

Technology and Psychology—Natural Enemies or Just Plain Natural?

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New forms of media and technology are changing how people interact with our natural, built, and social worlds. As the incoming editor of *Ecopsychology* recently stated, we are indeed a technological species (Kahn, 2013), and we must take our technological nature into consideration in our work as psychologists. We now live in a world with not only physical behavior settings but also virtual and mixed settings (Blanchard, 2004; Misra & Stokols, 2012). People are working from home, paying bills at work, and doing work at cafés that may have previously been reserved for socializing (Stokols et al., 2009). We are able to remain connected nearly all the time with cell phones, Internet, and social media sites allowing us to connect with others from (almost) anywhere in the world.

Much of the focus in both the popular press and in psychological research is on the negative role of technology. There has been a great deal of research critiquing science and technology and discussing how new technologies may undermine or prevent human flourishing (Kahn, 2011). We read about technology-caused ailments such as Nature Deficit Disorder (Louv, 2008) and Continuous Partial Attention (Stone, 2007) and are warned of the “coming dark age” (Jackson, 2008) caused by new technology and its psychological effects on us. We are warned in the popular media by psychologists that Google will make us stupid (Carr, 2008), Facebook will make us narcissists (Rosen, 2007), and data will make us drown (Suderman, 2008).

Although this research is quite compelling, it does not give us a complete picture of the relationship between technology and psychology. In his opening editorial of *Ecopsychology*, Peter Kahn stated that “Science and technology are not the enemy. If we think they are, then not only is that, in my view, an intellectual error, but we would be making ecopsychology largely irrelevant to most everybody in the

world today” (Kahn, 2013, p. 164). I agree wholeheartedly and would like to share a few comments in support of this direction.

First of all, the idea of technology impacting human life is not new—not even close. Technological innovations have been significantly changing how humans interact with the natural environment and with one another for thousands of years (Stearns, 2010). Over 10,000 years ago, settled agriculture began to appear throughout the world, leading to what is often called the Neolithic Revolution. This technological innovation had massive impacts on the natural environment through plant cultivation, construction of irrigation systems, and the use of domesticated animals. This led to more reliable food supplies, enabling population increase and the development of increasingly complex social structures. Likewise, the Industrial Revolution also brought with it unprecedented changes to how we obtain and use energy, enabling large-scale growth throughout the world. This newest revolution, often called the Technological or Digital Revolution, is bringing similar changes to the world of information that we’ve already seen in the worlds of food (agricultural) and energy (industrial).

As such, the view that this current form of technological innovation is “the enemy” seems not merely shortsighted but also quite flawed since technology is a vital and continued part of the human experience. “Indeed, the techniques of shaping tools are taken as the chief evidence of the beginning of human culture” (Rutherford & Ahlgren, 1990, 25). One of the four major orientations of ecopsychology, interconnectedness, asserts that we are inherently connected to one another as well as to the natural world (Kahn, 2013). Rather than view technology as severing these connections, another approach views technology as a part of human innovation and remains critical but impartial in analyzing both the positive and negative impacts of any new technology on the cultures that created it.

Although there is much work on the role of technology in disconnecting us, there is also evidence that technology can be used to connect us to the natural world. Another orientation of ecopsychology, phenomenology, argues that direct experience is key to both knowledge and connection (Kahn, 2013). When direct experience is

not possible, research indicates that technological experience can serve as something of a proxy (Kahn, 2011). Environmentally focused films, for example, enable up to millions of people to experience remote natural environments that would otherwise be available to only a select few. Since both Gaia theory and carbon science have shown us to be inherently connected to these environments, enabling such sensory experience of them can reduce our psychological distance and promote positive action.

We can also study the use of technology to create and enhance connections between people. Technologies such as podcasts, social media, and network applications are leading to new forms of civic engagement and advocacy. People are able to share ideas, photos, and funding across the street or across the world. "From the 2008 Obama campaign to the Arab Spring to Occupy Wall Street, social media platforms have become a fertile ground for movement development, especially with the much-coveted youth demographic" (Karlin & Matthew, 2012, 255). But connecting through technology is not limited to young people. "Some elderly people participate in virtual communities such as SeniorNet or SeniorsCan to be able to maintain and strengthen their ties to the outside world, overcome feelings of loneliness and isolation, and give and receive social support" (Misra & Stokols, 2012, 312).

Finally, technology can serve to connect people with important information. Mobile technology has been used in Africa and other developing regions to provide farmers with a platform for sharing weather information and market prices, increasing crop yields and gross sales, as well as to disseminate health information and even prevent prescription fraud (Ogunlesi & Busari, 2012). And we don't have to live in a remote location to be disconnected from important information. Within our own homes, we are largely disconnected from the energy use being consumed by our televisions, computers, washing machines, and home heating and cooling systems. Through the Industrial Revolution, we've been provided with a system for immediate transmission of energy into our homes, but the feedback loop that goes along with that energy is only now becoming readily available. Technology in the form of smart meters and sensors can give us feedback about energy use so we know how much energy (or money) is being spent powering our computers and televisions when we are sleeping (Karlin et al., 2013). This can scale up to millions of dollars and carbon savings across the millions of individuals who have the ability to conserve energy in the home.

Although we should approach all new forms of media and technology with a critical eye, we should not openly assume that they will be either our savior or our downfall. New digital technologies are tools just like the knives, chairs, and paper that preceded them when introduced by humans centuries ago. It is our role as psychologists to

study them critically and impartially and to assess the most practical ways to utilize technology to connect and to enhance our lives.

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