

Workplace technology use may increase both employees' distress and productivity

*As technology has become an inescapable part of most workplaces, it has become ever more important to understand its impact on employees. Using data from two surveys of U.S. workers, **Noelle Chesley** examines the effects of both personal and job-related technology use. She finds that increased technology use, especially when it extends work into personal life, is linked with higher levels of worker distress. However, it is also associated with gains in productivity, and personal technology use at work may help employees to manage work-related stress.*



It is not news that communication technology—and the social practices we have built around it—fuels a 24/7 lifestyle. However, that does not stop us from debating the effects of technology use on our health and sanity, particularly when we consider its role in the workplace. To further understand how technology is shaping today's work environments, I analyzed two key surveys of workers in the United States. What I found is a picture of contemporary employment in which our devices are fueling work that, while more intense and demanding, is probably more productive.

There is a well-developed line of research that documents the symptoms of a stressful work setting. These include an ever-increasing work pace and greater levels of interruptions and multitasking. The pacing of work is important because a faster pace can reduce workers' flexibility to cope with shifting demands, which is part of what can make these difficult settings for employees. While interruptions are not always bad, a key factor concerns workers' ability to control them. [Previous studies](#) show that many interruptions are unexpected, and the unpredictability of interruptions in the face of greater work demands can contribute to worker distress. In fact, [some research](#) shows that workers compensate for more interruptions by working faster. Finally, we know that technology use encourages and supports multitasking behaviors. We also know that multitasking is cognitively inefficient and may lead to job strain in some settings.

Indeed, when I analyzed data from the 2002 [National Study of the Changing Workforce](#), which draws on survey responses gathered at one point in time from a representative sample of U.S. workers, I found clear connections between greater work-related technology use and fast-paced work environments with more interruptions and multitasking. Since these job conditions are often associated with stressful work environments, it should be no surprise that I documented higher levels of worker strain and distress when employees use more technology.



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Drawing on previous research that illustrates technology's role in supporting greater flexibility, I also investigated the role that *personal* technology use can play in shaping work outcomes. Here, my research points to the important role that such uses of technology can play in alleviating employee's work strain. While I am not able to use these data to understand

exactly *how* that is happening, [plenty of research](#) already [shows](#) that we increasingly use our devices to maintain and strengthen our personal connections with friends and family. The same tools that fuel more stressful job conditions also instantly connect us to our personal networks in ways that can foster greater levels of support, provide needed information ('Can you pick up the kids—I'm running late'), or even just give us a break from work to check in on things that personally interest us (status update, anyone?).

I should emphasize that, statistically, the effects of technology use on levels of worker distress were small. To the extent that technology use is contributing to a more stressful work environment, its impact is minimal across a diverse sample of employees. Similarly, the influence of personal technology use in alleviating worker strain is also very small.

As a follow up to this work, my colleague Britta Johnson and I turned to more recent survey data ([the 2008 Pew Networked Workers survey](#), which draws from a national sample of employees) to better understand the costs and benefits of technology use for U.S. workers. Here we wanted to know more about how both work-related and personal forms of technology use affected employee assessments of distress *and* productivity. These data show that about a third of employees report that technology use is a factor shaping a more stressful work experience. Many more employees (69%) report that use is enhancing employee productivity on the job.

The data also document that technology use is extending work into personal life. Employees report using both email and phones to attend to work after hours, on weekends, when they are sick, on vacation, or while running errands. This extension, which is linked to longer work hours in some cases, is one of the factors fueling increases in *both* self-reported employee distress and productivity.

We also analyzed relationships among technology use, increases in the size of communication networks, and employee distress and productivity. One of the much-touted benefits of the "network society" is expanded communication networks, which have generally been found to be beneficial for users. To the extent that workers find that their technology use has greatly expanded these networks, this expansion is also connected to increases in employee distress. However, it is also linked to gains in productivity.

Both patterns are consistent with what we already know about social networks. While a large network can provide greater access to information and social support, it can also expose us to more interpersonal conflict and greater demands. We suspect that access to more and better information *and* greater demands produced by these networks underlie linkages among increased network size in employment settings and increases in employee distress and productivity. However, the costs of expanded social networks have been under-researched.

What should the public take away from this research? First, given the prevalence of technology in our work and personal lives, everyone needs to cultivate the skills and techniques necessary to use technology effectively. We need to shift the focus from discussion of whether to use it, to one in which both employees and employers work together to figure out what sorts of technology-based practices are effective and which ones are not worth the trouble.

The problem is that most employees and employers are not on equal footing in this conversation. Instant connectivity means that bosses (and clients) can rely on 'just in time' communication practices to reach needed employees anytime, anywhere. Research also documents that the current technology-based work environment pushes conscientious employees to stay online and responsive well beyond the 'normal' work day. Thus, the onus is on employers to think carefully about what sorts of communication practices will enhance productivity without causing undue harm to employees and take steps to see that these are established through organizational policies.

Second, organizations need to be aware of the important role that technology use is playing in their employees' personal life. Expectations about staying connected to family and friends are firmly entrenched. Some of the research I have described illustrates that personal technology use has the potential to enhance work outcomes that matter to employees and employers. Employers should embrace personal technology use at work as such use may help employees manage work-related stress, perhaps through better integration of their work and personal lives.

Third, while communication devices can be used in numerous ways, our social practices around technology appear to favor increased access and rapid response times. Restricting access (to employees, or to work) or slowing down responses will not feel like the natural order of things, even if organizations find it necessary. As a result, both workers and employers will need to be proactive and deliberate about technology use if they determine that non-normative practices are good for business.

*This article is based on the paper “[Information and communication technology use, work intensification and employee strain and distress](#),” which appeared in *Work Employment & Society**

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About the author

Noelle Chesley- *University of Wisconsin-Milwaukee*

[Noelle Chesley](#) is an Associate Professor of Sociology at the University of Wisconsin-Milwaukee in the United States. Her research focuses on the relevance of technological innovation for both work and family life. She has published in venues such as *Journal of Marriage and Family*, *Sociological Focus*, *Journal of Family Issues*, *Work, Employment, & Society*, and *Information, Communication, & Society*.



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