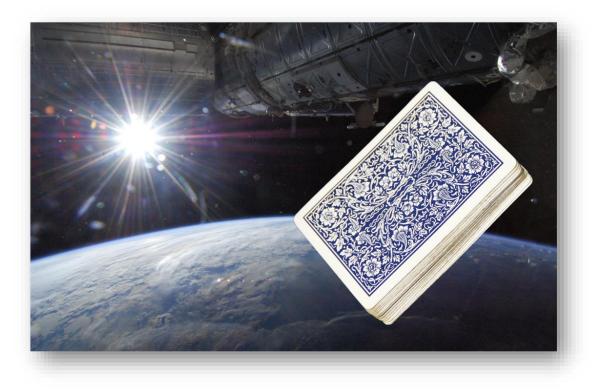
A Mind behind the Universe and a Deck of Cards

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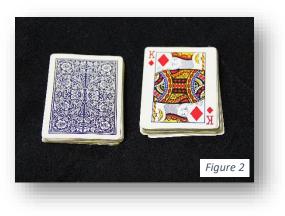
A few years ago, the rage in popular science was "chaos". People recognized that small differences can lead to really complex behaviors. A classic example is weather. We can describe the weather. We can predict trends for a few days. We really cannot predict the weather in detail, especially even one month in advance. (There are some things that we can rule out, such as it probably will not snow here in Houston in July.) The weather has inherently chaotic aspects to it. A lot of our lives feel like chaos reigns.

The next wave was "complexity". Does your life seem complex? The idea in science with this was that complex materials can spontaneously organize. Could this be why the universe is the way it is? Could it be that inherent in the Big Bang were characteristics that caused stars and galaxies to form? Was it self-organization that caused planets to form, some of which would develop life? Perhaps some of those which had life would, by some sort of self-organizing processes, develop complex life. Maybe some of these would develop advanced life, though undoubtedly most wouldn't. Perhaps the tectonic systems would have died out in some of them and they became permanent ice balls or fire balls, despite many other favorable circumstances. Perhaps purely accidentally, some of the advanced lifeforms in rare cases were favored enough to become intelligent, self-aware forms. If the planet were really fortunate, it may have the resources to support a highly technological society. Perhaps some of the favored few might actually have developed such a society. Maybe a few of these planets with technological societies

might be fortunate enough to be located where they could look out through the night and get a glimpse at the reaches beyond the local region in their galaxy and see galaxies beyond. Perhaps such societies might have individuals who wonder how they came to be and would study their origin and why they are there. Of course, somewhere along their course to develop to such a point, many of the planets probably would have been hit by an asteroid that would have wiped out their civilization.

Perhaps favorable accidents and self-organizing processes could form what we see in our universe or perhaps the processes were guided by a mind. Which is more reasonable? Which is more probable? We all use our ideas of probability to guide our actions. We do not know the future, so we make decisions about how to proceed based on what we think it will probably look like. We have different ideas about what is more probable and which are riskier. We have different understandings about what constitutes an acceptable risk.

Before we look at what are the best explanations for the natural universe, I want to firm up some concepts of probability. Imagine a friend cuts a deck of cards, revealing the king of diamonds. (**Figure 1**) He asks you, "what is the probability that I got the king of diamonds?" Perhaps, you might say, "pretty low". If you are more quantitatively oriented, you might say, "1 in 52 or about a 2% chance." You would be wrong. You are looking at the king of diamonds. The chance is 100%. Probability really involves things that are uncertain. If we already see the results, they are what they are. In a sense, the universe is like that. It is





what it is.

If your friend had said, before cutting, what is the probability of getting the king of diamonds, the answer might have been 2%. Might have been? Yes, 2% assumes that the card deck has 52 equally probable options. What if half the cards are kings of diamonds? Imagine that your friend took the deck of 52 cards and began revealing them one by one and they looked like **Figure 2**? All four aces, followed by all 4 kings, all 4 queens and so forth. Now, such an arrangement is one possible outcome of a totally random shuffling of a deck of cards. Do you believe that that is how these cards came to be in the order seen here? Why not?

