

Introduction to Demiurgic Pluralism

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ABSTRACT: A little reflection on the design and cosmological arguments suggests that there are many cosmic designer-creators. These are the demiurges. These demiurges are not supernatural – they are natural cosmic designer-creators. Less perfect demiurges create more perfect demiurges. Every demiurge runs a universe like a computer runs a program. More perfect demiurges run more perfect universes. And, given any universe filled with lives, the demiurges improve those lives. You have many lives across many universes. Your future lives will be better versions of your past lives. This is a short and cartoonish presentation of a longer and often highly technical series of arguments.

1. The Regression of Gods

At least to theists, the Cosmological Argument suggests that God created our universe. This is easily symbolized like this: God \rightarrow Universe. And the Design Argument, applied at the level of the universe itself, suggests that God has the theistic perfections to some degree: God has some benevolence, intelligence, and power.

One popular atheistic response to the Cosmological Argument goes like this: if God created our universe, then what created God? And one popular atheistic answer, designed to mock theism, posits some more perfect God who created our local God. Our local God becomes God-0 and the chain looks like this:

God-1 \rightarrow God-0 \rightarrow Universe.

But now the question repeats: what created God-1? The iteration of this reasoning leads to an endless regression of ever more perfect gods. These gods can be given numbers, and the n -th god can be referred to as God(n). So the chain looks like this:

$\dots \rightarrow$ God($n+1$) \rightarrow God(n) $\rightarrow \dots \rightarrow$ God(1) \rightarrow God(0) \rightarrow Universe.

This reasoning reveals two problems with theism. The first is that it leads to an infinite regression of gods. The problem with this regression is that it is a regression of causal dependencies. But the Cosmological Argument itself seems to rely on the thesis that there are no endlessly descending causal dependency chains. All dependency chains bottom out after finitely many steps in some ultimate initial object. The second problem is that the perfection of the gods *increases* as the chain descends. Assuming that greater things are more difficult to explain, this makes it harder and harder to explain the existence of the prior gods. These problems are fatal.

However, both problems are easily solved simply by *inverting* the chain of gods. Each previous god in the chain is *less perfect* than the next god. As the perfections of these gods decrease, they eventually bottom out in some original god:

God(0) \rightarrow God(1) $\rightarrow \dots \rightarrow$ God($n-1$) \rightarrow God(n) \rightarrow Universe.

Of course, the initial god God(0) is no longer the theistic deity of Abrahamic monotheism. This reasoning does away with monotheism. The ultimate original creator is not maximally perfect. On the contrary, it is the least perfect god. It has the minimal degrees of goodness, intelligence, and power. It has enough of these perfections to want to create the next god, to know how to create the next god, and to be able to create the next god. So it does create the next god. Hence the chain of gods rises up to the n -th god, which creates our universe. And, just as it does away with theism, this solution does away with atheism. It is a post-theistic approach to divinity, which is better than either theism or atheism. But it remains problematic.

2. From Gods to Demiurges

One problem concerns the relations of gods to universes. Why does only the last god (our god) create a universe? It is irregular to say that only the last god creates a universe. It would be more regular to say that every god creates a universe. The ability to create a universe is arguably an essential feature of godhood. It is more regular and thus more plausible to say that every god creates a universe. Since these gods are now primarily cosmic designer-creators, it is more plausible to call them *demiurges*.

Each universe depends on its demiurge as software on hardware. The demiurge is the ground of the universe (which means that it is not *in* the universe it grounds). And, just as each next demiurge is more perfect, so each next universe is more perfect. The series of demiurges and universes increases in perfection. The n -th demiurge is written as $G(n)$ and its universe is $U(n)$. The fact that the n -th demiurge creates the n -th universe is designated by writing $U(n)$ over $G(n)$. The chain now looks like this:

$$\begin{array}{ccccccc} \frac{U(0)}{G(0)} & \longrightarrow & \frac{U(1)}{G(1)} & \longrightarrow & \frac{U(2)}{G(2)} & \longrightarrow & \dots \longrightarrow \frac{U(n)}{G(n)} \end{array}$$

At the end of this chain is our universe $U(n)$ created by our local demiurge $G(n)$. But this is hard to understand. Why is our universe the last universe? Why is our demiurge the last god? If earlier demiurges can produce later demiurges, then our local demiurge can produce another demiurge too. The series of demiurges (and their universes) can go on forever. The demiurges are analogous to self-reproducing organisms at cosmic scales. And, since demiurges do not fail to create, their self-reproduction does go on forever. The result is an endless progression of ever more perfect demiurges and universes.

