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The Origins of Sociable Life: Evolution After Science Studies

Myra J. Hird. New York: Palgrave Macmillan, 2009; 202 pp; ISBN-13: 978-0-230-20213-9; ISBN-10: 0-230-20213-6. 50.00£.

Sociologists who wonder what sociological theory could be like in the 22nd century should look no further than Myra Hird's *The Origins of Sociable Life: Evolution After Science Studies*. This engaging, thoughtful, thought-provoking yet readable book shows sociological theory the path to the next century by examining the intra-actions between human life and some of the world's smallest creatures – bacteria – that have been running the show on earth ever since the beginning.

This book is about microontologies, or how the microcosmos comes to bear on the approach to social scientific topics. The approach is interdisciplinary and nonmodern; interdisciplinary in the sense that it engages the biological and the social, a trail already worn to an extent by Professor Hird's colleagues in biophilosophy. The nonmodernism is most refreshing, as the author eschews both modernism and postmodernism. The bacteria she studies predate modernity by billions of years.

The newcomer to this strangely attractive small world has no excuse for giving up due to ignorance of the terrain. Dr. Hird in Chapter One frames the ontological and epistemological issues she faces in the book by drawing out two extreme arguments, realism versus social constructivism, a debate that even the classically trained sociological theorist can put her arms around. Then, she goes on to historically trace how the argument between realism and constructivism progressed from Plato's battles with the Sophists onward. In the end, she finds Latourian metaphysics intriguing because Latour's actants constitute a middle ground between realism and constructivism, and actants need not be human. This is extremely important to her work as Hird's bacteria were "social" beings long before human beings were social.

Still, the newcomer needs specialised knowledge to contextualise the microbial world, and Professor Hird provides this in Chapter Two. She notes the resistance of social scientists to studying something that is not "big like us." At the same time, she points out that, in addition to bacteria's longevity on earth, they have been critically important in keeping it all going smoothly: "If microbial life were to disappear, that would be it – instant death for the planet" (p. 26). Not only are there more bacteria than people, there are as many bacteria as there are bacteria. And bacteria are not the passive agents we picture them to be; they monitor, respond, and adapt to their environment in complex ways.

Myra Hird in Chapter Three is an advocate of a variant of evolutionary theory called symbiogenesis theory, which argues that new phenotypes, traits, tissues, organelles, organs, or organisms are formed through a symbiotic relationship. While evolutionary theorists argue that random mutation over long periods of time is natural selection's primary engine of change, advocates of symbiogenesis contend that symbiogenesis constitutes the major mode of evolutionary innovation on which random mutation then makes slow, minor changes. In other words, the accumulation of random mutations played only a minor role in evolution. Why does this matter? Social science developed in tandem with the concept of the individual organism as the unit of selection and evolution as the struggle for survival. This foundation in turn underwrote our understanding of social, group and collective action. Symbiogenesis calls this entire foundation into question, and Chapters Four-Six explore the implications. Chapter Four reorients our understanding of the self, Chapter Five resituates prior understandings of sex and gender, and Chapter Six rearranges our view of environmental issues.

Traditionally the human self has been tied to our notions of a series of exchanges we experience with other humans. Biology, however, shows how we are more materially immersed in the lived bodies of others' identities than we typically think, and we are certainly more immersed than contemporary exchange theory allows. In a material perspective we cannot calculate the debts our bodies owe to our biological parents and to others we associate with (circulation of DNA, blood, nutrients, flesh, antibodies, pathogens, microbes, bacteria, and viruses constitutes life). In short, we do not simply

interact with others, we *intra-act*, gifting things that are often incalculable. This ongoing process creates something we call individuality.

Viewed from the perspective of symbiogenesis theory, sex arrived late on the evolutionary scene as an effect of symbiogenetic mergers and niche constructions. Thus, using this logic, the kind of sex practiced by some animals (including humans) is a result of the failure of organisms to exchange DNA through other means: “As such, sexual reproduction is an outcome of contingent circumstances rather than evidence of greater ‘complexity’ or hybrid vigor” (p. 96). Hird then thinks through the implications of this theory for gender studies as it resituates some of our basic assumptions about sex, reproduction and sexual diversity.

Dr. Hird embraces Gaia theory, or “symbiogenesis, from space” as an explanation for earth’s environmental problems. The basic idea is that the earth system behaves as a single, self regulating system comprised of physical, chemical and human components. The interactions between parts are complex and exhibit multi-scale temporal and spatial variability. By embracing the theory, Hird risks further eroding sociology’s reputation – Gaia having little traction in the scientific community. Despite this risk, Hird envisions an opportunity to recruit sociologists to a cause they can rally around, the environment, as environmental issues affect those “big like us” as well as smaller creatures. If sociology is to emerge from its doldrums, it must engage serious science, and the science of the microbial is the answer.

The final chapter on the “ethics of the microbial” is the crowning achievement of Hird’s book in that it puts a name to her body of recent theorizing, a name that may well appear on the reading lists of 22nd century sociology doctoral candidates. Simultaneously, it may be the least attractive chapter to today’s sociological theorists as they may disagree that such ethics... “is fundamental to our future disciplinary enterprise” (p. 133).

Despite such pessimism as the book may encounter, I remain convinced by this work and I propose that it makes vitally important reading for all sociologists, and especially sociological theorists and their students. It is time for sociology’s tent to open up to the microcosmos. Our world is pushing toward a biotech future that will have to deal with the social implications of cloning, stem cell research, synthetic foods, and other innovations. From the microcosmic perspective, this future is a road already travelled. Bacteria, earth’s saviour in the H.G. Wells classic *War of the Worlds*, may yet rescue sociology from itself. Sociology must grasp this opportunity to form an alliance with biology and become an intellectually leading enterprise. Doing nothing could lead to sociology’s extinction, as it increasingly is viewed as an intellectual underlabourer.