



Chapter IX

On Emergent Phenomena: If I'm Not in Control, Then Who Is? The Politics of Emergence in Multi-Agent Systems

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Abstract

“Emergence” is itself emergent; although originating in the context of the “sciences of complexity” — i.e., life sciences, cybernetics, multiagent systems research, and artificial life research — “emergent thinking” has spread to other parts of the academy, including the social sciences and business. Utilizing examples drawn from popular culture, this chapter looks to the ways IT has proven influential in other cultural contexts, but not without a price. The second part of the chapter interrogates the transportation of emergent thinking into these other discourses, taking them to task for not embracing the promises inherent in emergence and, in

fact, merely reproducing the old under the sign of the emergent new. Finally, by borrowing notions of “surprise” from robotics and multiagent systems, I suggest new possibilities for emergence to lead to genuine paradigm shifts in the ways we think.

Introduction

In the 1990s, a *value-free*, Mertonian science was variously critiqued by interdisciplinary congeries of scholars who worked to show how scientific discourses were always already imbricated in Western, white, and male hegemony. As Ross (1996) writes:

If stable sciences really are objective fields of knowledge and inquiry, why have so many (seismography, oceanography, and microelectronics, to name a few) evolved directly from military R&D as part of this spin-off system that is habitually cited to justify the benefits to society of the vast military budget? (p. 5)

Turning a hermeneutics of suspicion against areas of the academy putatively *above* culture, these analyses look to the ways that the questions science asks derive from historical contexts (Haraway, 1989; Redfield, 1998), the “hidden transcripts” that inflect putatively empirical results (Latour & Woolgar, 1979; Traweek, 1988), and the cultural fields within which scientific discourse is embedded (Helmreich, 1998; Parisi, 2004).

However, by the end of the 1990s, the tone of much of this work had shifted to more localized studies of specific disciplines. Clough (2004) attributes this — in part — to Sokal’s *hoaxing* of the journal, *Social Text*.

The questions once raised about the legitimacy and authority of Western discourses of science, reason, truth, and disciplinary methods have been quieted, and the relationship of these questions to the interarticulated differences of gender, sexuality, class, race, ethnicity, and nation, for so long productively explored in the critical theories of the late twentieth century, have ceased to be central to social criticism. (p. 1)

But what has happened, instead, is that these erstwhile critics of science have become, in a way, its servants, translating scientific discourse into more leaden theoretical language for its appropriation into the humanities and social sciences.

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