There is some initial demiurge $G(0)$. For every demiurge $G(n)$ running its universe $U(n)$, there exists a more perfect demiurge $G(n+1)$ which runs a better universe $U(n+1)$. The chain of demiurges is as long as the sequence of natural numbers. Every demiurge in this chain does the best it can in designing its universe, but it is only finitely perfect. It is only finitely benevolent; it has only finite intelligence; and only finite power. So its universe (and the things in it) are bound to be surpassable (improvable) in many ways. Fortunately, every demiurge is surpassed by some greater demiurge and better universe. The chain of demiurges and universes thus looks like this:

$$\frac{U(0)}{G(0)} \longrightarrow \frac{U(1)}{G(1)} \longrightarrow \dots \longrightarrow \frac{U(n)}{G(n)} \longrightarrow \frac{U(n+1)}{G(n+1)} \longrightarrow$$

Above our demiurge, there are endlessly many more perfect demiurges. But so far they are all merely finitely perfect – which doesn't seem very divine. Fortunately, mathematics allows the chain to be extended beyond the finite: the chain that rises endlessly can keep rising into the transfinite. Just as *limit rules* are used in mathematics to extend the number line into the transfinite, so limit rules can be used in demiurgic pluralism to extend the chain of demiurges into the transfinite. The least transfinite number is \aleph_0 . Hence the chain looks like this:

$$\frac{U(0)}{G(0)} \longrightarrow \dots \frac{U(n)}{G(n)} \longrightarrow \dots \frac{U(\aleph_0)}{G(\aleph_0)}$$

Modern mathematics says that the transfinite numbers run on in truly great ways, through higher and higher degrees of infinity. So do the demiurges and their universes:

$$\frac{U(0)}{G(0)} \longrightarrow \dots \frac{U(n)}{G(n)} \longrightarrow \dots \frac{U(\aleph_0)}{G(\aleph_0)} \longrightarrow \dots \frac{U(\aleph_1)}{G(\aleph_1)} \longrightarrow \dots$$

An issue remains. The way the chain of demiurges is defined, each demiurge produces *only one* greater demiurge. Why only one? This seems to be an arbitrary constraint on demiurgic self-reproduction. Surely if any demiurge can produce one demiurge, it can produce many. It seems most divine to say that for every demiurge G, for *every* way that G can make a more perfect demiurge, G does make a demiurge that is more perfect in that way. But how much more perfect? The least arbitrary answer is to say that each offspring demiurge is *minimally* more perfect. And if the increases are minimal, every chain of demiurges is continuous with respect to perfection – there are no divine gaps between demiurges. No possible demiurges are skipped in any chain.

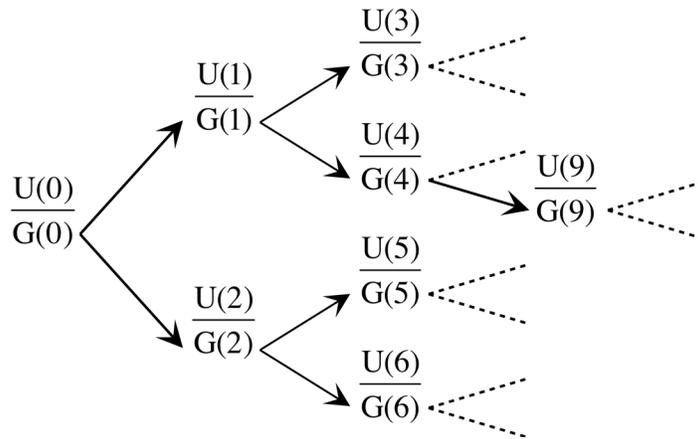


Figure 1. A small part of the tree of demiurges and their universes.

Since each demiurge creates many offspring, the system of demiurges is now a tree. Each demiurge creates its offspring in its own image: it creates versions of itself out of

itself. The result is a transfinitely ramified tree of ever more perfect demiurges. The root of the tree is the initial demiurge $G(0)$. Every path from the root is continuous at limits – it runs on into the transfinite. And every more perfect demiurge creates a more perfect universe. Just as every child demiurge is a version of its parent demiurge (it is created in the image of its parent demiurge) so every child universe is a version of its parent universe (it is created in the image of its parent universe). Part of the first few levels of this divine tree are shown in Figure 1.

3. Demiurgic Reproduction

It's time to look at the universes supported by these demiurges. Since $G(0)$ is the least demiurge, it doesn't have the power to create anything – its universe is empty. This is symbolized in Figure 2 by an empty bubble above the demiurge. But $G(0)$ does more than just create the initial universe. It also designs and creates the next demiurge. Speaking computationally, $G(0)$ wants to make a demiurge that is more perfect than itself; $G(0)$ knows how to make such a demiurge; and $G(0)$ has the power to make it; hence $G(0)$ does create such a demiurge. $G(0)$ studies its own nature to design a minimally more perfect version of itself. To use a computational analogy, $G(0)$ examines its own source code and rewrites it to make a superior version of itself. On the basis of this improved design, $G(0)$ produces $G(1)$. Consequently, $G(1)$ exists.

