

# The Anthropic Coincidences, Evil and the Disconfirmation of Theism (1992)

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The anthropic principle or the associated anthropic coincidences have been used by philosophers such as John Leslie (1989), William Lane Craig (1988) and Richard Swinburne (1990) to support the thesis that God exists. In this paper I shall examine Swinburne's argument from the anthropic coincidences. I will show that Swinburne's premises, coupled with his principle of credulity and the failure of his theodicy in *The Existence of God*, disconfirms theism and confirms instead the hypothesis that there exists a malevolent creator of the universe.

## 1. THE ANTHROPIC COINCIDENCES

Swinburne argues that the initial conditions of the universe and the physical constants mentioned in the basic physical laws are fine-tuned for intelligent life. The result is anthropic coincidences.

The initial conditions of the universe are the arrangements and properties of the stuff (matter, energy, space) of the universe at its beginning. The big bang singularity, occurring about 15 billion years ago, is the first state of the universe and initial conditions pertain to this singularity or, better, to the explosion of this singularity in the 'big bang' that commenced the evolution of the universe.

The physical constants are the strengths of the forces and the masses of the particles that are mentioned in the basic physical laws. There are four forces (gravity, electromagnetic, strong and weak) and two types of particles (bosons and fermions).

Swinburne does not offer a precise definition of fine-tuning, but the following definition is both serviceable and consistent with the spirit of his article. A certain set of values of initial conditions and physical constants of a universe are fine-tuned for intelligent life if and only if (a) each of the values of the initial conditions and physical constants in this set is a physically necessary condition for the evolution of intelligent life (1990: 164), (b) the values in this set are jointly sufficient for ('give rise to' (1990: 157)) the evolution of intelligent life, and (c) there is only an extremely small range of all physically possible values of the initial conditions and physical constants that meet conditions (a) and (b). If any value meets these three conditions, it is an anthropic coincidence.

An example offered by Swinburne of an initial condition that is an anthropic coincidence is the rate of expansion of the universe from the big bang singularity. If this rate were slightly faster, galaxies, stars and planets would not form; if slightly slower, the universe would collapse before any atoms formed. Swinburne considers the objection that the Inflation theories developed during the 1980s show that the expansion rate is not an anthropic coincidence (since condition (c) is not met) and offers a retort that will undoubtedly raise the eyebrows of physicists, that it seems difficult to formulate any Inflation theory that is not 'ill justified by data' (1990: 162-3). Given the virtually universal acceptance of Inflation by contemporary physicists, it would seem that a more rational response to this objection is to adopt Leslie's line (1989: 31) and point out that Inflation theories presuppose anthropic coincidences of their own, e.g. the fact that the two components of the cosmological constant (bare lambda and quantum lambda) must cancel each other with an accuracy better than one part in  $10^{50}$  in order for galaxies and planets to form.

An example of a value of a physical constant that is an anthropic coincidence is the electron to proton mass ratio,  $m_e/m_p \sim (1/1836)^{-1}$ . This small value is a necessary condition of there being DNA molecules.

This explanation of the basic concepts in Swinburne's 'argument from the fine-tuning of the universe' enables its formulation to be presented and evaluated.

## **2. SWINBURNE'S ARGUMENT THAT THEISM IS CONFIRMED BY THE ANTHROPIC COINCIDENCES**

The anthropic coincidences confirm theism, Swinburne claims, since if theism is true these coincidences are much more likely to occur than they otherwise would be. This can be stated precisely. Where  $P$  = probability,  $e$  = evidence,  $h$  = hypothesis and  $k$  = background knowledge,  $e$  confirms  $h$  if and only if  $P(e/hk) > P(e/k)$ . ' $e$  confirms  $h$ ' means  $P(h/ek) > P(h/k)$ . ' $e$  significantly confirms  $h$ ' means  $P(h/ek) \gg P(h/k)$ . The argument from the anthropic coincidences to God requires that:  $e$  = there are many anthropic coincidences;  $h$  = God exists;  $k$  = there is a universe that begins from an initial singularity and is governed by laws that have the form of our four-force laws.

Given this,  $P(h/ek) \gg P(h/k)$  since  $P(e/hk) \gg P(e/k)$ . In words, this means that the probability that God exists given the anthropic coincidences and a universe with an initial singularity and four-force laws is much greater than the probability that God exists given only a universe with an initial singularity and four-force laws, since the probability of the anthropic coincidences given the existence of God and a universe with an initial singularity and four-force laws is much greater than the probability of the anthropic coincidences given only a universe with an initial singularity and four-force laws.

