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Managing millennials' personal use of technology at work



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KEYWORDS

Personal internet use at work; Millennials in the workplace; Organizational control; Cyberloafing; Technology use policy Abstract Growing up with the internet and unparalleled access to technology, millennials (individuals born during 1981–1995, also known as Gen Y and Gen Me) extensively use various technologies for non-work-related reasons while at work. Both popular media and scholarly research have portrayed this issue negatively and have supported monitoring and restricting personal use of technology. However, if organizations are to attract and retain millennials—now the largest generation in the U.S. workforce—it is crucial to understand their characteristics and what drives them. Drawing on research on generational differences, organizational control, and cyberloafing, this article explains how unique characteristics of millennials lead them to engage in personal use of technology at work and how organizations might address this issue. Specifically, I contrast two one-sided approaches (deterrence and laissezfaire) that can lead to dysfunctional outcomes when used in excess and recommend more viable solutions. These solutions include establishing a workplace technology use policy based on shared understanding, fostering both relaxation and urgency mentalities, and training both millennials and their managers.

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1. Millennials: A different kind of worker

As various technologies permeate every aspect of our lives, a question about the appropriate use of technology at work is an important concern for managers and organizations. One of the most controversial issues is personal use of technology at work, which is often referred to as *cyberloafing*, a voluntary act of employees using technology for non-work-related purposes during working hours (Lim, 2002). During the work day, employees routinely check social networking sites, read current news articles, engage in online banking and shopping, watch YouTube videos, and book weekend travel. In fact, employees arguably spend about 2 hours per 8 hour work day using technology for personal reasons, at a cost of \$85 billion annually to U.S. corporations due to reduced productivity (Zakrzewski, 2016).

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Who is the mostly likely group to engage in this technology use? Many sources—both popular and academic alike-point to millennial employees. One study found that millennials wasted more than twice as much time as baby boomers (individuals born during 1946–1964) at work (Conner, 2013). Millennials spent about 2 hours on non-work-related technology use while baby boomers did so 41 minutes. In line with this, a study conducted by Ericsson (2013) of nearly 2,000 millennial workers found that the majority of millennials reported they deal with personal matters during office hours; it is almost impossible to leave their personal lives behind, and they constantly check Facebook and exchange messages with friends and family on their devices throughout the day.

Given the pervasiveness of millennials' personal use of technology at work, it is not surprising that employers hesitate to hire members of this generation. For example, managers selected from a representative sample of U.S. industries reported that they prefer to hire senior applicants rather than millennials with the same level of experience (Corgnet, Hernán-González, & Mateo, 2015) because they believe millennials to be less reliable and less diligent. Whether this stigmatization of millennials is based in fact or not, it is undeniable that millennials now comprise the largest segment of the U.S. workforce. If organizations are to attract and retain millennial workers, it is crucial to understand their characteristics and provide a workplace in which they can thrive (Stewart, Oliver, Cravens, & Oishi, 2017).

The purpose of this article is to provide a better understanding of millennial workers and recommend ways for organizations to address their technology usage at work. Drawing on research on generational differences, organizational control, and cyberloafing, this article examines how unique characteristics of millennials lead them to use technology more frequently for personal purposes at work and how organizations might address this issue. After discussing two contrasting approaches that could result in dysfunctional outcomes, I suggest more viable solutions to tap the potential of millennials while curbing their technology misuse.

2. Why is it hard for millennials to leave personal lives behind at work?

As the first generation to be born into a wired world, millennials view the appropriate use of technology differently than older generations (Sheaffer, 2009). The internet has nurtured millennials' ability to communicate with others in a uninhibited way

without regard for geographical boundaries (Tappscott, 1998). Millennials spend more time communicating online and building online relationships with friends and strangers than do middle- and late-aged adults (Thayer & Ray, 2006). Texting is their regular mode of communication, and participating in online forums and bulletin boards is part of their daily routine. In addition, millennials have a greater tendency to use technology for entertainment, which includes watching sporting events, listening to music, and playing mobile games (Jones & Fox, 2009). Given their constant use of technology for communication and entertainment, it is not hard to imagine that millennials engage in these activities during a typical work day.

Beyond their close relationship with technology, what else might explain millennials' frequent personal use of technology at work? Without digging deeper, it would be easy merely to demand: "Stop it. You are paid to work, not to play. This is the workplace!" However, millennials' identity is tied to their use of technology (Pew Research Center, 2014). To create a workplace in which millennial workers can thrive, it is crucial to address the issue based on a deeper understanding of their unique characteristics.

Although some research has minimized the importance and potential existence of clear generational differences (Costanza & Finkelstein, 2015), evidence from decades of studies has shown that generational differences do exist, particularly in work values, attitudes, personalities, and career experiences (Lyons & Kuron, 2014).

