Gender, Mobile, and Development: The Theory and Practice of Empowerment

Introduction

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Abstract

This introduction to the Special Section sets out the rationale for our focus on gender, mobile, and mobile Internet. We explain our aims in planning a dedicated section and introduce each of the four selected articles across different country contexts. We examine how these articles juxtapose the theory and practice of empowerment. Finally, we raise issues with the way that empowerment is used and applied in ICTD work and we draw on Cornwall's framework to support our view that access for women (an often-used variable) is not always accompanied by changes in law, policy, or men's and women's consciousness or practices; therefore, access does not de facto lead to empowerment. It is this space that we believe needs further exploration. A focus on access and digital literacy for women, while important, is not in itself a sufficiently meaningful criterion for empowerment through mobiles and mobile Internet.

Keywords: gender, women and mobile, mobile, mobile Internet, empowerment

Why This Special Section?

"Over 16 million underserved women now have mobile access due to USAID's Digital Inclusion team" read a recent tweet from USAID. The president of the World Bank, Jim Yong Kim, wrote in his foreword to "World Development Report 2016" that "new technologies allow women to participate more easily in the labor market" (p. xiii). GSMA's often-quoted report, "Bridging the Gender Gap" (2015), cites statistics that show women are, on average, 14% less likely than men to use a mobile, rising to 38% in South Asia. Discussions around gender, mobiles, and their role in international development are often unproblematically equated with issues of access, and from access they jump to implications of empowerment. We need to question these statistics and how access and empowerment are understood. How do we reach calculations such as "over 16 million women have mobile access" or women are 38% less likely to use a phone than men in South Asia? What constitutes "mobile access" for women? Is it owning a phone or a SIM? Is it being able to use a husband or father's phone for a few minutes a day? Finally, when women do have access, what does it lead to—in Jim Yong Kim's words, what are the conditions for "participating more easily"? Can we assume mobile access leads to—or even contributes to—empowerment?

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As Jonathan Donner states in his book *After Access,* we must move beyond discussing statistics on access to discussing meaningful use of mobiles (2015). To understand the part mobiles play in social and economic meaning-making, there is a need to focus on what makes mobile phones meaningful within specific uses and settings (Tacchi, 2014). Although gender is often considered a critical "tickbox" category for journals, conferences, and speakers, a rigorous body of knowledge conceptualizing and problematizing gender, mobiles, and development is only now beginning to appear. There are dedicated gender, mobile, and development outlets, such as the journal *Gender, Technology and Development,* institutions such as the GSMA cited above that has an mWomen Programme, and USAID's Women and the Web Alliance with NetHope, Intel, World Pulse, World Vision, and UN Women. There are major research projects such as the Web Foundation's Women's Rights Online, which analyzed women's access to the web in nine countries, and the GRACE (Gender Research into Information Communication Technology for Empowerment) Network across Africa and the Middle East.

However, the theoretical links between gender, development, and technology—particularly mobile telephony with its rapid global uptake—need further problematization. Even a quick review of this journal found no dedicated special issue on gender and only a few articles dealing specifically with gender and technology issues. While SDG[1] 5 aims to "achieve gender equality and empower all women and girls" by 2030, and SDG 5b specifically aims to "enhance the use of enabling technology, in particular information and communications technology (ICT), to promote the empowerment of women" (see all the SDGs on Sustainable Development, 2018), there are rising inequalities in most countries. If international development is designed to address the relative differences between people and communities, ICTs have contributed to increased inequalities and have had an overwhelmingly negative impact on the development agenda (Unwin, 2017). While ICTs have the potential for positive transformation, we still must ask questions on what "empowerment" through technology, especially mobiles, means for women and how it might be achieved.

The Aims of This Special Section

Within this context, we set out to dedicate a Special Section of *Information Technology & International Development* to gender, mobile, and mobile Internet. While we three authors have worked in this interdisciplinary space for several years, we still ask questions around the interplay of gender and technology (and particularly now, mobile), and the effects structural factors found in resource-constrained settings may have on empowerment.

What do we know about empowerment (discussed further below) for women through mobiles and mobile Internet? We know that access to mobile phones and mobile Internet is increasing exponentially around the world (World Bank, 2012). Many studies already show engaged use of mobiles both by and for women, from using mobiles to support oneself financially (Tacchi & Chandola, 2015), to mutual support in healthcare (Chib & Chen, 2011), finance (Wallis, 2011), civic technology (Rumbul, 2015), and education (Balasubramanian, Thamizoli, Umar, & Kanwar, 2010). Reflecting on the implications of mobile access, a point of discussion emerges: Do the particular *affordances* of mobile—cheaper, more accessible, dissociated from place and context as compared to PCs (Donner, 2015)—have the potential to disproportionately affect women (for many of whom mobiles are the first and foremost ICT device to be used) compared to men?

