

the Universe. As I have alluded this is the most fascinating question for me because it provides the basic motivation for almost all research into the fundamental structure of matter, space and time—the research area that has occupied me for much of my professional life.

I used to think there was a stark choice in the answer to this question, but in the process of writing this book, my views have altered. Clearly if there is a single theory involving a unique set of laws that describe and indeed prescribe how our Universe came into being and the rules that have governed its evolution ever since—the goal of physics since Newton or Galileo—then the answer would appear to be in the negative.

But what if our Universe is not unique, but a part of a vast, and possibly infinite multiverse of Universes? Surely the answer to Einstein's question in this case is a resounding yes!

I am not so sure. As I have described, it could be that there are an infinite set of different combinations of laws, and spaces, and varieties of particles and substances and forces that may arise in such a multiverse. However, it may be that only a certain very restricted combination, that results in the Universe in which we live, or one very much like it, can support the evolution of beings that can ask such a question. Then the answer to Einstein will still remain negative in this case. A God, or a Nature which could produce a multiverse is then as constrained by the existence of a Universe in which Einstein could ask the question as either would be if there is only one choice of a consistent physical reality.

I find the possibility that in either scenario, even a seemingly omnipotent God may have no freedom in the creation of our universe, oddly satisfying. No doubt because it further suggests to me that she is probably unnecessary.