

Comments on “The Cosmological Push”
Chris Arledge

1. Does a cosmological argument actually *have* to be deductive though? Most of them are and perhaps even the best cosmological arguments are, but does that entail that they must be deductive in order to be taken seriously? Certainly atheists give attention to the inductive fine-tuning argument and don't find its use on induction to be significantly troubling. So could one formulate an inductive cosmological argument that is taken as seriously as a deductive argument? In fact, doesn't Swinburne do just that in *The Existence of God*? I doubt this will be the case, but if deductive validity is not a necessary condition and if inductive strength were acceptable, would this avoid any of your subsequent conclusions? Also, are your three necessary conditions jointly sufficient? If you removed condition (1) from the requirements would this result in un-persuasive cosmological arguments?
2. Could you provide a few sources that descent from PSR? I am curious as to who argues this and I'm sure other readers would be as well.
3. I think the claim that the big bang is a “fact” is hasty. It is a very likely hypothesis based on the evidence we have and it is certainly rational to believe it. However, cosmology is a historical science and as such the data available is rather limited. Most if not all of the current data points to the occurrence of a big bang, but there is no guarantee that future data collection will continue to support the hypothesis. A great example of data collection that led to substantive model revisions is the 1998 supernovae data that shows that the expansion of the universe appears to be accelerating. Also keep in mind that evidence in cosmology is very underdetermined. Multiple cosmological models are consistent with the data available. A good example of this is that the standard model in cosmology is isotropic and homogenous (this is the Copernican Principle). But Ishak Mustapha and others have developed inhomogeneous models (which violate the Copernican Principle) of the universe that are consistent with the observational data. So to

claim that the big bang is a “fact” is not warranted. Also recall in the news not too long ago, cosmologists proposed a model of the universe that did not have a big bang! It is probably not a great model and is probably going to be shown to be incompatible with some data, but nevertheless the point is that a model without a big bang might come along and be just as, if not more, consistent with the observed data. So I recommend that you simply change “fact” to “a well-confirmed hypothesis.” It isn’t a huge point but I think calling the big bang a fact operates on too optimistic a view of confirmation in physical cosmology. You also acknowledge a lot of this line of argument a few paragraphs down so I don’t think this really hurts your argument at all; it just closes up an area for possible objection.

4. I am also not certain that skepticism about the big bang is necessarily faith based. It may just be a pessimistic meta-induction concerning past cosmological models that most if not all have needed substantive revisions or have been overturned altogether. Might this have implications about possible responses to the Kalam?