Chapter 7
Multitasking:
Some Consequences of the Convergence of Technologies in the Workplace

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ABSTRACT
Gunilla Bradley has been an intellectual force for more than forty years. The evolution of her thinking led to a theoretical model that posits the convergence of computer, information, and media technologies and how our work and private lives have been transformed by computerization. This essay examines recent research on this convergence in the context of multitasking, including communicative practices in social and interpersonal interactions at work, effects on the quality of work life and job performance, and the dissolving of the boundaries of work and private lives. Convergence has had both positive and negative effects. It has the potential for improving the quality of social and interpersonal relationships and productivity in the workplace, but, at the same time, substantial evidence shows that multitasking has contributed, sometimes significantly, to increases in stress and cognitive load that have impeded job performance. These effects of computerization were identified very early in Bradley’s research investigations, confirming the continued relevance of her research agenda for future work that she proposed more than 20 years ago in her book Computers and the Psychosocial Work Environment.

INTRODUCTION
Forty years of sustained research on the psychosocial aspects of information and communication technologies (ICTs) have resulted in a substantial corpus that is Gunilla Bradley’s contribution to understanding how our work and private lives have been transformed by computerization. Her legacy of empirical research on organizational life enriches our understanding of the interdependency and interactions of the social and the technical. Throughout her career she has taken a cross-disciplinary and interdisciplinary path to investigate how computerization affects the physical and psychosocial work environment, as she describes in her 2006 book Social and...
Community Informatics: Humans on the Net that summarizes the history of her research and theory-building efforts. This book also reveals her enduring personal commitment to a “people-centered perspective” (p. 2) in order to “achieve the good society” (p. 197). Grounded in theory, rigorous design, carefully specified concepts and their relationships, and empirical methods to test and extend theory, her research has demonstrated that we live in a world where change is a constant and where uncertainty, ambiguity, incomplete information, and unanticipated consequences are the norm. The results of her research are testimony to how ICTs have consequences—both opportunities and risks—for work organizations, human communication, stress, allocation issues, knowledge transfer, and our global village.

Today, we find ourselves in an environment where computer, information, and media technologies have become indispensable and have converged to confound and, indeed, dissolve former distinctions between our public, work, and private lives. Work life is interorganizational, no longer local and for many global; organizational boundaries blur; and new organizational forms have appeared. Where completing our work once depended largely on the constraints of geography and physical location, today it is increasingly at-a-distance (virtual), distributed, portable, and mobile as workers move between, across, and through different physical and social environments and organizational boundaries. Change in work processes has accelerated (Bradley, 2006). Work is increasingly structured as activities, assemblages of tasks “located in a broader organizational setting” (Halverson, 2002, p. 250) that more than ever require explicit cooperative practices, including coordination and collaboration, as workers switch between different projects and tasks and carry out work in-parallel (Fussell et al., 2004; Johnson, May, & Johnson, 2003). Work, at least here in the United States, appears to consume an increasingly larger part of our lives and is no longer bounded by clock time at the office. Activities appear, Abowd and Mynatt (2000) remark, “continuous in time, a constant ebb and flow of action that has no clear starting or ending point” (p. 31) due to the availability of new computational devices that have “fundamentally change[d] the relationship between humans and computers” (p. 31). Nardi, Whittaker, and Schwarz (2000) point to a significant increase in the “uptake of communications technologies such as email, voicemail, instant messaging, fax, pagers, and cellular telephones, as well as personal digital assistants,” contending that “these technologies have led to changes in established work-based communication practices (p. 206). We are seemingly always connected. Thus, as Abowd and Mynatt suggest, “Continuous interaction [has] move[d] computing from a localized tool to a constant companion” (p. 31).

The single user-to-desktop computer-bound relationship designed for one individual to perform discrete tasks has evolved into a complex web of human-to-human and human-and-nonhuman (tool, object, artifact) relationships that has regulated, intervened in, and modified organizational practices and interpersonal relations at work and in our private lives.

Advances in new digital platforms, the development of innovative applications, the replacement by computers of an array of other technologies, and the convergence of computer, information, and communication technologies have made this possible and in the process are transforming work practices. But has convergence, along with these advances and applications, contributed to or had no effect on different stressors in and outside the workplace? This is the question that this essay addresses in a rather narrow context, that of communication, multitasking, and interruptions.

Part of the story of computerization during the 1970s and 1980s reported in her book Computers and the Psychosocial Work Environment concerns communication patterns and work conditions inside organizations and the physical and psychological stresses that resulted from the hours spent in front of display terminals (Bradley,
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