The first thing I want to say by way of evaluating Swinburne's argument is that  $e$  confirms  $h'$ :  $h'$  = there is a malevolent creator of the universe, no less than it confirms  $h$ . By a 'malevolent spirit' I understand a spirit that either has all evil intentions or has some evil intentions and some good ones. (Hitler and Stalin were malevolent persons, but they both had some good intentions.) A malevolent spirit would desire a universe with intelligent life no less than would a benevolent

spirit, since the realization of moral evil requires the existence of intelligent life no less than does the realization of moral good. A spirit cannot exercise her malevolence on inanimate matter but has abundant opportunity to be cruel if there are intelligent creatures capable of suffering, harm and premature death. Accordingly, we may say about  $h'$  what Swinburne says about  $h$ , namely that  $P(h'/ek) \gg P(h'/k)$  since  $P(e/h'k) \gg P(e/k)$

It is not a paradox that the same evidence  $e$  confirms equally well two incompatible hypotheses; this is a familiar principle of confirmation theory, known since Carnap's *The Logical Foundations of Probability*, section 86 (also see (Salmon, 1975: 6-8)). If it appears paradoxical, it is because one is confusing relative confirmation (which I am here using 'confirmation' to express) with absolute confirmation (which I shall use 'makes highly probable' to express). The same evidence cannot make highly probable each of two incompatible hypotheses, but it can increase the probability of each of two incompatible hypotheses (i.e. make the two hypotheses more probable than they would have been without the evidence).

A decision between two hypotheses each of which is equally confirmed by the same evidence  $e$  can be made if there is some further evidence  $e'$  that disconfirms one of the hypotheses but confirms the other. In the case at hand,  $e'$  = there is a large amount of gratuitous natural evil.

Is  $e'$  true? It certainly seems to be. Consider one example from thousands. Psychoses come in two main types, schizophrenia and bipolar disorder ('manic depression'). Both are genetically inherited diseases. Bipolar disorder is caused by a dominant gene on the X chromosome. Typically, the person with this gene does not have this disease from birth but develops it later in life, usually during adulthood. Suppose there is a person Alice with this gene who is living a happy and morally good life up until age 33, when there is a relatively rapid onset of the disease. Alice acquires a chronic, endogenous, rapid cycling bipolar disorder and is mentally ill for the remainder of her life. This is a natural evil. Is it gratuitous?

Swinburne claims that despite appearances natural evils are justified since they are logically necessary means to outweighing goods. In the case of incurable diseases, the outweighing good is the empirical possibility they offer us of eliminating any future occurrences of these diseases. 'Men can only have the opportunity to prevent incurable diseases or to allow them to occur, if there are naturally occurring incurable diseases' (1979: 207-8). However, *pace* Swinburne, it is a self-evidently false moral principle that the evil of an incurable disease is outweighed by the good of the opportunity to prevent future occurrences of the disease. The falsity of this principle needs little reflection to become manifest. Consider that if this principle were true, we would rejoice in each new disease because it would give us an opportunity to prevent future instances of that disease. We would be currently celebrating the AIDS epidemic, because the thousands or millions who have died and will die agonizing deaths from this disease will give us the 'outweighing good' of the opportunity to prevent future instances of AIDS. But this of course is morally absurd. The evil of the actual instances of AIDS far outweighs whatever goodness belongs to the opportunity to prevent possible instances of it.

Given that this is the case, Swinburne has failed to demonstrate that seemingly gratuitous natural evils are not really gratuitous. Given in addition Swinburne's principle of credulity ('things are as they seem to be, unless and until proved otherwise' (1979: 168)) we may conclude that in the

light of the considerations Swinburne has offered, it is reasonable to conclude that there are gratuitous natural evils. On the same basis, it is reasonable to conclude that God does not exist, since God is omnipotent, omniscient and perfectly good and thereby would not permit any gratuitous natural evil. But since gratuitous natural evils are precisely what we would expect if a malevolent spirit created the universe, it follows that h' is confirmed. More exactly,  $P(h'/ee'k) \gg P(h/ee'k)$  since  $P(h'/ek) = P(h/ek)$  and  $P(h'/e'k) \gg P(h/e'k)$ . If any spirit created the universe, it is malevolent, not benevolent.

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