

Health, Technology, and Behavior Science: A special issue of *Perspectives on Behavior Science* edited by Valdimar Sigurdsson, Asle Fagerstrøm, and Gordon R. Foxall

Call for Papers

Biology is not the controlling factor of health but rather a mediator in behavioral chains that rely on interactions between behavior and environments. The World Health Organization has warned of a forthcoming epidemic in non-communicable diseases such as cancer, heart disease, diabetes, and Alzheimer's since the 1960s. This warning is strengthened as modifiable behavioral risk factors, such as inappropriate nutrition and over-eating, substance use, stress, and sedentary activities, are widespread (James, 2016). According to Rachlin (2004), this is a problem of self-control, where people recognize behaviors that could be harmful to their health, but continue them even when undesired consequences appear.

Technological innovations are being tested to better describe, predict, and modify self-control with the aim of preventing and mitigating the physical and financial burdens of negative health-related behavior. One example is the study by Stites et al. (2015), which demonstrated that combining mindful eating training and online pre-ordering improved workers' food choices. However, behavioral science needs better promotion, as, for example, many application developers seem oblivious to there being a basic science of behavior (Dallery, Kurti, & Erb, 2015; Kaplan & Stone, 2013).

All consumption is a choice and exhibits matching (Herrnstein, 1997), which can underlie discounting. Hence, behaviors at all locations on the consumer continuum—routine consumption, the primrose path, or addiction to recovery (Foxall, 2016)—invoke temporal and probability discounting. Low self-control, say over unhealthy food, and other choices can lead consumers to overeat to the point of obesity, reflecting heavy discounting (Foxall & Sigurdsson, 2011). To develop successful interventions, it is vital to understand how environmental conditions influence health choices, and how they are constantly altered through new settings and situations. In this regard, children and adolescents should be of primary concern, especially given increased sedentary behaviors related to such things as computer games and other digital media. Behavior analysts should continue to assess functional relations between environmental events and eating habits and physical activity (e.g., Cassey, Washio, & Hantula, 2016; Hustyi, Normand, Larson, & Morley, 2012).

According to Marteau, Hollands, and Fletcher (2012), interventions have traditionally emphasized covert behaviors and reflections; however, these approaches often tend to be ineffective, strengthening the conclusion that most behavior under the influence of the environment is automatic. It is safe to conclude that the world is experiencing a new emphasis on objectivity and interventions through technological innovations, analytics, and proliferation of behavioral data. This “digital revolution” has advanced, and should continue to do so, thereby strengthening explanations relying on environment–behavior interaction via technology and experimentation. Moreover, a sound contextual conceptualization that narrows the gap between explanations and data and that encourages evidence-based practices should be encouraged. A key driving force is technology innovation that opens up numerous opportunities to study behavior in natural environments, such as real-time monitoring with mobile apps, online or in retail stores (Larsen, Sigurdsson, & Breivik, 2017; Sigurdsson, Menon, & Fagerstrøm, 2017). The value of the technology lies in its ability to constantly deliver more accurate, less disruptive accounts of how individuals behave and how they react to stimuli. Therefore, there is a real opportunity to stick to and rely on behavioral data at the

expense of theoretical, indirect, nonexistent, and even circular constructs. However, increased datafication of such activities as buying behavior, social interactions, reading and writing, listening and looking, or walking and eating needs responsible, critical analysis (Ruckenstein & Schüll, 2017).

Arranging environmental conditions so that people make better decisions has the utmost potential for successful health promotion (e.g., Hollands et al., 2013; Lake & Townshend, 2006; Sigurdsson, Larsen, & Gunnarsson, 2014). This may help promote the behavior change capabilities of behavior analysis and connect that research with other disciplines. Behavioral changes do not necessarily need to be drastic, as small changes could add up to significant long-term effects for individuals and society (Wansink, 2016). Another aim should be to monitor trends in technological innovation, analyze them from the standpoint of behavior theory, and identify possibilities to perform behavioral studies related to consumer protection/health promotion. It is important for behavior analysis to be as relevant as possible, and to follow the latest technology and to scrutinize it critically.

The special issue on health and technology is intended to provide timely reviews of research programs that integrate technological innovations and behavior analysis. Conceptual, review, empirical, methodological, and practical contributions are all appropriate. Papers are invited that are relevant to health behavior and that employ technology such as mobile apps, wearables, the Internet of Things, social media, online experiments, virtual reality, glucose meters, observational technology, machine learning, eye tracking, retail analytics, or other technology that can gather, store, and/or analyze individuals' behavioral, physiological, and geolocation data. Authors should strive to advance behavior theory with datafication of important health behavior, as well as embrace critical standpoints and ethical considerations.

Submission inquiries are encouraged and should be sent to the editors at valdimars@ru.is, asle.fagerstrom@kristiania.no, or foxall@cardiff.ac.uk.

Papers should be approximately 20 manuscript pages (excluding tables, figures, and references) and conform to the submission requirements for *Perspectives on Behavior Science*. Please indicate in your cover letter that the submission is for the special issue on health, technology, and behavior. It is recommended that papers be professionally proofread prior to submission.

Papers should be submitted via the online manuscript submission system: <https://www.editorialmanager.com/tbha/default.aspx>.

The submission deadline is April 10, 2019, and accepted papers not finalized by December 10, 2019, will have to be rejected.

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