to hit those keys in that order. In this situation you would conclude, "design."

This line of reasoning is used to argue for Intelligent Design in the field of biology. Certain biological systems, such as the bacterium *flagellum*, show a distinct pattern—an intelligent being might reasonably want to create them. Supporters of Intelligent Design argue that such complex systems are also highly improbable to come about by the natural mechanisms of evolution. (See the related article on this website, "Is the Evolution of Complexity Improbable?") They conclude that since these systems exhibits both low probability and pattern, they were designed by an intelligent being.