Just as the nature of every next demiurge is based on the nature of its predecessor, so the universe generated by every next demiurge is based on the universe generated by its predecessor. The process is analogous to biological reproduction. Each next demiurge inherits the description of the previous universe from its previous demiurge. It inherits this description like an organism inherits genes from its parent(s). It uses this description as the basis for the design of its own universe. Thus $G(1)$ inherits the description of the empty universe from $G(0)$. Since every next demiurge is more perfect than its predecessor, it wants to do better than its predecessor. So it wants to make a better universe than the one made by its predecessor. For example, since $G(1)$ has more perfection than $G(0)$, $G(1)$ wants to do better than the empty universe; $G(1)$ knows how to do better; and $G(1)$ has the power to do better. So $G(1)$ does better. But how?

Since $G(1)$ is only minimally more perfect than $G(0)$, it only does minimally better. Thus $G(1)$ designs and creates a universe $U(1)$ that is minimally better than the empty universe. But what is the nature of $U(1)$? Any universe that is minimally better than the empty universe is one that contains some minimally valuable content. It contains exactly one minimally valuable thing. For example, this thing is A_0 . Figure 2 shows the transition from $U(0)/G(0)$ to $U(1)/G(1)$, and that fact that $U(1)$ contains A_0 .



Figure 2. Some demiurges and their universes.

After generating its universe, $G(1)$ turns to the task of producing its successors. As it studies its own nature, $G(1)$ figures out two ways to make that nature minimally more perfect. It figures out two ways to improve itself. On the basis of those two better designs, as shown in Figure 1, it creates $G(3)$ and $G(4)$. Those demiurges exist. Each of these better demiurges inherits a description of universe $U(1)$ from $G(1)$. And each of them will apply its better nature to make a new and improved version of the universe that it inherits. Specifically, $G(3)$ and $G(4)$ will each make improved versions of $U(1)$. This means that universes $U(3)$ and $U(4)$ will be improved versions of $U(1)$.

4. The Emergence of Counterparts

A little reflection on the meaning of *improvement* suggests that, when a demiurge designs a new and improved version of an old universe, it has to satisfy four design constraints. These ensure that demiurgic improvement is as good as possible, that is, that it is Pareto optimal. The first constraint is that every thing in the old universe must have at least one new version of itself in the new universe. The new version of the old thing is a *counterpart* of the old thing. The second constraint says that distinct things in the old universe must have distinct counterparts in the new universe. The third constraint says that no thing in the old universe can have a worse counterpart in the new universe. The fourth constraint says that at least one thing in the old universe must have a better counterpart in the new universe.

When $G(3)$ designs its new and improved version of universe $U(1)$, it must satisfy the four design constraints with respect to the single thing A_0 . One very easy way to do this is just to make an improved version of A_0 . This improved version of A_0 is A_1 . Hence the improved universe $U(3)$ just contains the improved thing A_1 . When $G(4)$ designs its new and improved version of $U(1)$, it must also satisfy the four design constraints with respect to A_0 . Another way to do this is to make two better versions of A_0 . These are the new and improved things A_2 and A_3 . The details are shown in Figure 3. Arrows indicate improvements. Thus A_0 is improved into A_1 , into A_2 , and into A_3 .

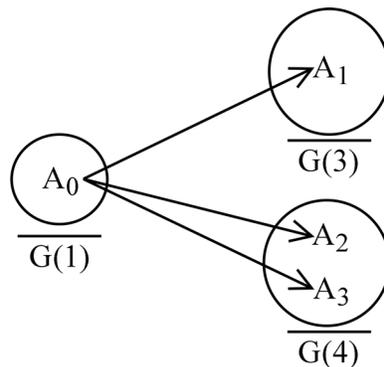


Figure 3. Some better counterparts.

One after another, every created universe gets improved. And since there are demiurges working on their universes in all possible positive ways, every universe gets

improved in every possible way. For every universe, for every way to improve it, there is some universe that is improved in that way. The improvements of universes entail improvements to the things in those universes. For any thing in any universe, if there is some way to make that thing better, then some demiurge will eventually operate on that thing in that way. Consequently, for every thing in any universe, for every way to improve that thing, there is some universe in which it is improved in that way. Every thing is the root of an endlessly branching tree of ever better counterparts.