2.1. Work values

Work values are defined as "evaluative standards relating to work or the work environment by which individuals discern what is 'right' or assess the importance of preferences" (Dose, 1997, p. 227). Generational research suggests that young generations believe that work is not central to their lives (Smola & Sutton, 2002; Twenge, Campbell, Hoffman, & Lance, 2010). Instead, millennials place a higher priority on leisure (i.e., they work to live rather than live to work) and work-life balance (Cennamo & Gardner, 2008). As such, they might be more likely to look for jobs with more vacation time and prefer flexible work arrangements such as telecommuting, flextime, and compressed work weeks. In addition, millennials generally hold a weaker work ethic than older generations. They are less likely to agree with the statement "I want to do my best in my job, even if this sometimes means working overtime," and are more likely to say that they would turn down a job because it requires them to work too hard and put in longer hours (Twenge et al., 2010).

These noted characteristics of millennials may explain their personal use of technology at work. Work values play a pivotal role in employees' assessments of what is right, help shape their preferences, and guide behaviors they believe are appropriate in a given situation (Dose, 1997; Ravlin & Meglino, 1987). Therefore, in regard to personal use of technology at work, work values may influence responses to questions such as:

- Can I spend company time reading blogs online at work?
- Should I do online banking or check stock prices during a work day?
- Can I exchange emails with my family and friends while in the office?

As noted, millennials tend to hold work as less central to their identity, place a high priority on leisure and work-life balance, and generally hold a weaker work ethic. As a result, they are more likely to answer these questions affirmatively and engage in these activities throughout a work day.

2.2. Learning style

Millennials' early and increased exposure to technology also influences their distinctive learning style. Millennials believe that they can gather all necessary information with just a few clicks on a 24/7/365 basis. Proserpio and Gioia (2007) suggested that members of the millennial generation are more likely to have an autonomous learning style in which they seek information on their own, often in a solitary setting, and they dislike waiting for information. This learning style contrasts with that of older generations, who learn in a more guided, structured way such as through formal training and educational programs.

This autonomous learning style contributes to the impression that millennials frequently engage in seemingly non-work related activities at work. For example, to come up with a marketing strategy for a new product, millennial employees are likely to read articles on blogs, watch YouTube videos on competitors' products, or seek input from their Facebook friends. When a manager happens to walk by and observes these activities, he/she may think that the millennial employee is slacking off, though it is simply the way millennials learn their tasks and come up with ideas. However, it is also plausible that these activities may lead to actual loafing.

What starts out as seeking input from friends for tasks may quickly turn into chatting about personal lives, and conducting research online can lead to clicking on unrelated topics out of curiosity.

2.3. Multitasking

Millennials are also known for their ability to multitask (Farrell & Hurt, 2014; Partridge & Hallam, 2006; Wesner & Miller, 2008). As digital natives, whose life span parallels the explosion of various information and communication technologies, millennials seamlessly juggle multiple devices at once and learn critical information while listening to music or performing other activities. Time Inc. found that millennials switch their attention between media venues (e.g., laptops, tablets, smartphones, television) 27 times per hour on average, 60% more often than their older coworkers (Steinberg, 2012). Consistent with this finding, UCLA neuroscience research revealed significant differences in brain functioning among generations; millennials were found to have a distinctive neurological pathway more conducive to multitasking and parallel processing (Small & Vorgan, 2008).

Equipped with multitasking proficiency, millennials believe that they can perform work tasks while engaging in personal matters on other devices. Also, considering that millennials have a relatively low boredom threshold and a short attention span (Barnes, Marateo, & Ferris, 2007; Bell & Narz, 2007; Schofield & Honoré, 2009), juggling multiple roles between different devices is more likely. Whenever faced with tedious tasks, they likely turn to their usual habit (i.e., personal use of technology) to escape from work in the moment.

3. How should organizations address millennials' personal use of technology at work?

The previous section suggested that millennials' personal use of technology at work reflects their work values, learning styles, and multitasking proficiency. Knowing this, a crucial question comes to light: How should organizations address millennials' personal use of technology at work? Finding a viable solution is critical because ultimately it is not an issue only related to millennial employees but one that also affects the whole workforce living in a technology-driven world.

There has been an ongoing debate about personal use of technology in the workplace, with some contending it should be banned and others believing

employees should be allowed to use their own discretion with technology use at work (Ivarsson, 2011; Ugrin & Pearson, 2008; Young, 2010). This article examines the effectiveness of different approaches to the issue, given the characteristics of millennials noted earlier. I begin by outlining two contrasting one-sided approaches that likely lead to dysfunctional outcomes for employees and firms. With insights from the competing approaches, I then propose more viable solutions.

3.1. A deterrence approach

According to a 2008 American Management Association survey, 75% of firms claimed to monitor their employees' technology use at work. Monitoring and regulating may increase overall organizational efficiency by curbing the inappropriate and excessive personal use of technology in the workplace (Li, Zhang, & Sarathy, 2010; Urbaczewski, 2002). Too much emphasis on a deterrence approach, however, could prove counterproductive for a number of reasons.

