INFORMATION SYSTEMS JOURNAL: SPECIAL ISSUE CALL FOR PAPERS
TITLE: The Digitization of the Individual (DOTI)

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1. Motivation

A large body of research has focused on use processes and organizational impacts of organizational technologies, such as Enterprise Resource Planning [1] or Business Analytics [2] systems. In recent years more research has been also devoted to personal-use [3, 4] and mostly hedonic technologies [5, 6], such as videogames [7] and social media [8]; this again focused on the respective use drivers and their impacts on individuals [9]. With the emergence of many new technologies (e.g., smart homes, smart cars, fitness trackers, drones, virtual reality) [e.g., 10] and the increase in prevalence and intensification of use of older technologies and platforms (e.g., social media sites, massive multiplayer video games) [e.g., 11, 12], a new paradigm of heavily digitized individuals has developed [4, 13-15]. These highly digitized individuals constantly (1) leave electronic behavioral traces, intentionally or not, and (2) receive and process information about themselves and their surroundings [16]. This new status-quo represents a relatively new paradigm that has not been fully conceptualized and explored. In other words, research on the digitization of individuals is in its embryonic stages. Given the possible individual (e.g., fatigue, overload, increased motivation, improved health, reduced privacy, improved quality of life, brain changes) and societal (e.g., reduced productivity, increased public health, cultural changes) impacts of this trend, it is important to understand its drivers, key success factors, and positive and negative outcomes.

Consider the following statistics:

- The purchase of Internet connected smart cars is predicted to grow from a few millions in 2015 to 94 million (representing 82% of all cars shipped) in 2021 (http://www.businessinsider.com/internet-of-things-connected-smart-cars-2016-10). Such cars can leave analyzable digital traces of individual behavior (e.g., driving speed, location) but also deliver context-relevant information to drivers and help them with decision making (e.g., route selection, lane changes and speed optimization).

- Social media sites have billions of users as of Jan 2017. Some sites (e.g., Facebook) generate an average of over 1000 minutes per visitor per month and involve users who access the sites on average 8 times per day (http://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/). Each access session and minute spent on such

sites represents a combination of following the digital traces of others and generating personal digital traces that are often observed by others.

- Between 5-7% of consumers are considering the purchase of smart lighting, security and thermostat devices in the next 12 months; many other digitized home devices have already penetrated the UK market (e.g., smart TV, 28%, videogame consoles, 26%, and video streaming devices, 11%). Many new devices are being introduced, such as internet connected refrigerators. Hence, the market for smart homes has grown from less than 2 billion US$ in 2012 to over 9 billion in 2017 (http://www.ironpaper.com/webintel/articles/smart-home-market-size-trends-projections/). Again, the digitization of individuals' homes creates new incoming and outgoing streams of data and presents many new opportunities and threats.

- The market for wearable technologies such as fitness trackers and smart watches has exploded. It was worth more than US$2 billion in 2015 and is expected to double this year. While in 2015 only 50 million wearable devices were shipped, 125 million units are expected to be shipped in 2019. Interestingly, employees who use wearable devices report an 8.5% productivity improvement and 3.5% job satisfaction improvement (https://www.forbes.com/sites/bernardmarr/2016/03/18/15-mind-boggling-facts-about-wearables-in-2016/#27323cc72732). Such devices help individuals collect and manage data about themselves.

Several conclusions can be drawn from these examples. First, the digitization of the individual is on the rise. Second, reasons include the notion that many more, and presumably better, technologies that help digitizing the individual have been introduced, people's willingness to use such technologies has increased, and/or their concerns regarding such technologies (e.g., privacy, security) have been alleviated. Third, the effects of using such technologies are complex and can include many aspects of life [17]; yet, the effects are not restricted to individuals or society as there can be a spillover from the digitization of the individual to organizations and the digitization of the individual can influence organizational outcomes.

