

Why is There Something Rather Than Nothing?

This question isn't necessarily a Big Question as much as it is a Basic Question. After all, how much more basic can you get? According to Wikipedia, "Physicists such as [Stephen Hawking](#) and [Lawrence Krauss](#) have offered explanations that rely on quantum mechanics, saying that in a [quantum vacuum state](#) particles will spontaneously come into existence." However, this answer is obviously insufficient, since a quantum vacuum state itself is certainly something and not nothing. A complete and correct answer to the question must explain why there is such a thing as a "quantum vacuum state" in the first place.

The correct answer to the basic question of why something instead of nothing must differentiate between "necessary" and "contingent" objects. A "necessary" object is an object that must exist, i.e. it cannot "not exist". An example of a necessary object is any "[concept](#)" or "idea". All concepts exist, whether or not any material object exists. For example, the concept of "nothingness" itself would always exist even if nothing material existed. So if concepts are included in the definition of everything, then "nothingness" is impossible.

So the basic question becomes, why is there something material rather than nothing? The answer to that question can be divided into two cases:

1. A necessary object exists that can create contingent objects.
2. A necessary object that can create contingent objects does not exist.

A Necessary Object Exists That Can Create Contingent Objects

In Case 1, a god-like necessary object exists that can create contingent, material objects. In that case the reason for the existence of contingent material objects is simple, namely that God, who Himself is a necessary being, created them. This explanation is held by theists and deists.

A Necessary Object That Can Create Contingent Objects Does Not Exist

What if a godlike object that can create contingent objects does not exist? Why would something exist rather than nothing in that situation? [Peter van Inwagen \(1996\)](#) provides a probabilistic answer to the question. Van Inwagen argues that there is only one possible state of nothingness, whereas there are infinitely many states of somethingness. The probability of nothingness is then some finite number divided by infinity, which is zero.

In van Inwagen's argument, all states of existence are assumed to have equal probabilities of actually existing. So the probability of a single state of nothingness is completely overwhelmed by the combined probabilities of an infinite number of states of somethingness.

But van Inwagen's assumption is certainly unreasonable. Clearly, it would seem that simple states must have a higher probability of existing than more complicated states. Since the state of nothingness is the simplest of all states, it must have a higher probability of existing than some or all of the states of somethingness. Indeed, that's why we ask the question in the first place.

And one may reasonably argue that the probabilities of most or all of the states of somethingness could conceivably be zero, thereby allowing the probability of the single state of nothingness to dominate, or even be 1.0. But from the [Principle of Mediocrity](#), all states of somethingness must have similar probabilities of existence, depending on their size, complexity, etc. Then, since we know from inspection that there is at least one state of somethingness with non-zero probability (namely our current state of existence), there must be at least an infinite number of similar potential states of somethingness with a similar non-zero probability. Thus the probability of nothingness cannot dominate the sum of the probabilities of somethingness.

Now you may ask, how can there be an infinite number of potential states of somethingness with non-zero probability, since the sum of all the probabilities cannot be greater than 1.0? The answer is that as the size and complexity of the states increase, the probabilities decrease and become vanishingly small, but never zero. This is similar to the infinite series $(1/2 + 1/4 + 1/8 + 1/16 + \dots)$ which has an infinite number of non-zero terms, but whose sum is 1.0.

Another way to understand the answer above is that from inspection of our current state, we know that some state of somethingness is possible. Then from Murphy's Law that anything that can happen eventually will happen, the assertion is proved.

The proof that nothingness cannot exist, and that something must exist, leads to the general Law of the Conservation of Somethingness (LOCOS):

You can never have a completely perfect state of nothingness. Something will always come along to spoil it! (C'est la vie.)