INFORMATION SCIENCE PUBLISHING
701 E. Chocolate Avenue, Suite 200, Hershey PA 17033, USA
Tel: 717/533-8845; Fax 717/533-8661; URL-http://www.idea-group.com
ITB12131

This chapter appears in the book, *New Infrastructures for Knowledge Production: Understanding E-Science* edited by Christine M. Hine © 2006, Idea Group Inc.

Chapter VI

Networks of Objects: Practical Preconditions for Electronic Communication

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Abstract

The chapter is based on interviews with a group of university scientists in the Department of Chemistry, University of Oslo. It seeks to lay bare some of the processes that the chemists carry out in order to transform their "raw materials" into more or less standardized information that can usually be communicated in the forms of e-mails, etc., in a seemingly unproblematic manner. The chapter argues that this work has been a precondition for the success of electronic communication in the sciences, and that information that has not been through such a process is frequently seen as unfit for electronic media. It follows that further introduction of ICTs in the sciences might not prove useful unless this is taken into account. The chapter includes references to problems and literature from the field of Science and Technology studies.

Introduction

The internet has become increasingly important as a means of communication in the sciences. However, in order for net-based communication to work, the information exchanged must already have been made exchangeable, and exchangeable in the right form. In this chapter, I will try to describe some of the processes that precede electronic communication between scientists, and that serve to make this communication possible. The chapter is based on interviews with a group of 25 employees of the Institute of Chemistry at the University of Oslo, and I will attempt to lay bare some of the processes that these chemists carry out that transform their "raw materials" into more or less standardized information that can usually be communicated in electronic form in a seemingly unproblematic manner. The flip side of this is that other types of communication are not as easily translated into electronic form, and that certain types of information are not easily transferred over the internet.

Subject-Object Relations in Theories of Science

One way of framing the last decades' debates around the status of the sciences could be to see them as concerning the relationship between the subjects and objects of science. Whereas the "standard view"[1] of science has assumed the scientists' subjectivity to be utterly irrelevant to scientific findings, newer approaches have suggested that the actions of the scientists are reflected in the scientific product, so that the final product is not "uncontaminated" by external factors, as previously thought.

Schematically, we may say that the "standard," or "classical," view of science presented the object of science as a thing observed, a thing passively discovered by the scientist. The scientific object was there to be found, and the scientist unveiled a preexisting reality. The nature of the object of science was taken for granted, and the subjects were not seen to contribute anything but the discovery. We could say that this view assumes that the subjects and objects are all fairly passive. One discovers, the other is being discovered.

The field "science studies" is in part a reaction against descriptions such as these. David Bloor argued that sociology should not be content to describe "the circumstances surrounding [scientific knowledge's] production" (Bloor, 1976, p. 3), but should aspire to explain the products of scientific investigation—scientific knowledge. Whereas earlier sociologies of science had aspired only to describe