As these trends continue and our lives become immersed by powerful digital devices and services, questions regarding the drivers of these processes and their effects on individuals, societies and organizations still remain largely unaddressed. In this Special Issue, we seek to start addressing the conceptualization of and issues (opportunities, benefits, challenges, risks, outcomes, etc.) surrounding the digitization of the individual. The framework we propose for this line of work is depicted in Figure 1.
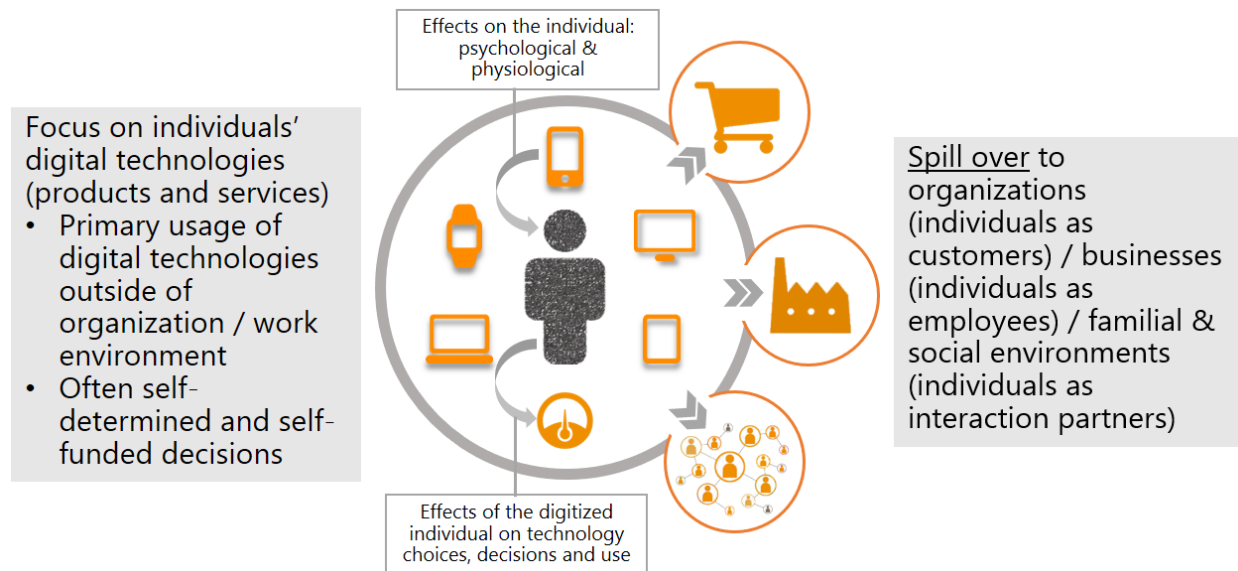
Effects on the individual: psychological & physiological

Focus on individuals' digital technologies (products and services)
- Primary usage of digital technologies outside of organization / work environment
- Often self-determined and self-funded decisions

Spill over to organizations (individuals as customers) / businesses (individuals as employees) / familial & social environments (individuals as interaction partners)

Effects of the digitized individual on technology choices, decisions and use

Figure 1: Framework for studying various aspects of the digitized individuals

Topics of interest for this Special Issue may focus on various aspects of this framework and may include but are not limited to:

- Digitization drivers and individual behavior in digitized environments, e.g.,
  - Consumer choices of digitization tools
  - Individual attitudes, preferences and behaviors in digitized environments
  - Individual communication, consumption patterns and decision making in digitized environments
  - Information sharing among individuals in digitized environments
  - Micro (e.g., personality) and macro (e.g., government policies) perspectives on the digitization of the individual
- Positive and negative outcomes of digitization, e.g.,
  - Effects of usage of new digital devices and services on individuals' attitudes, behaviors, health and performance
  - Privacy and IT-security issues of the individual in private life
  - Usage and effectiveness of consumer devices and services in businesses
  - Fatigue, negative emotions, addiction and techno-stress associated with highly digitized environments
  - Effects of digitization on health and wellbeing
  - Spill-over effects of the digitized individual on organizations
  - Brain activation and structure changes associated with digitization
- Development, exploitation and management of personal IS
  - Individual's information system architectures
  - Development of solutions for individual use

- Accumulating technologies for creating a quantified-self
- Personal health devices and health management

