

Letters

The Experiential Consequences of a Multiverse

I read with interest the article by Robert Mann (*PSCF* 57, no. 4 [Dec. 2005]: 302-10) on the “many universes” or “multiverse” idea that our observable universe is but a tiny region in a vast, but disconnected, larger “multiverse” that contains enormous numbers of copies of our observable universe, but with different histories and different values of the various physical constants or other properties. The multiverse idea is sometimes embraced as a means of overcoming the apparent “fine tuning” of physical laws, physical constants, and initial conditions that seems to make our universe especially suited for intelligent life. An infinity of alternative universes would imply that the “biophilic” conditions of our universe are not an indication of God’s design of the universe, but are instead a necessary consequence of the laws of probability and logic. If the number of universes is infinite, and the properties of these universes are selected at random, then the only universe which humans could observe would be one in which the properties are such that intelligent life can exist.

It seems not to have been noticed that this “observability” criterion that filters out uninhabited universes from our view and so explains why our universe seems to be “special” can be applied not just to the existence of observers in general, but also to each one of us in particular. That is, it is not only true that an uninhabited universe cannot be observed, but also that I cannot observe a universe in which I do not exist. As a small child, I was nearly killed when standing in a driveway behind a car that nearly backed over me. Only quick action by an alert bystander saved my life. Presumably, if the multiverse idea is correct, then in many of the parallel universes in which I existed, I was not so fortunate, but was killed. But since I cannot experience non-existence, the only reality I could currently experience is one in which I survived. The principle that there are infinitely many universes, with all possible variations in detail, combined with the principle that I can only observe a universe in which I exist, would seem to imply that my consciousness, which is almost identically replicated in infinitely many realities, can experience nothing other than continued existence until it becomes physically impossible for it to continue to exist in any of the infinitely many universes. That is, I will continue to experience survival through any and all dangers that are not 100% fatal, thus experiencing the longest possible age-span for a human, and, if it is not physically impossible in any universe, have my life extended as far as possible through technological breakthroughs, perhaps ultimately being transferred to an immortal computer or machine. Of course, this is true of each of us. While we observe others dying, each of them also continues to experience survival in alternate universes, and each of us does as well, becoming virtual immortals, unless this is absolutely impossible according to any set of laws that might operate in any alternate universe. Moreover, this rather bizarre implication of the “many universes” idea will be directly tested by each one of us, as we experience death, or rather the constant avoidance of it.

There are other strange implications of the existence of infinitely many universes, with all possible properties and histories. One of them is that all realistic works of fiction, such as the novels of Dickens, are literally true in some alternate universe. *Oliver Twist*, the Artful Dodger, and the others actually exist, and by those names, in some universe. Furthermore, if the biological origin of life seems hard to explain or some steps in evolution seem improbable, one can postulate that virtually miraculous random collisions of molecules occur in some universe, and in fact did so in our universe, if this is the only way to get intelligent life.

Perhaps these bizarre implications of the many-universes theory will give those entertaining this idea second thoughts about how sensible the idea really is.

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Neuroscience, Free Will, and the Incarnation

David Siemens is surely right in saying that the Incarnation challenges contemporary scientific descriptions of human beings, and attempts to relate these to the Bible.¹ I offer below a possible solution to the problem, based partly on the work of Polkinghorne,² and partly on my own.³ I begin by considering human freedom.

Suppose I have to decide between two courses of action, A and B. Suppose further that my brain, body, and environment comprise a physical system, made up of components interacting and moving according to physical laws. Then the sequence of thoughts that I have in making my decision corresponds to a series of configurations of the physical components of my brain.⁴

Suppose now that a superscientist is able to observe these configurations, and predict from the laws of physics how they will change. Two results are possible. The first is that the superscientist correctly predicts what I will choose. In this case, the thoughts encoded on my brain must follow a sequence that is determined equivalently by their content and the laws of physics. Thus if my thoughts lead to “I will do A,” the physics of my brain must lead to the configuration corresponding to “I will do A.” This must certainly be what happens when I carry out an arithmetic calculation by a method I have learned.⁵