First, a strong deterrence approach engenders millennials' distrust in organizations. In general, employees perceive a strong organizational control system (e.g., a strict technology use policy with surveillance and threats of formal sanctions) as an indication of distrust (Mayer, Davis, & Schoorman, 1995). The erosion of trust is an even more serious issue when it comes to millennial employees. A 2015 poll conducted by Harvard University's Institute of Politics (2016) found that approximately 80% of millennials said that they did not trust institutions including big businesses, governments, and news media. Coupled with the idea that millennials view technology use as a right that should not be controlled or blocked (Coker, 2013), excessive control may undermine millennials' already low trust in organizations, leading to reduced work efforts and commitment (Frey, 1993).

Second, a one-sided deterrence approach inhibits the ability of millennials to recover from work demands as needed during a work day. Lim and Chen (2012) found that a group allowed to browse the internet during a 10-minute break between tasks was significantly more productive than a control group given no break and a rest-break group (allowed to do anything but browse the internet during the break). This positive effect might be more prominent among millennials. A study of 2,700 office workers revealed that unlike older workers, younger workers perceived productivity benefits from personal use of technology at work and were more likely to stay vigilant through enjoyable technology breaks (Coker, 2013). Thus,

the restorative function of the technology use might affect millennial workers more than older employees.

Third, as previous research has demonstrated that personal use of technology during work is associated with increased work-life balance (e.g., Wajcman, Rose, Brown, & Bittman, 2010), a strict deterrence approach will affect millennials negatively. Millennials' number-one career goal is to balance their personal and professional life (Hershatter & Epstein, 2010), and if they are allowed to do so (e.g., doing online banking, making weekend travel reservations) as needed, they may be more willing to work harder and commit to their organizations.

Too much emphasis on a deterrence approach may eventually translate into a competitive disadvantage at the organization level. By engendering distrust among millennial employees, intensive organizational control could increase turnover over time (Costigan, liter, & Berman, 1998). Indeed, prior studies report that monitoring personal use of technology at work significantly increased turnover intention (Alder, Noel, & Ambrose, 2006). Considering that one in three millennials prefer social media freedom over salary in accepting a job offer (Kratz, 2013), if organizations are known for zero tolerance for personal use of technology at work it would be hard for them to attract millennials, negatively affecting their future prospects.

Further, firms with a deterrence approach may find that their intangible resources-employee skills and knowledge-have become mediocre and outdated, limiting their ability to create new business opportunities. In order to have a sustainable competitive advantage, firms should have employees with unusual insights about the future value of the resources they are acquiring or developing (Barney, 1986). As noted earlier, personal use of technology at work encompasses learning activities that may not be directly related to tasks at hand, but have the potential to increase work quality in the future (Anandarajan, Simmers, & D'ovidio, 2011). For example, to excel at their jobs, stockbrokers must stay on top of current events by constantly reading various news articles, which are readily accessible online, and marketing managers must closely interact with broad and varied professional and personal contacts through mobile devices or online social networks. Blocking any nonwork-related technology use may enhance performance in the short term, but over time it could result in an inability to respond to environmental changes (Ahuja & Morris Lampert, 2001; Leonard-Barton, 1992).

3.2. A laissez-faire approach

Given the dysfunctional outcomes of a deterrence approach, giving millennials discretion over personal use of technology may seem like a better solu-However, overemphasizing discretion, or taking a laissez-faire approach, can be equally dysfunctional. First, under a laissez-faire approach, millennials' performance may suffer from excessive time loss and shallow attention, or lack of focus. Frequent distraction from work by personal use of technology can leave employees less time for task completion. To make matters worse, returning to a work mode after a distraction requires additional time as employees need to ramp back up and relearn essential parts of the task they were working on before being distracted (Johnson, 2009; Mark, Gonzalez, & Harris, 2005). Shallow attention is likely when frequent distractions prevent them from giving their full attention to tasks at hand. As a result, millennials may not produce creative output, which requires hard and persistent work (Amabile, 2001).

Second, undisciplined use of technology eventually translates into a decline in organizational performance. Firms with a laissez-faire approach may believe that seemingly non-work-related activities by their millennial workers will lead to breakthrough ideas in the long run. However, despite its potential to enhance a firm's knowledge base, an overemphasis on employee discretion can trap organizations in an endless cycle of search and unrewarding change (Volberda & Lewin, 2003). If their technology use goes unchecked for long periods, millennials could use 'possibly beneficial to work' as a justification for their unnecessary personal use of technology. To prosper or even survive, explorative activities (e.g., reading current events, networking with people outside the organization) should be balanced with exploitative ones (e.g., completion of tasks, meeting deadlines, fast response to client requests) (Raisch, 2009).