Other questions arise in conceptualizing gendered affordances of mobile phones and mobile Internet. In particular, limited gender-disaggregated statistical data are available on mobile and mobile Internet access, which hinder our capacity/ability to draw inferences (UN Women, 2015). Poor access may be the result of several issues, including but not limited to cost, male control of finances as well as use, analogue and digital literacy, relevance, and, perhaps, fear of use. For example, Potnis (2015) finds women in rural Maharashtra, India fear being harassed or accidentally "breaking" the phone. Schoemaker (2015) elaborates on cultural constraints that affect the use of mobile Internet in Pakistan ("digital *purdah*"). Further research brings forth restricted agency—of female street traders in Kampala switching off phones in the presence of men to preserve the status quo (Masika & Bailur, 2015) or of Vietnamese brides in Singapore, who use mobile Internet to reenact restricted agency within the confines of their home (Nguyen et al., 2017).

1. Sustainable Development Goal.

With this in mind, this Special Section set out to focus on three specific areas in gender, mobile, and mobile Internet use. First, we looked for articles that expanded theories and frameworks of gender and empowerment through mobile phones such as Sen's capability approach (see Nguyen, Chib, & Mahalingham, 2017), Cornwall's matrix of empowerment (Bailur & Masiero, 2017), Alcoff's theory of positionality as applied to gender (Wallis, 2011), and so on. How do we define mobile use as empowerment? What examples do we see, whether selling through WhatsApp (Venkatraman, 2015) or self-educating through YouTube (Caribou Digital, 2015)? We wanted to move beyond access–empowerment arguments and enter more nuanced discussions on what empowerment means and *how* it occurs.

Second, following in this vein, we wanted to deconstruct overly simple or vague assumptions about empowerment. For example, what do we know about poor regulation in microwork for Amazon Mechanical Turk (Harris, 2014), negotiating sex work (Tacchi & Chandola, 2015) and using images or videos for it (Veena, 2007), or the challenges of harassment (World Wide, 2015). While income generation for women through the web may lead to economic empowerment, Duffy and Pruchniewska (2017) call income generation through the mobile web a *digital double bind:* Women are able to earn an income independently, but they are more visible to the world and, therefore, more vulnerable to harassment.

Third, we wanted to move further into nuances and intersectionality around empowerment. Not all women experience the same levels of autonomy or constraint: technical, social, economic, political, spatial. What role does intersectionality play, not only with respect to gender, but also categorizations such as race, poverty, disability, class, and caste? In some cases women may enable or constrain other women. Wallis (2011) uses ethnographic methods to analyze how in Beijing a richer female shop owner consistently called a recent female immigrant employee in the evenings to unfairly accuse her of stealing stock. When there are intermediaries—male or female—how do they enable or not enable access? Research with low-income girls in India revealed that older brothers, in particular, were gatekeepers to access (Caribou Digital, 2017). Chandrika, age 16, said, "When I ask my brother [to use the phone], he says, 'What would you do with it?'" Another girl, Prema, said, "Oh, brothers don't teach you, they say, when you have your own phone, you will learn yourself." It is also brothers who are more aware of dangers. Lavania, 15, says, "He keeps asking, 'Who are you talking to?' . . . My mother and father don't really care; they think that we must be using the phone for a purpose. It's mostly brothers who suspect misuse" (Caribou Digital, 2017, p. 28). Only one girl reported that her brother helped her navigate content.

There are other issues to tease out. Can we draw on granulated data and findings to extend and problematize binary male/female discussions? What tactics of agency do we see? Sharing devices may be one tactic, but Burrell (2010) illustrated the complex roles of sharing in rural Uganda, which are yet to be explored elsewhere. What generational changes may we see? While there may be many access differences between men and women, at the same time digital-based enterprises owned by women are increasing, according to our own analysis in Crunchbase, an IT industry platform. Kenya appears to have more females who are digital enterprise founders than any other country (20% of the worldwide total), including the United States (16%). We were keen to discuss complex issues such as these when we invited articles for this Special Section.

Articles in This Special Section

Each article in this Special Section addresses one or more of our aims noted above. In terms of theories and frameworks, Ronda Zelezny-Green uses Kleine's (2013) choice framework to understand how girls in a Nairobi secondary school use mobile Internet to increase access to educational content after school. Kleine's choice framework is an application of Sen's capability approach, and here Zelezny-Green proposes a (girl) child-centered choice framework, designed to conceptualize the influence of girls' personal characteristics and adult intermediaries on technology appropriation. The article reflects on the challenges of promoting girls' agency with mobile in the presence of structural elements dictated by adult intermediaries and the resource-constrained setting in which the study is placed. Zelezny-Green's framework innovates on existing conceptualizations of choice, providing a new lens through which to observe technology appropriations by girls in a developing country context.