Many of my decisions are doubtless predictable. Given a choice between a savory morsel and a sweet one, I usually choose a savory one. Many of my *moral* decisions may also be predictable. Having chosen to serve the Lord, I endeavor to keep to his commandments. However, not *all* my moral decisions (including my decision to serve the Lord) can be predictable. If a superscientist could correctly forecast what I will do in every situation, then I would not be responsible for my actions, because I could say to God on the Day of Judgment, “*You* determined the choices I made by the way you set up the universe.” The Bible insists that I cannot say this (James 1:12-15).⁶

The second possibility is that the superscientist predicts that the assembly of physical components in my brain reaches a bifurcation point between two configurations, one corresponding to "I will do A" and the other to "I will do B." A quantum-mechanical calculation gives a 50% probability of the assembly proceeding to the first configuration and 50% to the second.

How then do I make my decision? One possibility is that a small perturbation from outside the system considered by the scientist, or a quantum fluctuation, tips my brain in the direction of doing A or B. This again means that I can blame my choice on the way the universe is made. An alternative is that *my thoughts themselves* determine the outcome at this point. As we have seen, when I make a predictable decision, my thoughts follow a sequence that is determined equivalently by their content and the laws of physics. At a bifurcation point, however, the physics is undetermined. In this case, the outcome must be determined by the content of my thoughts alone.⁷ In other words, I make the decision, and am answerable to God for it.

If this is so, the evolution of the universe is determined, not only by physics, but also by the choices human beings make under these conditions. This does not mean that God ceases to control the universe, as I have shown elsewhere.⁸ But it does mean that human beings are responsible for many of their actions, and in measure determine the persons they are, as encoded on their brains.

This model applies to human beings when they have grown up sufficiently to be aware of having to make decisions. In the womb their constitution is monistic; as they grow up it becomes dualistic.

We are now in a position to consider the Incarnation. To become a human embryo, the Son had to empty himself of his personality,⁹ trusting that his Father would overrule in his growth and development as a human being so that

he would acquire the personality he had before he came. This overruling took place particularly in his home, the synagogue at Nazareth, and the temple in Jerusalem. Luke gives us a glimpse of the process when Jesus was twelve (Luke 2:41-52), and of its completion when he was about thirty (3:21-22). This makes the *kenosis* of the Son even more remarkable than in traditional theology.

Notes

- ¹David F. Siemens, Jr., "Neuroscience, Theology, and Unintended Consequences," *Perspectives on Science and Christian Faith* 57, no. 3 (2005): 187-90.
- ²John Polkinghorne, *Science and Providence: God's Interaction with the World* (London: SPCK, 1989), chap. 2, and other writings.
- ³P.G. Nelson, *God's Control over the Universe*, 2d ed. (Latheronwheel, Caithness, Scotland: Whittles, 2000), chap. 4. I can supply copies of this on request.
- ⁴Note that the behavior of any physical system that depends on the configuration of its components cannot be reduced to that of the components. A simple example is a Lissajous figure, the shape of which is determined not only by the oscillations of its components, but also by their phase.
- ⁵Cf. Nancey Murphy, "The Problem of Mental Causation: How Does Reason Get Its Grip on the Brain?" *Science & Christian Belief* 14 (2002): 143-57.
- ⁶Philosophers postulate a type of free will that is compatible with determinism ("compatibilist"), but this fails the test I have applied.
- ⁷In *God's Control*, I stated that a disturbance is required at a bifurcation (pp. 32-3). If my thoughts determine the outcome, however, this is not needed (cf. *Science and Providence*, p. 32).
- ⁸*God's Control*, Chap. 5.
- ⁹Phil. 2:6-7: "who, though being in the form of God, did not deem equality with God something to be clung on to, but emptied himself..." (my translation).

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Reviewers in 2005

We wish to publicly thank the following people for reviewing manuscripts.

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