Even though the results are already revealed, we would be wise to doubt pure chance caused this. We might not be able to "prove" it, but it is more reasonable to decide that something or somethings besides random processes were at work. I want to point out that the order of the cards in this image is not perfectly ordered. The first four cards are the ace of

diamonds, the ace of hearts, the ace of spades, and the ace of

clubs. A higher degree of ordering would be possible. If it were ordered more strictly, the second four

cards would be the king of diamonds, the king of hearts, the king of spades, and the king of clubs. However, that is not the order that the kings are in, nor the queens, yet we can easily see order. That demonstrates that we do not need perfect order to be able to see a clear pattern. Patterns can still be real and discernable.

We will look at nature in later posts in this category. We will consider whether we are in the scenario where the cards are random or whether we are in the case where they are ordered. We will consider whether self-organization is likely or whether a mind is called for. Nature does not necessarily give an absolute proof for a mind, any more than it would be impossible to randomly deal out a deck of cards like the example in Figure 2. For some people, no adequate proof could ever exist. If a mind is the best explanation, then we can think about what we can learn about that mind from nature.

What if the cards dealt looked like **Figure 3**? What do you think the two facedown cards are? How confident are you? This requires the ability to extrapolate. They say that there are two kinds of people: those who can extrapolate based on incomplete data.

In this case, I suggest that this photo demonstrates what faith based on evidence means. We don't know what is in the future. Nor do we have complete knowledge of the past. Blind faith needs no evidence. Blind faith might bet that the next two cards are threes, perhaps based on a love of threes. We can choose to



extrapolate the pattern we have found so far to say what the unknowns will likely be. Faith based on evidence can cause us to trust that the God who has been faithful in the past will continue to be so, despite the fact that our knowledge is incomplete.

What should we look for in nature? Complex patterns can be beautiful and ordered without having a particular designer inference. Watch a movie of the Mandelbrot set to appreciate this (**Figure 4**). The fact that nature is complex does not prove that a mind is behind it. This is also true for life. The fact that life is very complex does not in itself prove a mind was required to form it. Is the universe more than just complex? Early scientists, such as Isaac Newton, saw an elegance in the heavens that suggested a mind. Writing the introduction to Sir Isaac Newton's (Newton 1713), Roger Cotes wrote:

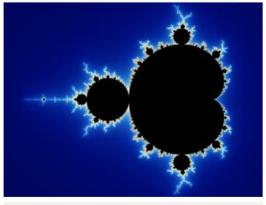


Figure 4. Mandelbrot set. Select image to link to a movie. (Image created by <u>Wolfgang Beyer</u> with the program Ultra Fractal 3. This file is licensed under the <u>Creative Commons Attribution-Share</u> <u>Alike 3.0 Unported</u> license. (<u>https://en.wikipedia.org/wiki/File:Mandel_zoom</u> <u>00_mandelbrot_set.jpg#file</u>))

"Therefore we may now more nearly behold the beauties of Nature, and entertain ourselves with the delightful contemplation; and, which is the best and most valuable fruit of philosophy, be thence incited the more profoundly to reverence and adore the great Maker and Lord of all. He must be blind who from the most wise and excellent contrivances of things cannot see the infinite Wisdom and Goodness of their Almighty Creator, and he must be mad and senseless who refuses to acknowledge them."

Elegance and beauty are definitely consistent with a mind. Nature abounds in beauty. It has over-thetop extravagance. This has certainly pointed people to a creator for millennia.

Looking back at the card example, when would you, based on your experience, start to think that the deck might be rigged? I might wonder with the first ace. With the second ace, I would be very suspicious. With the third ace, personally, I am convinced. Our mind discerns a pattern that, in our experience with card distributions and how they arise, suggests a non-random distribution. We could perhaps generate a card order, such as the one with all the cards arranged by their value, by a mechanical process. However, it would be unlikely that such a process would form, without knowing that the end product would group all of the cards such that the aces are first, followed by kings together, etc. When we look for a mind behind nature, part of this is trying to discern if the order that we find in nature was put there for a purpose. Unguided processes do not know what they are trying to build. If the features were purposed to be there, then a mind was involved. It is not surprising that the claim of a mind behind nature is at times controversial. We cannot unplay nature and then replay it to see what the results would be. We must look for the most reasonable conclusion. This is commonly called **"abductive reasoning"**. Wikipedia defines this as a form of logical inference which starts with an observation or set of observations and then seeks to find the simplest and most likely explanation for the observations. This is a theme through most of the topics that I am investigating on this site.