5. The Tree of Lives

Figure 4 shows three universes. Universe Alpha is something like our universe (as made by our little local demiurge, $G(n)$). It contains two people, call them *Deucalion* and *Pyrrha*. Deucalion and Pyrrha are temporally extended things, that is, they are lives from birth to death. The icons in Figure 4 designate the *entire lives* of Deucalion and Pyrrha, from birth to death. And these lives are, in sum, unhappy – things haven't worked out very well for them here. But the demiurge who inherited Alpha wants to make it better. This is the next demiurge, $G(n+1)$. And since this next demiurge is more perfect than our demiurge, it knows how to make Alpha better. But it only knows two ways to make it better. These two ways are Beta and Gamma. The next demiurge has the power to make Beta and Gamma – which it does. In Beta, Deucalion is a bit happier while Pyrrha is just as she was. In Gamma, both are slightly happier. Why not just make Gamma? Because each god is a maximizer as far as it can be – it makes *all* better versions.

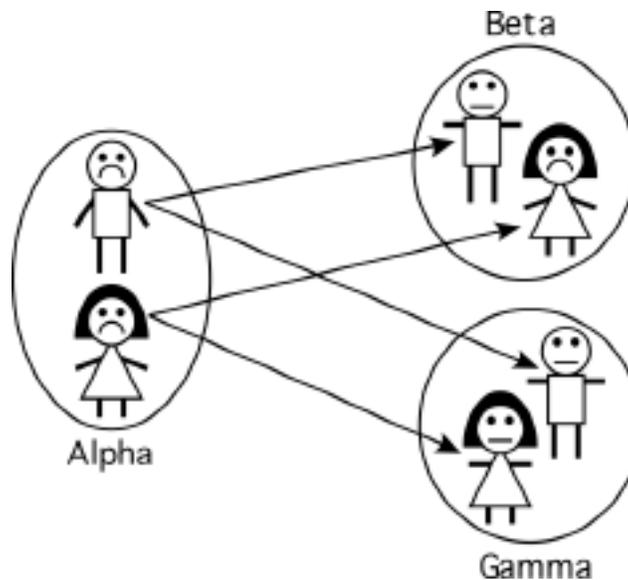


Figure 4. Universe Alpha and two improvements.

The next demiurge $G(n+1)$ passes the description of its universe down to its offspring. It has two offspring. Each of these is one of the next next demiurges. Each next next demiurges sets to work improving Gamma. The ways to improve Gamma are shown in Figure 5. One way makes Pyrrha happier – that leads to universe Delta. The

other way makes both Pyrrha and Deucalion happy, which leads to universe Epsilon. Epsilon is pretty good for both Deucalion and Pyrrha. But perfection is always increasable. Just as demiurges rise endlessly in perfection, so do universes. And so do the things in those universes. The lives of Deucalion and Pyrrha, however good, can always become better. And, as demiurges work on their universes, they do become better – in all possible ways. The result is endless improvement.

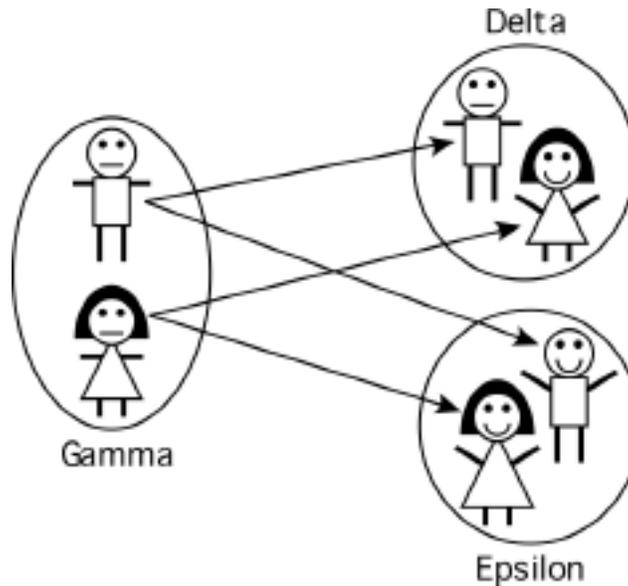


Figure 5. Universe Gamma and two improvements.

For every thing in any universe, for any way to make it better, it has some successor counterpart in some later universe that is made better in that way. This rule can be extended to infinity – endless sequences of ever better counterparts can be improved. So, beyond every endless series of ever more finitely perfect Deucalions, there is an infinitely perfect Deucalion. Since \aleph_0 is the least infinite number, this infinitely perfect Deucalion is Deucalion(\aleph_0). And beyond every endless series of ever more finitely perfect Pyrrhas, there is an infinitely perfect Pyrrha, namely, Pyrrha(\aleph_0). The lives of Deucalion and Pyrrha now run out into the transfinite. Infinitely far beyond Deucalion(\aleph_0), there is Deucalion(\aleph_1). Infinitely far beyond Pyrrha(\aleph_0), there is Pyrrha(\aleph_1). And so it goes. Demiurges, universes, and things of all kinds ascend their ranks of perfection without bound. There are no maximally perfect demiurges, universes, or things. This version of demiurgic plurality is optimistic: all things can all get better – and they will!