# Chapter 6.3
# Home Alone:
## The Role of Technology in Telecommuting

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## ABSTRACT

While technology enables home-based telecommuting (HBT), it also has been blamed for its slow growth. Thus, technology may both facilitate and hinder HBT. In order to clarify the role that technology currently plays when employees telecommute, this study investigated the relationship between different forms of organizational support (classified as technology-related, somewhat technology-related, and nontechnological) and employees' reactions to HBT. Dependent variables included satisfaction, Perceived Productivity, and number of days/weeks spent telecommuting. Respondents were 50 full-time employees from 20 organizations. Two technology-related support variables and manager's trust (a nontechnological support) had a broad impact on employees' reactions to HBT. So, technology plays a crucial role and, thus, could be a major factor in HBT's slow growth, but HBT is better understood within a multi-factor rather than a single-factor framework. Results also indicate that organizations should emphasize providing IT support and appropriate technology for telecommuters as well as HBT-related training for nontelecommuting coworkers and managers.

## INTRODUCTION

Since the 1980s, there have been predictions that a high proportion of workers will work in their electronic cottage (Braus, 1993; Handy, 1995; Konradt, Schmook, & Mälecke, 2001; Toffler, 1980). Yet the reported proportion of remote workers remains far below the predictions, typically below 10% (European Teleworking Online, 2000; Flexibility Ltd, 2002; Scott & Timmeran, 1999). The reasons for this discrepancy are still

unclear, although the figures do vary somewhat, as do the definitions used for gathering the data (Lindorff, 2000). A large body of literature has addressed the question of why the expected shift from working in the office to home-based tele-commuting (HBT) has not occurred.

## Background

Early research drew attention to resistance to HBT from supervisors, managers, and employer organizations (Olson, 1982; Zuboff, 1982). Attempts to respond to managerial concerns about losing control led to calls for more trust in HBT employees, more use of management by results for HBT (Konradt et al., 2001), and continuing research into effective HBT control strategies (Snell, 1992; Kurland & Cooper, 2002).

The focus then shifted from the managerial side to the prospective HBT employees. Studies established the importance of personal characteristics, such as autonomy or self-efficacy (Belanger, 1999; Katz, 1987; Raghuram, Wiesenfeld, & Garud, 2003), individual coping strategies (Konradt et al., 2001) and job factors (Raghuram, Garud, Wiesenfeld, & Gupta, 2001) for increasing the likelihood of employees adopting HBT. It also is now recognized that HBT is constrained by the availability of suitable space in the home (Green, Strange, & Trache, 2000) as well as by the characteristics of the person's household (Baruch, 2000).

Increasingly, the literature has reflected a recognition that a broader, multi-factor approach is more appropriate for understanding HBT than the study of single factors because of the complexity of the HBT situation (Bailey & Kurland, 2002; Baruch, 2000; Depickere, 1999; Pearlson & Saunders, 2001; Raghuram et al., 2001). This is also consistent with the recent emphasis on more complex approaches to the study of organizations (Eisenhardt, 2000; Lewis, 2000). Typical of this broader approach to HBT is the summary of research related to the slow growth of telecom-

muting by Baruch (2000). He concluded that the appropriate variants for each of four factors (telecommuting interface, job, individual, and organization) need to be present simultaneously in order for telecommuting to be effective. The absence of the appropriate variants for any one of these components undermines effective telecommuting, thus slowing the spread of this innovation. Within Baruch's (2000) framework, technology is treated as part of the telecommuting interface and job factors rather than as a separate factor.

## The Role of Technology

In contrast to this broader approach, the possibility recently has been raised that it is the technology being used in the home when telecommuting that is the major determinant of the slow growth in the number who work from home. That this is being argued now is somewhat surprising, as the technology available for HBT has improved, and there also has been an increase in the expertise related to information and communications technologies (ICTs) within working populations in developed countries.

The role of technology in HBT, in fact, may be equivocal. On the one hand, the availability of ICTs to connect the HBT employee with others gave rise to expectations of increased HBT. Much of the literature on telecommuting assumes that technology facilitates telecommuting (although the role of technology generally is not addressed empirically), and many definitions of telecommuting specifically mention technology (Baruch, 2000; Belanger, 1999; Nilles, 1998). From this perspective, technology is seen as an enabler and facilitator of HBT. On the other hand, technology may be detrimental to the development of HBT. In *The Social Life of Information*, Brown and Duguid (2000) devote an entire chapter, titled "Home Alone," to the slow growth of HBT. They argue that current technology is still designed so badly that users need to have other employees present in their vicinity so that a group of coworkers can

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