Last, organizations could become hostile work environments and potentially subject to costly financial and legal liabilities. With unbounded discretion over their time, millennials could engage in more serious forms of personal use of technology that may jeopardize their colleagues and entire organization (Eivazi, 2011). For instance, inappropriate use of social networking sites could damage the company's reputation (Langheinrich & Karjoth, 2010). Millennial workers may unknowingly spill company secrets to their friends, and these could quickly travel to their competitors and the public. Activity that may be inappropriate or even illegal in a work setting could involve an entire work group.

Such was the case when groups working for the Yukon government were found to be engaging in the collection, storage, and exchange of pornographic files through their work computers and emails (Weatherbee, 2010). This collective activity not only congested workplace network systems, but also created a hostile environment that was offensive to other members of the organization. Thus, a one-sided focus on employee discretion could prove costly and increase exposure to legal liabilities.

4. Suggestions for managers: Embracing both deterrence and laissez-faire approaches

The previous discussion points out the vital need for control and flexibility approaches to millennials' technology use, as well as problems that can occur when either approach is overemphasized. A deterrence approach helps minimize the negative aspects of personal technology use by preventing excessive and inappropriate consumption, while a laissez-faire approach helps tap positive aspects by providing opportunities for respite, work-life balance, and learning. Yet, if one approach is overstressed, firms can lose competitive advantage due to reduced productivity, increased turnover, or financial and legal liabilities. Thus, embracing and leveraging both approaches may foster sustainability or short-term peak performance that fuels long-term success (Smith & Lewis, 2011). I offer several recommendations in this section for managers to tap into the enlightening potential of millennials, including:

- 1. Establishing a workplace technology use policy based on shared understanding;
- 2. Instilling both relaxation and urgency in the minds of millennials; and
- 3. Providing training for millennials and managers.

4.1. Establishing meaningful technology use policy

The first step is to build a technology use policy. Workplace technology use policies can be critical to fostering beneficial uses of technology at work while curbing inappropriate uses. Despite the widespread adoption of technology use policies, their effectiveness has been questioned as a growing number of employees have been fired for email and internet abuse at work (Young, 2010). Several studies have demonstrated that establishing a poli-

cy unilaterally and threatening employees with formal sanctions for violation not only increased technology abuse, but also undermined trust between employees and employers (Alder et al., 2006; De Lara, 2006). Hence, a more viable approach is needed.

A more effective policy is one that is based on shared understanding. Shared understanding fosters trust as different parties learn to value the viewpoints of others (Bradach & Eccles, 1989). One way to promote shared understanding is through employee-management cooperation in deciding the elements of a workplace technology use policy. For example, firms can form an internal committee that is made up of multigenerational members with various functional backgrounds such as IT, HR, and marketing. Through a series of meetings, members should be encouraged to reach a consensus on such elements as prohibited activities, privacy, security, monitoring, and penalties for violations. For example, although activities judged as defamatory, discriminatory, harassing, or pornographic in nature should be prohibited, millennials may disagree with others on what constitutes these activities. Millennials may believe that they can freely criticize other people on their Facebook page, but what if the public is able to trace back the person to the company he/she works for? If disagreements cannot be resolved, committee members can vote on multiple alternatives to find the best solution. Research suggests that employees who had an opportunity to vote, even if they voted against the implemented measure, do not react negatively to the final policy (Corgnet, Hernán-González, & McCarter, 2015). The final agreed-upon policy should be so specific that it can give employees exact guidelines and can prevent rule breakers from wiggling through a loophole.

A specific social media policy is also necessary. A growing number of companies have incorporated social media use into their code of conduct or established a separate social media policy. Intel Corporation, for instance, developed detailed guidelines that encouraged their employees to represent the company more ethically and professionally on social media. As millennials involved in a significant percentage of 200,000 Instagram posts and 300,000 tweets that are sent every minute (Anderson, 2017), companies should actively seek millennial voices and perspectives in developing the policy. Further, the policy should be periodically reviewed and updated in light of ever-evolving technologies and online social tools. Firms might promote discussions among employees through the corporate intranet or departmental social websites. Increased exchange of information among employees from different generations may help firms identify elements of the existing policy that need to be removed or changed, and consequently help meet emerging demands of their employees and businesses.

4.1.1. Caveats

In establishing a technology use policy, several caveats are in order. First, there is no one-sizefits-all policy. Firms should align their policy with their unique business objectives. Specifically, firms with a focus on innovative products and services may enact a policy to encourage the utilization of various technologies for learning and communication. For example, IBM—one of the most innovative companies—has acknowledged the importance of social media for organizational and individual development. Accordingly, their social media policy was built to actively encourage their employees to exchange ideas and insights with their clients. shareholders, and communities. As another example. Proctor & Gamble is one of the most lenient companies in terms of providing access to the internet. The consumer products giant reported that their employees listen to 4,000 hours of music on Pandora and watch 50,000 5-minute YouTube videos during a typical work day (Gross, 2012). They have recognized the importance of free access to sites like YouTube as a marketing tool.

