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Chapter IV

Interest in Production: On the Configuration of Technology-Bearing Labors for Epistemic IT

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Abstract

The chapter locates the organization of the technology-bearing labor process as an important object of STS/ e-science research. Prospective e-science texts, so central to the pursuit of innovative technologies, construct images of specific technical product outcomes that could justify future investment; such products in turn imply specific labor contributions. To study the production of IT for epistemic practice is to go beyond an inquiry of IT use and design practices, and to consider decisions that get made about how the skill, commitment, performance and product demand of scientists could be coordinated and stabilized. In bringing these considerations to the fore, the chapter presents findings from a study about a particular e-science infrastructure production project—the U.S. National

Computational Science Alliance—at the turn of the 21st century. The chapter illustrates the organizational dynamics in this case that were bound up with the garnering of interest and commitment of scientists who were funded to build interdisciplinary computational media.

Prospective Texts and the Reproductive Passages of Epistemic IT

Contemporary international interest in e-science reflects and maintains a resilient tradition of prospective discursive practice on the part of computing practitioners. To speak only on behalf of the United States, the document recently published by Atkins (2003) is the young one in a series of prospective reports that have been made to the U.S. National Science Foundation in response to its requests for bases on which to assess the direction of its investments in large-scale computing. Indeed, computing advocates in the United States have been making arguments for continued investment in high-performance computational technologies for several decades. Contrary to von Neumann's early vision that only a few computers would be needed across the United States for scientific research, it seems that a need for technical systems for science is insatiable. We might speak here of a resilient *will to produce epistemic IT*. By "epistemic IT" we mean information technologies that are produced for the stated purpose of being used by scientists in their knowledge production efforts[1].

Such reports, cultural media for the expression of epistemic IT's will to produce, are objects of study for those who care about dynamics that constitute the principal zone of research for scholars of science, technology, and society (STS). They articulate problems to which future social activities should be oriented, and propose solutions to which financial resources should be directed. Some scholars of STS have concentrated on understanding how these kinds of texts work (cf. van Lente & Rip, 1998; Brown & Michael, 2002). These scholars speak of the construction of "prospects," "expectation statements," and the power of texts to mobilize "communities of promise" into the present. As Brown has recently specified:

[F]uture-abstractions are put into circulation in the first place to have a 'performative' influence in real time (Michael, 2000). That is, hype is constitutive, it mobilises the future into the present. It is part of the repertoire through which a narrative path or story line is constructed for technologies (Deuten and Rip, 2000). And, as with any narrative or story,