Information Technology (IT) and the Self: Conceptualizing IT Identity

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CHI 2015, April 18–23, 2015, Seoul, Republic of Korea.

ACM 978-1-4503-3145-6/15/04…$15.00.
Every submission will be assigned their own unique DOI string to be included here.

Abstract
As social roles and relationships become inseparable from people's interactions with information technologies (IT), new concepts representing social-technological intertwinement are needed to expand understandings of human behavior. This extended abstract describes ongoing research efforts to systematically develop one such concept, IT identity—defined as the extent to which an individual views an IT as integral to his or her sense of self—as a new form of material identity. IT identity is appropriate for the time and has implications for a wide range of topics relating to IT and human behavior

Author Keywords
IT identity; Conceptual.

ACM Classification Keywords
H.1.m. Information Systems: Models and Principles: Miscellaneous.

Introduction
Information technology (IT) has become increasingly intertwined with personal and social routines, helping to create and maintain the social structures in which people are embedded [9]. Social structures are the networks of relationships and roles in which individuals participate, which are defined by the "cultural and

normative expectations that [individuals] hold about each other's behavior" [11, p. 3]. In a digital world, pervasive mobile computing (e.g. smartphones, tablets, wireless data plans, WiFi hotspots, social media, and cloud-based services) has lifted social relations out of localized contexts—and created new expectations for how, when, and where people perform various roles and maintain their social networks [8, 17]. These expectations shape individuals' self-conceptions and guide their behaviors within the environments they inhabit [5]. As social structures and IT become inseparable, new concepts that embrace social-technological intertwinement can advance understandings of ITs' implications for societies, social institutions, and individuals.

To better understand human behavior in today's digital world, we have sought to articulate one such concept, IT identity—*defined as the extent to which an individual views an IT as integral to his or her sense of self* —as a new type of material identity. By IT, we mean a unit of technology (hardware device; software application, or software application environment) that an individual consciously engages with to produce, store, and communicate information; that could be accessible to that person across time and space, and that may provide breadth of access to others in the person's social world. This extended abstract describes our ongoing research efforts to develop this novel concept.

Background

In recent years, the relationship between IT and identity has garnered increasing research interest. With ubiquitousness of the mobile phone, the domains of communication, media, cultural studies, as well as anthropology and social psychology have directed greater attention to the technology's implications [e.g. 4, 6, 18]. In this stream, there is an emergent understanding of mobile phones as a means of representing the self to others. However, knowledge about the interplay between how one defines the self and mobile phone use is nascent [6, 19].

In information systems (IS), researchers have examined the role of IT as a medium for promoting trust, supporting social interactions, and projecting important identities to others [14, 15]. Others have explored the role of IT as a determinant of identity [e.g. 1, 13]. Finally, some have investigated IT use as a consequent of identity [e.g. 7, 10]. Still, existing approaches mostly consider IT and identity as distinct entities; thus, reinforcing their discreteness. A conceptualization of IT as an integral part of the self has yet to be formally theorized.

Developing the IT Identity Concept

We took a multi-step approach to developing IT identity. Because identities are constructed as people interact with the world and IT has become bound up in this interaction [5], it seems reasonable to think of IT as a source of reflexivity that gives rise to the question, "Who am I, in relation to this technology?" To investigate this potential, we conducted an exploratory study of young adults' relationships with mobile phones [3]. Qualitative content analysis of written narrative accounts revealed that, as mobile phones become infused in daily life, the meanings attached to the devices are increasingly focused on the self. These meanings are reflected in young adults' emotional responses to thinking about themselves in relation to their phones. Based on our findings, we developed an initial conceptualization of "mobile phone identity" [3].

Next, we sought to extend our conceptualization beyond the context of young adults and mobile phones. In a theoretical paper (not yet published), we draw on structural symbolic interactionism [16] and findings from the mobile phone study [3], to define IT identity as *the extent to which a person views an IT as integral to his or her sense of self*. Consistent with our theoretical frame [12], a strong IT identity represents self-identification—"the [target IT] is integral to my sense of self (who I am)"—and a weak IT identity represents dis-identification—"the [target IT] is completely unrelated to my sense of self (who I am)." IT identity is reflected in three interrelated dimensions—emotional energy, relatedness, and dependence. These dimensions make the concept comparable across individuals and applicable to different technologies.

Our theoretical paper contributes to the literature in three ways. First, it formally defines the domain and dimensions of IT identity. In doing so, it elucidates the concept's scope; the motivation for identity construction, the types of IT that it is applicable to, its stability, and whether IT identity is personally or socially constructed. We posit that individuals can develop multiple IT identities; each tied to a particular IT in an individual's personal technology network.

Second, it identifies the referential relationships in which IT identity exists, including its antecedents, consequents, and boundary conditions on its influence. The theoretical discussion explains how, while individuals are motivated by self-expansion to construct and enhance IT identity, ultimately, a desire for self-continuity leads to routinized behaviors and resistance to change.

Third, the paper demonstrates IT identity's implications for a wide range of topics relating to how people interact with IT to express, maintain, and expand their self-concepts. For example, in organizations, IT identity can extend understanding of employees' use of IT in work settings, including topics related to IT consumerization, resistance, and technostress. IT identity may also be helpful in evaluating the effectiveness of user interfaces, and offer new insights into how often to deploy, and how much change to introduce into, technology upgrades. For policymakers, understanding the interplay between personal and social dimensions of IT identity may facilitate attempts to empower individuals and social groups through IT.

Finally, we have drawn on our conceptual definition to develop valid measures of IT identity [2] and test its utility with regards to different IT use behaviors and different types of IT (static, single-use vs. dynamic, multi-use). Our efforts in this area are ongoing. However, preliminary analysis indicates that IT identity is related to a wider range of behaviors, and may have greater explanatory power, than existing constructs.

Conclusion

As social roles and relationships become increasingly inseparable from people's interactions with IT, new concepts are needed to expand understandings of human behavior. In this extended abstract, we describe ongoing research efforts to systematically develop and operationalize one such concept, IT identity, as a new form of material identity. IT identity is appropriate for the time and has implications for a wide range of IS topics relating to human behavior

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