Further, for organizations that are particularly concerned with protecting customer information (e.g., financial institutions and hospitals), their policy may focus on security issues associated with technology misuse. For example, Mayo Clinic, one of the largest not-for-profit hospital systems in the U.S., has focused its technology policy on patient confidentiality with limited personal use of technology at work. This policy is intended to prevent hospital staff from using social media inappropriately as shown by the news in recent years (e.g., medical staff posted a picture of a chaotic emergency room on Instagram and incurred serious legal problems on behalf of both the hospital and themselves).

In addition, before implementing a technology use policy, firms should consult with their legal team to make sure it does not violate any laws and regulations. Typically, it is not illegal to monitor employees' computer and e-mail use at work in the U.S., but certain states such as Connecticut and Delaware require employers to notify their employees before starting the practice. If firms operate globally, their policy needs to be adjusted for the laws and regulations of each country. In countries such as Germany and Italy, for instance, electronic monitoring can be justified only when employees give written consent and only in very limited cir-

cumstances (e.g., where a firm already has concrete suspicions of technology misuse by a particular employee). Thus, a thorough review of relevant laws and regulations should precede the implementation of a technology use policy.

4.2. Instilling the proper balance of urgency and relaxation

A policy alone cannot make meaningful changes to millennials' day-to-day technology use in the workplace. Extra steps need to be taken to instill both relaxation and urgency in the minds of millennials.

4.2.1. Relaxation

Fostering relaxation is vital for achieving beneficial work-related outcomes from personal use of technology. Relaxation leads to positive emotions, a resource that can be directed toward work-related tasks, and can help reduce the negative effects of job stress (Fredrickson, 2001; Stone et al., 1995). Despite a formal policy approving the access to social networking sites, millennials may still feel uneasy checking Facebook in the presence of their boss. For personal use of technology to be truly relaxing, millennials must perceive their management as supportive. If they are constantly worried about negative career consequences from their personal use of technology, this anxiety will cause a stress response or hyper arousal, negating the possible benefits (Dickerson & Kemeny, 2004).

Supervisors should be proactive in fostering relaxation. Previous studies suggest that employees' patterns of technology use were positively related to those of their supervisors (Blanchard & Henle, 2008). In this regard, supervisors may act as role models. According to social learning theory (Bandura, 1986), people learn appropriate behaviors through a role-modeling process. Given their power to punish and reward, supervisors are credible candidates for modeling behavior that millennials can emulate (Mayer, 2012). If supervisors speak openly about the benefits of personal use of technology such as opportunities for recovery, work-life balance, or learning, millennials feel more comfortable engaging in this behavior as needed. In addition, supervisors can encourage group norms about personal use of technology at work. Evidence suggests that employees often use group norms to justify engaging in personal use of technology in the workplace (Lim & Teo, 2005). Once millennials in a work group perceive that personal use of technology is supported by their supervisors and in compliance with group norms, they will feel more comfortable engaging in the activity appropriately.

Another way to foster relaxation is to take a time-based quota approach. Specifically, employees can be given a set period of time daily for which they can access non-work-related sites as needed throughout the work day. Internet management software allows HR to set the time limit on non-work-related internet use and to keep track of total daily non-work use for each employee. Employees can choose the timing and duration of an online break depending on their personal needs within the time limit. Under the quota system, millennials do not have to worry about negative repercussions of personal use of technology, which enhances relaxation and the positive outcomes associated with it.

4.2.2. Urgency

Given today's volatile and fast-paced business environment, a pure relaxation mentality does not allow for the organizational agility required for speedy execution and implementation. In such a context, instilling a sense of urgency in the minds of millennial employees is needed simultaneously. Urgency is associated with tight deadlines and the costly consequences of failing—a situation in which individuals must stay alert and focused to find a solution quickly (Hermann, 1963). To increase needed urgency, firms should be proactive in developing a strategy to ensure that their millennial employees make progress each and every day (Kotter, 2008).

Two strategies may help build a sense of urgency among millennial employees. First, managers should offer millennials visible and unambiguous short-term goals. Decades of research on goal setting has proved the effectiveness of time-sensitive, specific goals (see Locke and Latham, 2002, for a review). In determining short-term goals, employee participation is crucial to enhance goal ownership and their subsequent commitment (Anderson & Wexley, 1983). Through joint meetings, millennial workers should be given a to-do list and be clearly aware of their goals for the day, week, month, and beyond.

