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## **Chapter X**

# **Studying Virtual Work in Teams, Organizations and Communities**

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## **ABSTRACT**

*This chapter addresses empirical methods for obtaining data on virtual teams, organizations and professional communities. We begin by reviewing different ways of defining virtual work. We then examine two epistemological paradoxes involved in empirical research on virtual work: (1) virtual work is simultaneously mobile and motionless, and (2) virtual work is simultaneously distributed and situated. We address these paradoxes by identifying four data generation approaches that can be used separately or in combination: participant observation, computer logs, interview, and questionnaire. The chapter describes each of these methods and illustrates each with one or more exemplary studies. By studying virtual teams, organizations, and communities from various angles with different types of data, researchers can better inform the process of theorizing.*

# INTRODUCTION

This chapter addresses empirical methods for obtaining data on virtual teams, organizations, and professional communities. Because virtual work settings are enabled by advanced information and communication technologies, IS researchers are often in an advantageous position to conduct rigorous studies on the design, development, implementation, use, and consequences of virtual work arrangements. Such studies are needed because work is increasingly mediated by technologies that potentially liberate workers from specific places and times. However, studies of virtual work face fundamental ontological and epistemological challenges that must be addressed before research findings can be considered valid and applicable. This chapter identifies these challenges and offers methodological guidance to researchers investigating virtual work in teams, organizations, and communities.

The chapter begins by emphasizing the importance of defining virtual work. Given the variety of definitions of virtuality in research, it is essential that researchers choose a definition that suits their purposes and allows comparison with other studies. Researchers' definitions comprise their ontological assumptions about virtual work. We review a range of definitions of virtual work, noting that all uses of the term *virtual* are not equal.

We then turn to two epistemological paradoxes involved in obtaining data for empirical research on virtual work. The first paradox is that virtual work is simultaneously *mobile* and *motionless*. That is, virtual workers are able to move freely from place to place, but their work activities require stationary attention to technology interfaces. The second paradox is that virtual work is simultaneously *distributed* and *situated*. That is, workers can connect with people in different places whom they may never meet in person, yet each individual is situated in a particular physical and social context. We address these paradoxes by identifying four data generation approaches that can be used separately or in combination: participant observation, computer logs, interview, and questionnaire (including Web-based surveys). The chapter describes each of these methods and illustrates each with one or more exemplary studies.

## WHAT IS VIRTUAL WORK?

Taken literally, work described as *virtual* means work that exists “in effect or essence, although not in actual fact or name” (*Webster's New World Dictionary*). The literal meaning of *virtual* derives from its use in computer science to describe virtual machine environments and its use in science fiction, where concepts like virtual reality were born. In most contemporary research, the literal definition has been abandoned, allowing the term *virtual* to acquire many meanings. We briefly review the conventional assumptions about virtual work when applied to teams, organizations, and communities. Following this, we identify alternative conceptions of virtual work that researchers might usefully exploit.

In *teams*, virtuality has most often been used to describe work that is distributed across time and space (Saunders, 2000; Townsend, DeMarie, & Henrickson, 1998). Because distributed work is enabled by information and communication technologies, virtual teams have also been defined as teams that rely upon electronic communication

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