

Book Review

Review of Frank Ryan's Book: Darwin's Blind Spot: Evolution beyond Natural Selection

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ABSTRACT

Competing bacteria can fine tune their weapons to such an extent that they may win over their victims. They could be invited into their conquered host cells and become organelles like mitochondria and the cell nucleus. But the illusion of conquest is short lived. As the competing prokaryote cells find themselves to be one eukaryote cell, they discover a deeper symmetry and their felt imperatives flip as the competing bacterium find deep agreements in their mutual cooperation. Frank Ryan's book presents a wonderful account of such symbiosis as discovered in biological evolution. You can find this book at Amazon http://www.amazon.com/Darwins-Blind-Spot-Evolution-Selection/dp/0618118128/ref=cm_cr-mr-title.

Key Words: Darwin, blind spot, evolution, natural selection.

After the emergence of the first examples of prokaryote life, it had been thought that bacteria competed among themselves. That is, if we could intervene into the life of a bacterium and ask the little fellow: What is it that you are doing? What is this imperative that you hold? We would expect the answer that the bacterium holds challenge and necessity. And based on all outward signs it looks as if the bacterium must compete for its survival because of some egocentric imperative. Otherwise, the bacterium can just go on strike and there would be no surviving bacteria to direct such questions to, and we would not be here to ask such questions because our own survival depends upon the success of bacteria.

The bacterium is not an isolated unit onto itself. There is also everything else that makes up the biosphere and beyond. Is this imperative that the bacterium holds based on challenge and necessity of the individual cell? Or is it the empathetic wish of the biosphere to nurture the communities of prokaryote life and more? Is it the many, or the one? If it is our attention to avoid homomorphism, it must be that we cannot answer these questions. Therefore, the imperatives that life holds comes with two sides that are formally indistinguishable. Incidentally, judging imperatives relates to the same confusion that Huw Price (see Time's Arrow and Archimedes' Point) described regarding the perceived passage on time - a very important observation. Does time unfold by the thermodynamic arrow as energies degrade into states of maximum entropy? Or is this just an issue of perspective as it is just as plausible for low energy states to unit into more ordered states?

Given that we hold these alternative views, it is not surprising that competing bacteria can fine tune their weapons to such an extent that they may win over their victims. They could be invited into their conquered host cells and become organelles like mitochondria and the cell nucleus. But the illusion of conquest is short lived. As the competing prokaryote cells find themselves to be one eukaryote cell, they discover a deeper symmetry and their felt imperatives flip as the competing bacterium find deep agreements in their mutual cooperation. Lynn Margulis will tell us this much, and Frank Ryan's book "Darwin's Blind Spot" presents a wonderful account of such symbiosis as discovered in biological evolution.

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In writing on Albert Bernhard Frank's work on trees and fungi, Frank Ryan (on page 24 of "Darwin's Blind Spot") concludes:

"... The intimate cooperation between wholly different life forms - plants and fungi - is not only an amazing biological phenomenon but also a vitally important factor in the diversity of plant life on earth. It should have been of enormous interest to evolutionary theorists, but few scientists were paying attention. In those formative years at the end of the nineteenth century, as the fundamental principles of biology were being hammered into place in laboratories around the world, Darwinian evolution took center stage. And as Darwinism, with its emphasis on competitive struggle, thrived, symbiosis, its cooperative alter ego, languished in the shadows, derided or dismissed as a novelty."

How we perceive our self and our world will direct our imperatives. We may greet the broken symmetry with angry confusion and find ourselves competing (Publishers Weekly comes to mind). Or we may see the deeper symmetry and find ourselves cooperating. The imperatives are made of mind stuff as I note in my book, "Trinity". It is for this reason that I give Frank Ryan's book the highest recommendation.

References

Frank Ryan, 2002, *Darwin's Blind Spot: Evolution Beyond Natural Selection*. Houghton Mifflin Harcourt.