Another strategy to reduce complacency among millennials is to communicate critical information related to their business on a regular basis. If employees do not understand what is going on and what it means to their job and organization, it will be hard to expect them to work with a sense of urgency. For example, a consumer electronics company may inform their employees of real-time information about their business, customers, and industry: What problems with our products are customers complaining about? Are fixed costs too high? Is the union about to go on a strike? Is the competitor rolling out their new model this month? These types of immediate challenges faced by the

firm should be made available to employees so that they clearly know why prompt actions are needed. Communicating strategic, well-selected messages in combination with specific, short-term goals may help millennials develop and maintain a strong sense of urgency and consequently help curb their urge to use technology for personal matters more than is necessary.

4.3. Training for millennials and managers

Organizations might provide relevant training for both millennials and their managers. First, training on a technology use policy can increase employees' understanding and compliance. Typically, firms require employees to read and sign their policy, but it is possible that some employees might misunderstand the provisions, or might not be able to recall the specifics while on the job. A well-designed training program can help employees better understand what activities are prohibited and why they are prohibited through detailed explanation and real-life examples. For example, an employee might read a policy that states, "Do not open an email to malware delivered through spam." Then, relevant examples can be used in support of the policy, such as the 2014 Yahoo incident where hackers used a simple phishing email on a Yahoo employee to access 500 million user accounts. HR may train new employees during induction training and provide refresher training on a regular basis.

Further, millennials can be trained in techniques to self-manage their technology use effectively. Experts could be invited to teach time management and prioritization techniques. Also, workshops focusing on how to employ various tools for increased focus and productivity might be held. For example, using a host of online applications (e.g., Self-control, Freedom, Focus booster, StayFocused), millennial workers can self-monitor their computer use patterns, establish time limits for goof-off breaks, and block themselves from accessing personal email and social networking sites for a set period of time (Tanner, 2017).

Last, managers can be trained to motivate millennials to use technology in a judicious way. Training for managers needs to include components such as establishing a workgroup norm on appropriate technology use, handling technology misuse, and providing frequent feedback on work progress. More importantly, managers should avoid a commandand-control mindset. As millennials tend to check and respond to work emails in real time after hours, similar to how they respond to texts from their friends (Johnston, 2016), managers should acknowl-

edge their extra work outside of normal working hours. To be fair, managers may need to be trained in performance management techniques that focus on results more than on face time (Eversole, Venneberg, & Crowder, 2012).

5. Summary

Millennials' personal use of technology at work is not simply loafing, but is driven by their distinctive work values, learning styles, and multitasking proficiency. I have offered insights on the upsides and downsides of two contrasting one-sided approaches—a deterrence approach and a laissezfaire approach—to personal technology use, providing practical guidance for organizations. Determining how to control and leverage this issue is of paramount importance for organizational success. I hope that the recommendations from this article will help organizations to move beyond either deterrence or laissez-faire toward a both/and approach, creating a workplace in which millennials can thrive and contribute.

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References

Ahuja, G., & Morris Lampert, C. (2001). Entrepreneurship in the large corporation: A longitudinal study of how established firms create breakthrough inventions. *Strategic Management Journal*, 22(6/7), 521–543.

Alder, G. S., Noel, T. W., & Ambrose, M. L. (2006). Clarifying the effects of internet monitoring on job attitudes: The mediating role of employee trust. *Information and Management*, 43 (7), 894–903.

Amabile, T. M. (2001). Beyond talent: John Irving and the passionate craft of creativity. *American Psychologist*, *56*(4), 333–336.

Anandarajan, M., Simmers, C. A., & D'ovidio, R. (2011). Exploring the underlying structure of personal web usage in the workplace. *CyberPsychology, Behavior, and Social Networking, 14* (10), 577–583.

Anderson, J., & Wexley, K. (1983). Applications-based management development: A method to promote practical application of managerial and supervisory training. *Personnel Administrator*, 28(11), 39–43.

Anderson, T. (2017). Millennials are leading—Is your company following? A new generation of employees is setting the pace for modern communication. *In-House Ops.* Available at http://www.inhouseops.com/2017/03/millennials-leading-company-following-new-generation-employees-setting-pace-modern-communication/

