aware that in time they will learn better of both history and science.

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Why We Exist

Freeman Dyson, the famous astrophysicist, writes: "Life resides in organization rather than in substance, and it makes sense to imagine life detached from flesh and blood and embodied in networks of super conducting circuitry."[1] From this we can postulate that a life form of superior intelligence evolved slowly in the cosmos, over eons and eons, from the gradual accumulation and self-organization of energy; and that this energy arose in the cosmos through the same random quantum mechanism as used by cosmologists to provide the energy need for the Big Bang, to create an "accidental universe." We can also postulate that the cosmos has always existed and still exists as that space or space time into which our universe is now expanding.

We can further postulate that the energy of the life form was slowly decaying, as all energy does, so that at some point this loss of energy exceeded the gain of energy being acquired from the cosmos so that the life form was either slowly dying, or becoming static in some way, so that the situation had become desperate for the life form.

We can postulate too that the planning for, and the creation of a universe as a survival plan is such a monstrous task that it could only be undertaken as an act of desperation, for survival itself. We can postulate such a survival plan must permit the life form to acquire new and fresh energy, an energy that was not being recycled from somewhere else.

We can postulate then that the life form evolved a Plan to create a universe the fundamental constants of nature and the laws of physics fixed in advance so that a universe had to evolve whereby intelligent life would emerge on countless planets throughout the universe and whereby the dominant intelligent life form on such planets had the mission and opportunity to develop a source of fresh energy which became accessible at some point to the life form; and that the life form then creates such universe through some inflationary big bang scenario.

We can also postulate that this fresh energy can be generated in the mind and brain of a dominant intelligent planetary life form through the exercise of free will, an act which is absolutely vital to the Plan; and that free will is so important to humanity that it has been handed down in allegorical form through the story of Adam and Eve, where Eve exercised her free will through the taking of the apple; and that this fresh energy increases with free will thoughts and actions which are good and decreases with those that are evil, which may be why the teachings of Moses, Jesus, and Mohammed are dedicated to encouraging that moral system which would promote the development of fresh energy; and that this fresh energy passes directly on death to the energy field of the creative life form; and this may be why Jesus could tell his disciples with confidence as he was taken away to be crucified, as reported by John, "On that day you will understand that I am IN my Father and you IN me and I IN you." It may be that here Jesus was trying to tell them, before anyone had ever heard of anything called "energy," that the Father was a pool of living, sentient energy, and that He, Jesus, was in this pool, and that they would be in this pool too!

And finally, we can postulate that we know this fresh energy as the soul, and the creative life form as God, and that this then is the Destiny of Humanity, our reason for existence, to develop a soul which can merge with God and flow throughout the cosmos as a living sentient field, supporting this and other universes unto eternity.

Note

[1]Freeman Dyson, *Infinite in All Directions* (New York: Harper and Row, 1988), 107.

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Altruism as Evidence for Intelligent Design

Some biochemical processes are believed to be irreducibly complex, and the molecular components cannot be broken down into simpler molecules without the system falling apart. This complexity has been presented as evidence for intelligent design in living systems.[1]

The intelligent design hypothesis has been challenged on the grounds that the structures of living things are not in fact irreducibly complex, but have a built in redundancy.[2] Furthermore, it has been shown that irreducibly complex and functionally indivisible structures can be accessible by some Darwinian pathways, and there is fossil and biochemical evidence that some of these pathways have been traveled in the past.[3] Moreover, once complex biochemical systems have been selected for, natural selection would act to maintain these structures, since any slight deviation from a complex and inter-related process would have severe selective disadvantages.

Some altruistic interactions on the other hand not only can not be accessed through any known Darwinian selection pathway, but natural selection would be unable to maintain such systems. In a previous paper,[4] I reviewed three examples of altruism which would not be maintainable under any known mechanism of natural selection. My examples have been challenged by David Lahti[5] who concludes that these are all cases where Darwinian mechanisms would act to preserve altruism.

My first example concerned the reciprocal altruism of cleaner fish and the predators they clean. In this case, the predator is acting altruistically by not eating the cleaner when it has finished cleaning, and in some cases the predator may risk its life by ensuring the safety of the cleaners before itself escaping from larger predators.[6] Lahti states that this is an example of simultaneous mutualism, which is demonstrably false. The altruism here is not merely between the cleaner and the predator. Experimental evi-

dence shows that the cleaners are shared among the predators,[7] so other predators would be hard done by if the cleaners were all eaten. The predator therefore sacrifices short-term gain to preserve the population of cleaners for the good of all.