In nature, we cannot rerun the experiment of creation to look for different outcomes and. if the mind happens to be the Christian God, then we certainly cannot dictate the rules that He chose. For instance, we cannot set up an experiment where we demand that he provide a miracle. He can simply decide not to play. We cannot use probabilities in the sense of predicting an outcome, because the cards have already been played. The universe is here. We also only have a sample size of one. We have one universe, one planet, and one system of life. We cannot demonstrate that life exists anywhere else. We cannot prove whether it is common, rare or unique to Earth. We have to use abductive reasoning to search for the best explanation.

One explanation given for our present universe and all of the life is that it simply reflects historical contingency. It is the result of vast numbers of historical circumstances and options. If time were turned back by billions of years and replayed, vastly different results would be obtained. If re-run many times, most realizations would not include mankind. I would suggest that guided by naturalistic processes, no realizations would include intelligent life, while if nature were ultimately guided by an intelligent mind, then potentially all would.

If we make a hypothesis that nature demands a mind as a cause, then we can evaluate this with evidence. For instance, we can make a hypothesis that this universe is designed such that one of its explicit purposes is to have advanced lifeforms that can know the creator, then we can look at creation and compare that to random processes, perhaps with self-organizational tendencies. While we cannot strictly use probabilities, in some cases we can look at what type of precision is required for the parameters that set up the existence to fit the hypothesis, that is, how much fine tuning was needed. It

may be subjective but at some point, it should be more reasonable to assume the hypothesis of a creator is true than alternatives.

A number of thoughtful articles and books provide discussions of this topic. From a Christian perspective, Melissa Travis (2018) writes about the "maker thesis" that embodies this. The idea that life demands a designer is controversial but many are convinced it demonstrates "intelligent design". Marcos Eberlin (2019) strings together many parts of nature that he says show evidence of "foresight", where the end product had to be in view in order to generate the end. Michael Behe (2016) described this as the "purposeful arrangement of parts". Undirected processes do not know what they are trying to build, whether the product is a cell, an animal, or a planet. The scientists at "Reasons to Believe" have developed a model that they propose to test by the trend of future scientific discoveries (Ross, 2022). This is one way to scientifically support the abductive reasoning that makes the maker hypothesis more supported.

If a mind created the natural processes of the universe and directed them and if one of the purposes that this mind had was to create advanced life, then what would have been required? It might not demand that such a universe look exactly like this universe, but there are many characteristics that are essential. If that universe were designed to have developed advanced life that would be capable of engaging in a relationship with the creator, then even more characteristics would be important.

For instance, advanced life required a long-lived stable power source such as the sun. In fact, it had to be a 3rd generation star to have the heavier elements. Advanced life required a rocky planet. The planet needed to be stable for a long, long time as the planet was prepared for life. The chemistry of elements really limits the options for what comprise that life. In fact, carbon seems to have unique properties suggesting that it is really the only option on which to base life in the physics that we have. A planet with life needed the right amount of carbon. It needed oxygen. It needed the right amount of water. It had to have that water stable in solid, liquid and gaseous states. It required the right amount of more subtle elements such as chromium and lithium. The requirements go on and on. In coming posts, we will consider some of these. I really would recommend Hugh Ross' book, "The Improbable Planet", where he describes many requirements and how they came to be met. What we see is that the universe is extremely finely tuned to allow stars and planets to exist. We find ourselves in just the right type of galaxy, on a planet that circles just the right type of star. The planet is just the right distance with just the right type of other planets beyond it. It has just the right type of composition. Its history over and over had to have developed in ways that protected it, in order for life not to have been destroyed. It becomes very reasonable to consider it not a random occurrence, but much more of a case like the deck of cards, arranged in a very deliberate manner. Just as a deck of cards might be randomly shuffled to be dealt like Figure 2, a better explanation is that a mind was involved. The Christian explanation must be considered seriously.

Future posts will look at further examples where foresight is the simplest and most likely explanation.

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