- Bandura, A. (1986). Social foundations of thought and action. Englewood Cliffs, NJ: Prentice-Hall.
- Barnes, K., Marateo, R. C., & Ferris, S. P. (2007). Teaching and learning with the net generation. *Innovate: Journal of Online Education*, 3(4), 1–8.
- Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32(10), 1231–1241.
- Bell, N. S., & Narz, M. (2007). Meeting the challenges of age diversity in the workplace. *CPA Journal*, 77(2), 56–59.
- Blanchard, A. L., & Henle, C. A. (2008). Correlates of different forms of cyberloafing: The role of norms and external locus of control. *Computers in Human Behavior*, 24(3), 1067—1084.
- Bradach, J. L., & Eccles, R. G. (1989). Price, authority, and trust: From ideal types to plural forms. *Annual Review of Sociology*, 97–118.
- Cennamo, L., & Gardner, D. (2008). Generational differences in work values, outcomes, and person-organisation values fit. Journal of Managerial Psychology, 23(8), 891–906.
- Coker, B. L. S. (2013). Workplace internet leisure browsing. *Human Performance*, 26(2), 114–125.
- Conner, C. (2013, September 7). Who wastes the most time at work? Forbes. Available at https://www.forbes.com/sites/cherylsnappconner/2013/09/07/who-wastes-the-most-time-at-work/#f72ec036c39e
- Corgnet, B., Hernán-González, R., & Mateo, R. (2015). Cognitive reflection and the diligent worker: An experimental study of millennials. *PLOS ONE*, 10(10), 1–13.
- Corgnet, B., Hernán-González, R., & McCarter, M. W. (2015). The role of the decision-making regime on cooperation in a workgroup social dilemma: An examination of cyberloafing. *Games*, 6(4), 588–603.
- Costanza, D. P., & Finkelstein, L. M. (2015). Generationally based differences in the workplace: Is there a there there? *Industrial and Organizational Psychology*, 8(3), 308–323.
- Costigan, R. D., liter, S. S., & Berman, J. J. (1998). A multidimensional study of trust in organizations. *Journal of Managerial Issues*, 10(3), 303–317.
- De Lara, P. Z. M. (2006). Fear in organizations: Does intimidation by formal punishment mediate the relationship between interactional justice and workplace internet deviance? *Journal of Managerial Psychology*, 21(6), 580–592.
- Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol responses: A theoretical integration and synthesis of laboratory research. *Psychological Bulletin*, 130(3), 355—391.
- Dose, J. J. (1997). Work values: An integrative framework and illustrative application to organizational socialization. *Journal of Occupational and Organizational Psychology, 70*(3), 219–240.
- Eivazi, K. (2011). Computer use monitoring and privacy at work. Computer Law and Security Review, 27(5), 516—523.
- Ericsson. (2013, April). Young professionals at work. Available at https://www.ericsson.com/assets/local/news/2013/4/young-professionals-at-work.pdf
- Eversole, B. A. W., Venneberg, D. L., & Crowder, C. L. (2012). Creating a flexible organizational culture to attract and retain talented workers across generations. *Advances in Developing Human Resources*, 14(4), 607–625.
- Farrell, L., & Hurt, A. C. (2014). Training the millennial generation: Implications for organizational climate. *E Journal of Organizational Learning and Leadership*, 12(1), 47–60.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218–226.

- Frey, B. S. (1993). Does monitoring increase work effort? The rivalry with trust and loyalty. *Economic Inquiry*, 31(4), 663–670.
- Gross, D. (2012). A new reason to stay off the web at work.

 Available at http://www.cnn.com/2012/04/06/tech/web/
 proctor-gamble-internet-ban/index.html
- Hermann, C. F. (1963). Some consequences of crisis which limit the viability of organizations. *Administrative Science Quarterly*, 8(1), 61–82.
- Hershatter, A., & Epstein, M. (2010). Millennials and the world of work: An organization and management perspective. *Journal of Business and Psychology*, 25(2), 211–223.
- Institute of Politics. (2016). Young Americans' attitudes toward politics and public service. Cambridge, MA.
- Ivarsson, L. P. (2011). Personal internet usage at work: A source of recovery. *Journal of Workplace Rights*, 16(1), 63–81.
- Johnson, N. F. (2009). Generational differences in beliefs about technological expertise. New Zealand Journal of Educational Studies, 44(1), 31–45.
- Johnston, K. (2016, December 20). Millennials are't lazy, they're workaholics. *The Boston Globe*. Available at www.bostonglobe.com/business/2016/12/19/millennials-aren-lazy-they-workaholics/3ZD86pLBYg954qUEYa3SUJ/story.html
- Jones, S., & Fox, S. (2009, January 28). Generations online in 2009. *Pew Research Center*. Available at http://www.pewinternet.org/Reports/2009/ Generations-Online-in-2009.aspx
- Kotter, J. P. (2008). *A sense of urgency*. Boston, MA: Harvard Business Press.
- Kratz, H. (2013, June 24). Maximizing millennials: The who, how, and why of managing Gen Y. Available at https://onlinemba.unc.edu/blog/geny-in-the-workplace/
- Langheinrich, M., & Karjoth, G. (2010). Social networking and the risk to companies and institutions. *Information Security Technical Report*, 15(2), 51–56.
- Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13(S1), 111–125.
- Li, H., Zhang, J., & Sarathy, R. (2010). Understanding compliance with internet use policy from the perspective of rational choice theory. *Decision Support Systems*, 48(4), 635–645.
- Lim, V. K. G. (2002). The IT way of loafing on the job: Cyberloafing, neutralizing, and organizational justice. *Journal of Organizational Behavior*, 23(5), 675–693.
- Lim, V. K. G., & Chen, D. J. Q. (2012). Cyberloafing at the workplace: Gain or drain on work? *Behaviour and Information Technology*, *31*(4), 343–353.
- Lim, V. K. G., & Teo, T. S. H. (2005). Prevalence, perceived seriousness, justification, and regulation of cyberloafing in Singapore: An exploratory study. *Information and Manage*ment, 42(8), 1081–1093.
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation. *American Psychologist*, *57*(9), 705–717.
- Lyons, S., & Kuron, L. (2014). Generational differences in the workplace: A review of the evidence and directions for future research. *Journal of Organizational Behavior*, 35(1), 139–157.
- Mark, G., Gonzalez, V., & Harris, J. (2005, April). No task left behind? Examining the nature of fragmented work. Paper presented at the Association for Computing Machinery, Portland, Oregon.
- Mayer, D. M. (2012). Who displays ethical leadership, and why does it matter? An examination of antecedents and consequences of ethical leadership. *Academy of Management Journal*, 55(1), 151–171.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734.