My second example concerned ants that keep useful caterpillars in their nests for their nectar, but continue to look after the pupa until the butterfly has flown away. Some species of ants eat the pupa if it is injured, so they do gain nutritional benefit from the pupa. The ants are therefore sacrificing their own fitness when they refrain from eating healthy pupae.[8] Lahti points out that the interaction between the ants and the emerging butterflies is not actually altruistic since the ants rely on the butterfly to provide a good crop of caterpillars in the next generation. The beneficiaries of the ants' altruism however are not just the caterpillars, but other ant colonies in the area, which will also benefit from the higher numbers of caterpillars.

In both the examples given, one could expect "cheat" individuals or colonies to evolve which would eat the cleaners or the pupae. These would multiply at the expense of their altruistic competitors and overrun the area. In the long term the species as a whole would suffer, but Darwinian evolution (like some human economic systems) is concerned with short-term gain and does not look ahead.

In my third example, I referred to plants which produce estrogen mimics. These chemicals act upon the hormonal system of grazers such as sheep and reduce their fecundity. Lahti states that this is not altruistic because the plant benefits from not being eaten. This would only hold true however for plant defenses that immediately deter grazers and not for slow acting toxins. Again, it would be expected that Darwinian selection, being concerned only with short-term gain, would not produce plants capable of producing long term contraceptives that would benefit the species at the expense of the individual.

Advocates of intelligent theory freely admit that it tells us nothing about the identity or personality of the designer, who could be the God of the Bible, a lesser deity, a demon or even an extraterrestrial.[9] The presence of altruism however extends the intelligent design theory in that it tells us something more about the Designer.

One of the strongest arguments against the existence of God is the problem of evil, and as we learn more about living things and their interactions, this argument has been expanded to include the nonhuman world. The presence of predation, parasitism and ruthless competition in the living world has been cited as reasons to doubt the claims of Christianity.[10]

The problem of evil is a valid objection to the goodness of God, but to my mind can be countered by an equally powerful "problem of good." Those who doubt the goodness of God need to explain the seeming reality of transcendent moral laws in humans.[11] The problem of good, like the problem of evil, can be extended from the human world to the natural, where we find examples of altruistic and co-operative interactions in the living world. Unlike the case with human morality, there is no need to postulate the existence of a transcendent moral imperative, which other living things choose to keep. The fact that at least some altruistic interactions cannot be supported by Darwinian mechanisms alone does however lend further support for the "problem of good."

It is possible that further evidence may turn up that will explain all altruistic interactions in Darwinian terms, but those who use this as an argument to dismiss design are simply begging the question by assuming Darwinism to be true. Until further evidence comes to light we should be content to base our inferences on known observations and not speculation. Based on the information we have on altruistic systems, I suggest that intelligent design is the most parsimonious inference.

Notes

[1]M. J. Behe, *Darwin's Black Box* (New York: Touchstone, 1996); and W. A. Dembski, *The Design Inference: Eliminating Chance Through Small Probabilities* (Cambridge: Cambridge University Press, 2000).
[2]D. W. Ussery, "A Biochemist's Response to the Biochemical Challenge to Evolution," *Bios* 70 (1999): 40-45; and N. Shanks and K. H. Joplin, "Redundant Complexity: A Critical analysis of Intelligent Design in Biochemistry," *Philosophy of Science* 66 (1999): 268–82.
[3]R. H. Thornhill and D. W. Ussery, "A Classification of Possible Routes of Darwinian Evolution," *Journal of Theoretical Biology* 203 (2000): 111–6.
[4]M. C. Morris, "God's Design Plan in Nature—A Fresh Look at Altruism," *Perspectives on Science and Christian Faith* 52 (2000): 55–7.
[5]D. Lahti, "Evolutionary Theory Misunderstood," *Perspectives on Science and Christian Faith* 52 (2000): 215–7.
[6]A. Grutter, "Cleaner Fish Really Do Clean," *Nature* 398 (1999): 672–3; and R. L. Trivers, "The Evolution of Reciprocal Altruism," *The Quarterly Review of Biology* 46 (1971): 35–57.
[7]Trivers, "The Evolution of Reciprocal Altruism."
[8]S. Yamaguchi, "Butterflies, which Inhabit with Ants," *Konchu to Shizen* 35 (2000): 2–7 (in Japanese).
[9]Behe, *Darwin's Black Box*; and Dembski, *The Design Inference.*
[10]R. Dawkins, *River Out of Eden* (Phoenix: Basic Books, 1996).
[11]C. S. Lewis explains this complex point simply in his *Mere Christianity*. For a more recent discussion, see D. Lahti,"Parting with Illusion in Evolutionary Ethics," *Biology and Philosophy* (in press).

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