Determining Parfit's Selector

Introduction

In 1992, Derek Parfit published *The Puzzle of Reality: Why does the Universe Exist?* – an essay introducing possible mechanisms to describe why our Universe manifested or *obtained*. Parfit acknowledges the fine-tuning hypothesis that suggests our Universe was designed. He dismisses coincidence by citing the extreme rarity of complex natural phenomena were the universe to be randomly drawn from all possibilities (p. 419). However, he challenges a popular perception of fine-tuning which implies a God. Instead, Parfit claims that metaphysicians should assume temporally and spatially independent Universes, or *global possibilities*, within a grand Multiverse. Parfit tokens the *Selector* as an inherent and biased sampling mechanism that would obtain our seemingly rare Universe. In this paper, I examine Parfit's Selector, claiming that this interpretation of the Multiverse gives the illusion of fine-tuning only for certain conditions imposed on a Selector. I aim to offer structure to Parfit's Selector theory through comparisons to well defined statistical concepts as well.

Parfit's Selector

In trying to understand what caused an event such as the creation of the Universe, we inevitably introduce causal mechanisms at a metaphysical level that we cannot conclude. For example, if I walk outside because it was sunny today, you may ask why it was sunny, for this is truly why I walked outside. Should I respond, 'Because it is Spring,' you may still ask why, until we end up discussing the Earth's orbit, the Solar System, the Universe, and its origins. You then ask why the Big Bang, for which we have no physically-grounded explanation. Parfit uses Selectors to steer clear of this problem. Under the Selector, Parfit generalizes Multiverse

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configurations which would obtain our Universe without further explanation, extinguishing the endless why.

Parfit states (p. 424), "If some possibility obtains because it has some feature, that feature selects what reality is like." A sort of end-all-be-all to reality, our universe is (selected by) X, and being (selected by) X explains its existence. He goes on to say, "A feature is a *plausible* Selector if we can reasonably believe that, were reality to have that feature, that would not merely happen to be true." In other words, explanation of the Universe's existence is implicit to the Universe possessing features imposed by the Selector of the Multiverse.

From Parfit's definition, there are two possible procedures for determining a Selector. *Empirically*, one could observe a seemingly unique feature of their universe and from this deduce a Selector. The challenge with this approach is that we have no sense of uniqueness given only one observed universe. *Theoretically*, one could hypothesize Selectors and look for evidence locally. Like in science, theory and experiment are not necessarily ordered operations. So given these options, one is inclined to narrow down an empirical search through theory. If we can properly formalize Parfit's Selectors theory, establish constraints, and agree upon a range of possible Selectors, we can then think of how one could be observed in our Universe.

Special Cases

Parfit proposes two important cases for the Selector theory. Namely, he proposes a bound to the Selectors and a condition for a truly random selection. If there is a *null* Selector, the Universe must possess no features. If there is a *maximal* Selector, our Universe is selected for it possesses every possible feature. Finally Parfit puts forth that if there does not exist a Selector,

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our Universe's manifestation is truly random. Parfit has laid the foundation for a model of his Selector theory wherein a Selector implies determinism and no Selector implies randomness.

One may conclude from Parfit's definition that a Selector is deterministic – for every Selector there is a single corresponding universe. Empirical evidence of a universal feature corresponding our Universe to a single Selector would likely be apparent if this were the case. Furthermore, if there exists a deterministic Selector inherent to the Multiverse, then only one Universe, this Universe, could ever obtain. This eliminates the need for a Multiverse altogether.

Consider the *best* Selector. This Selector is the basis for the *Axiarchic View*; our Universe exists because it is the *best* global possibility. Parfit suggests that if this Selector is deterministic, while maintaining extreme subjectivity, it is no better than declaring the existence of God. He says (p. 426): "Just as God cannot have caused His own existence, the truth of the Axiarchic View cannot be what makes this view true." If one declares such an extremely subjective Selector, one must conclude that God eliminates its subjectivity for objectivity. At this interface, the agnostic fine-tuning believer says the *best* Selector is *determined* by God, whereas Parfit requires it to have a deterministic nature. If we are to exclude God from our exploration of Multiverse theory, subjective Selectors require skepticism. Furthermore, one may actively search for more objective means of selecting a Universe.

In terms of modeling the Selector theory, the bounding Selectors and a no-Selector case could, alternatively, be extreme Selectors examples on a continuum of determinism. One could interpret Parfit's Selector to be generally nondeterministic – our Universe is a single observation from a large Multiverse. The aforementioned *null* and *maximal* Selectors would indeed be special cases of maximal determinability. Lack thereof a Selector would also be a special case of minimal determinability.

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Determinism and Selector Statistics

According to Parfit, a Selector based on *elegance*, *complexity*, *goodness*, or *badness* could also obtain our Universe. Let these be *qualitative Selectors*. When Parfit uses qualitative Selectors such as *goodness*, he initially speaks of them as having deterministic, corresponding Universes. He then contradicts this notion, suggesting that our Universe could not be selected upon *goodness* because that does not explain the suffering in our world.

Parfit fails to explicitly acknowledge that qualitative Selectors introduce subjective interpretations which challenge the notion of a deterministically obtained Universe. For example, if our Universe was selected upon *goodness*, it is not that this is false because our Universe contains suffering, rather we need to explain the disparity between my definition of goodness and that of a Satanist. Simply put, <u>subjectivity of a Selector eliminates determinism</u>. From Parfit's special cases, lack thereof a Selector implies randomness. Therefore, by equating an absolutely subjective Selector to a random selection, I am equating an absolutely subjective Selector to no Selector altogether.

The qualitative Selector uncovers the basis for a well structured Selector theory. First, I assume that the subjectivity of a Selector reduces the determinism of that Selector's selection. Then I define a *measure* of the ability of a Selector to deterministically select. I propose the *quality* of a Selector be this measure, and roughly inverse to the *variance* of the global possibilities. For instance, a low quality Selector is highly subjective, thus it is not likely that a particular Universe obtains. A high quality Selector is opposite, and increases the likelihood that a particular universe obtains.



Figure 1: A visualization of qualitative Selectors. The width of a Selector's distribution, or the *variance* (a metric quantifying the number of likely global possibilities), is reduced for Selectors of higher *quality*.

In discussing the limits of Parfit's Selectors when we take their quality to be minimal or maximal, we may speak in terms of statistics. The Selector in this instance is a distribution of probability over a set of global possibilities within a *sample space* bounded by *null* and *maximal* (Figure 1). In the limit of minimum quality, the distribution flattens out. The lowest quality Selector would be representative of a *uniform distribution* or completely random. In the opposite limit, the distribution spikes. The highest quality Selector would be representative of a thin *trivial distribution* that allows for only sampling the outcome as its position in sample space. We may consider where in the global possibilities the distribution is centered, as this is the *mode* of the distribution – the most likely global possibility to occur.

Through this framework, we can narrow down what type of Selectors we should look for, although there are a few caveats. Parfit seeks a Selector which is of very high quality, and with a mode near our Universe's global possibility. The challenge is that the physics of our Universe does not restrict that of other global possibilities. We have no way of reducing the number of global possibilities which would effectively increase the likelihood of ours. In fact, the number of global possibilities is estimated to be extremely large, hence the fine-tuning theory. To focus the mode of the Selector about our Universe, it must be biased by something present in this Universe. Fortunately, this would imply the bias is a physical feature, but whether this feature is the existence of mankind or the fact that today was sunny may be a question beyond our comprehension.

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