- Partridge, H., & Hallam, G. (2006). Educating the millennial generation for evidence based information practice. *Library Hi Tech*, 24(3), 400–419.
- Pew Research Center (2014). The next America: Boomers, millennials, and the looming generational showdown. New York, NY: Public Affairs.
- Proserpio, L., & Gioia, D. A. (2007). Teaching the virtual generation. *Academy of Management Learning and Education*, 6(1), 69–80.
- Raisch, S. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organization Science*, 20(4), 685–695.
- Ravlin, E. C., & Meglino, B. M. (1987). Effect of values on perception and decision making: A study of alternative work values measures. *Journal of Applied Psychology*, 72(4), 666—673.
- Schofield, C. P., & Honoré, S. (2009). Generation Y and learning. 360°: The Ashridge Journal. Available at https://www.ashridge.org.uk/Media-Library/Ashridge/PDFs/Publications/GenerationYAndLearning.pdf
- Sheaffer, S. R. (2009). The marriage of technology and leadership. *Training*, 46(4), 16.
- Small, G., & Vorgan, G. (2008). iBrain: Surviving the technological alteration of the modern mind. New York, NY: Harper Collins
- Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of Management Review*, 36(2), 381–403.
- Smola, K. W., & Sutton, C. D. (2002). Generational differences: Revisiting generational work values for the new millennium. *Journal of Organizational Behavior*, 23(4), 363–382.
- Steinberg, B. (2012, April 9). Study: Young consumers switch media 27 times an hour. AdvertisingAge. Available at http://adage.com/article/news/
 - study-young-consumers-switch-media-27-times-hour/
 234008/
- Stewart, J. S., Oliver, E. G., Cravens, K. S., & Oishi, S. (2017). Managing millennials: Embracing generational differences. *Business Horizons*, 60(1), 45–54.

Stone, A. A., Kennedy-Moore, E., & Neale, J. M. (1995). Association between daily coping and end-of-day mood. *Health Psychology*, 14(4), 341–349.

- Tanner, L. (2017). 4 apps to help distracted designers increase productivity and focus. Flywheel. Available at https://getflywheel.com/layout/apps-increase-productivity-focus/
- Tappscott, D. (1998). Growing up digital: The rise of the net generation. New York, NY: McGraw-Hill.
- Thayer, S. E., & Ray, S. (2006). Online communication preferences across age, gender, and duration of internet use. *CyberPsychology and Behavior*, 9(4), 432–440.
- Twenge, J. M., Campbell, S. M., Hoffman, B. J., & Lance, C. E. (2010). Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. *Journal of Management*, 36(5), 1117–1142.
- Ugrin, J. C., & Pearson, J. M. (2008). Exploring internet abuse in the workplace: How can we maximize deterrence efforts? *Review of Business*, 28(2), 29–40.
- Urbaczewski, A. (2002). Does electronic monitoring of employee internet usage work? *Communications of the ACM*, 45(1), 80—83.
- Volberda, H. W., & Lewin, A. Y. (2003). Co-evolutionary dynamics within and between firms: From evolution to co-evolution. *Journal of Management Studies*, 40(8), 2111–2136.
- Wajcman, J., Rose, E., Brown, J. E., & Bittman, M. (2010). Enacting virtual connections between work and home. *Journal of Sociology*, 46(3), 257–275.
- Weatherbee, T. G. (2010). Counterproductive use of technology at work: Information and communications technologies and cyberdeviancy. *Human Resource Management Review*, 20(1), 35—44.
- Wesner, M. S., & Miller, T. (2008). Boomers and millennials have much in common. *Organization Development Journal*, 26(3), 89–108.
- Young, K. (2010). Policies and procedures to manage employee internet abuse. *Computers in Human Behavior*, 26(6), 1467—1471.
- Zakrzewski, C. (2016). The key to getting workers to stop wasting time online. *The Wall Street Journal*. Available at https://www.wsj.com/articles/the-key-to-getting-workers-to-stop-wasting-time-online-1457921545