2. Informing Theory and Influencing Practice

Opportunities for Informing Theory include but are not limited to:
1. How can various aspects of the digitized individual inform IS theory?
2. How and to what extent can current theoretical perspectives in IS explain antecedents and consequences of various aspects of the digitized individual?
3. How can theoretical perspectives from other areas (such as, but not limited to psychology, cognitive science, neuroscience, decision sciences, organizational behavior, computer science, and informatics) enrich the efforts of IS research to understand phenomena associated with the digitized individual?
4. What factors can modulate the influence of digitization on individuals, and as a consequence on firms and societies?
5. How do IT use behaviors of the digitized individual in the home and work contexts interact with one another in modulating the effects of this phenomenon on individuals, firms and societies?
6. How do digitized individuals manage their individual IT portfolio and how do they handle the arising complexity?
7. What new methods could be used – both quantitative and qualitative – to better inform our understanding of the digitization of individuals?
8. What theoretical frameworks can be developed to understand the duality of being digitized and experiencing both positive and negative impacts?
9. How can digitization be influenced by brain systems and/or modify them? Will the human brain morph to adjust to heavy digitization?

Opportunities for Informing Practice include but are not limited to:
10. To what extent are organizations and users currently aware of the range of positive and negative outcomes of heavy digitization?
11. How can individuals manage their own digitization and balance their positive and negative outcomes? How can organizations and governments help individuals find this balance?
12. In what context and under what circumstances can organizations leverage the digitization of individuals for obtaining organizational performance gains?
13. To what extent do organizations and users have tools for measuring and managing levels of digitization that their employees experience?
14. How can organizations design technologies that will allow more positive influences of the digitization of individuals on themselves and other individuals, firms and societies?

Opportunities for Informing Policy and Social Milieu include but are not limited to:
15. What sorts of legislation may be required for ensuring fair use of services and tools that digitize individuals?

16. What sorts of legislation may be required for ensuring fair access of all individuals to services and tools that digitize individuals?
17. What impact will the digitization of individuals have on social culture, communication between individuals, or public health?
18. Who is responsible for ensuring that self-digitization technologies produce maximum benefit and minimum harm?

3. Objectives and Criterion for Submissions for the Special Issue

The objective of this Special Issue is to present exemplary and outstanding research that examines the phenomenon of, trends, drivers and outcomes of the digitization of individuals. The IT artifact in submissions should be individuals' digital technologies (products and services) and their primary usage of which is outside organization/work environments (though the use and effect of which can spill-over to organizations). Submissions should broadly address or relate to the above-mentioned, or similar, aspects in their contribution to theory and practice. We seek relevant and rigorous research that develops and applies applicable theory to problems under investigation and identifies IT and IT management tools as solutions.

Specifically, we seek research that addresses the following criterion.
1. Diverse in terms of author demographics (nationality/gender/disciplines) and affiliations (academia/industry)
2. Capture integration of theoretical perspectives and theory-in-use application in relevant contexts
3. Analyze innovative experiences and achievements in the topical domain, by individuals and organizations spanning different sectors, from a variety of AIS regions
4. Identify directions and opportunities for shaping future research in the domain
5. Identify critical issues that organizations and societies should anticipate and address

Submissions should:
1. Explain how they meet the Special Issue objectives
2. Present insights and contributions based on empirical evidence (i.e. not be a review article, an opinion article, a speculative paper or be based on algorithmic analysis of secondary data).
3. Be innovative in their contribution to IS theory and practice
4. Ideally be generalizable to a broad and/or prevalent range of contexts
5. Meet criteria for reporting completeness, structure and research rigor required for ISJ. They should not be research-in-progress papers

4. Review and Publishing Process

Recognizing that the SI seeks thoughtful and innovative submissions that address an emerging domain, authors are encouraged to submit an optional mini proposal to the Special Issue editors for early feedback. Initial submissions should not exceed 5-pages in total including: 1-page with title, keywords,

authors and key references; a 1-page extended abstract; a 1-page description and justification of research approach; a 1-page description of the expected major contributions, limitations and generalizability; and a 1-page analysis of how it fits the objectives and desirable requirements of the Special Issue. Formatting for this 5-page initial submission is to the standard for ISJ submissions.

This SI will solicit papers based on an open call. All manuscript submissions will go through an initial round of screening by the SI Editorial Board to ensure that they fit the objectives of the SI and ISJ and can be reasonably improved during the mentioned time frame. For formatting criterion, authors should refer to the ISJ website at http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291365-2575/homepage/ForAuthors.html. Manuscripts that qualify will go through the ISJ review process. It is expected that a manuscript will go through a maximum of three rounds of revision.

Timeline:
Initial proposal submission: Jan. 15, 2018 (optional but encouraged)
Original manuscript submission due date: May 15, 2018

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