

Health, Technology & Behavior Science

A special issue of *Perspectives in 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 the interactions between people's behavior and the environments they inhabit. 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 where many still continue even when the undesired consequences appear. To fight this trend, 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 health-related behavior. One example is the study by Stites et al, (2015) which demonstrated that combined mindful eating training and online pre-ordering appears a feasible and useful worksite intervention to improve food choices by employees. However, behavioral science needs to be promoted better as for example many application developers seem oblivious that there is a basic science of behavior (Dallery, Kurti, & Erb, 2015; Kaplan and 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 from routine consumption, the primrose path, addiction over to recovery (Foxall, 2016), invoke temporal and probability discounting. Low self-control, say of unhealthy food, and other choices can lead consumers to incur overeating to the point of obesity that reflects heavy discounting (Foxall & Sigurdsson, 2011). In order to develop successful interventions, it is of vital importance to understand how environmental conditions influence consumers' health choices, and how they are constantly being 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 digital media. Here, behavior analysts should continue to contribute by assessing 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 increased, 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 brings evidence-based practices should be encouraged. A key driving

force is technology innovations 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 and Breivik, 2017; Sigurdsson, Menon, & Fagerstrøm, 2017). The value of the technology lies in its ability to constantly deliver more accurate and nondisruptive 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. But, increased datafication, of such activities as buying behavior, social interactions, reading and writing, listening and looking, walking and eating, needs to incur responsibility and critical analysis (Ruckenstein & Schüll, 2017).

Arranging the environmental conditions so that people make better decisions, therefore, has the utmost potential for successful health promotion (e.g., Hollands et al., 2013; Lake & Townshend, 2006; Sigurdsson, Larsen, & Gunnarsson, 2014). This can hopefully promote the behavior change capabilities of behavior analysis and connect research with other disciplines. The behavioral changes do not necessarily need to be drastic, as small changes in behavior could add up to significant long-term effects for the individual and the society (Wansink, 2016). One aim should also be to monitor trends in technological innovations, analyze it from the standpoint of behavior theory, and to 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 employ technology such as mobile apps, wearables, Internet of Things, social media, online experiments, virtual reality, glucose meters, observational technology, machine learning, eye-tracking, retail analytics or some other technology that can gather, store, and/or analyze individuals' behavioral, physiological and geolocation data with the purpose of advancing behavior theory and is relevant from a health behavior point of view. Authors should strive to advance theory with critical datafication of health behavior, as well as embracing critical standpoints and ethical considerations.

Inquiries concerning possible submissions are encouraged and should be sent to the editors at valdimars@ru.is, asle.fagerstrom@kristiania.no, Foxall@cardiff.ac.uk

Papers should be approximately 20 manuscript pages (excluding tables, figures, and references) and conform to the requirements for submissions to *Perspectives in Behavior Science**. 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 closing date for submissions is April 10, 2019, and accepted papers not finalized by December 10, 2019, will have to be rejected.

*Please indicate in your cover letter that the submission is for the special issue on health, technology and behavior.

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