Becky Faith positions capability against materiality (Burrell, 2016) and Donner's (2015) affordance limitations of the mobile phone such as screen size, capacity to do meaningful work, battery life, and other technical features. Her study of 30 young low-income women (either unemployed or homeless) in the United Kingdom shows the burdens related to maintaining their phones links with several types of structural inequality experienced by the women. Faith's proposed framework makes sense of such complexities, showing how the maintenance affordances of technologies affect subjects' capability to live lives they value. This illuminates the relation between technology appropriation and urban poverty in a Global North context, conceptualizing issues at the problematic intersection of gender and socioeconomic status.

Susan Wyche and Jennifer Olson discuss their research with rural women in Kenya against the framework provided by the Africa Rising rhetoric. Mobile phones and Internet access feature powerfully in the Africa Rising narrative, referring to the rapid growth and development experienced by the continent over the last two decades. Wyche and Olson's research, centered on rural women's experiences with mobile devices, illustrates a set of counternarratives related to secondhand handsets, misinformation around social media, and heteronormativity as they reflect on gendered allocations of time. Such counternarratives contribute to problematizing the mainstream Africa Rising narrative in the light of lived experiences that illustrate more complex interplays of gender, technology use, and cultural norms.

Finally, Bushra Hassan, Tim Unwin, and Akber Gardezi report on an online survey that examines experiences of sexual harassment through mobile devices in Pakistan, particularly through voice and text. Their analysis of ICT's darker side is discussed alongside patriarchal and normative values, providing a nuanced and socially embedded view of the phenomenon. The survey results show that experiences of sexual harassment, found to be more pervasive than initially expected, are conveyed in multiple ways through mobile devices, with effects (such as the connected dynamics of blaming) that vary significantly based on gender. Exploring the problematic grey area of ICT adoption (per Duffy and Pruchniewska's digital double bind above), the study sheds light on the persistence of old and problematic stereotypes perpetuated through new technologies.

What Is Empowerment and for Whom?

All articles, albeit in different ways and through different theoretical lenses, problematize what empowerment means for the women and girls researched. For Zelezny-Green, empowerment is framed in terms of choice and predicated on structural factors that influence girls' appropriation of mobile technologies. Faith argues against the "give access, get empowerment" assumption and states that, while the digital and intangible are often given precedence, what needs greater attention is the technology's materiality such as buying or recharging phones, all undercut by issues such as poor employment conditions, low pay, and lack of fixed housing. Wyche and Olson argue that, in real terms, access to mobiles makes little difference to the rural women they interviewed as their available free time for learning to use mobile phones is limited and any benefits to them are not clearly conceptualized. Finally, Hassan et al. illustrate the challenge of visibility for Pakistani women, showing how it also means being vulnerable to harassment.

Finally, what particularly stood out in these four articles is the intersectionality or nuances around gender and technology. Crenshaw (1991) refers to *intersectionality* as the nexus of gender, race, age, and ethnicity, among other attributes. Often in discussions around gender and technology, the distinction is binary—simply put, that women face a greater challenge than men in accessing mobiles and mobile Internet. However, each article dives deeper into intersectionalities. Faith discusses low-income women in Brighton and their multiple vulnerabilities in relation to poverty, employment, and housing, which starkly show that these challenges exist in "developed" societies, and not only in "developing" ones. Hassan et al. explore perceptions and experiences of harassment across gender, age, religion, location, ethnicity, and employment. Wyche and Olson contrast the distinction of rural versus urban Kenya, detailing the elements and demographics of what "rural" means. Zelezny-Green discusses girls as opposed to women, another distinction we do not make often enough. The four articles tackle intersectionality in different ways, and we feel more attention to intersectionality will be beneficial to understanding the implications of mobile and mobile Internet to gendered use and empowerment.

Conceptualizing Gender and Empowerment Through Mobiles and Mobile Internet

Interrogating how we think about gender, empowerment, and mobile phones and how they relate to specific uses and experiences are important. How we frame them separately and in relation to each other determines to a great extent what we research, our analytical approach, and the meanings we uncover—what we might think of as "cognitive determinism" (Tacchi, 2014). Ways of thinking about mobile phones and mobile Internet as empowering, especially in relation to women (not only for researchers, but also for aid agencies), development policy makers, and practitioners, can become an "ICTD truism" like the "myth" that mobile phone access to market price information equates to economic development and empowerment (Burrell & Oreglia, 2015). Challenging ICTD truisms and myths around mobiles and empowerment requires close study of what is actually happening through interrogation of "meaningful" (Tacchi, Kitner & Crawford, 2012) or "effective" (Donner, 2015) use.

The articles in this Special Section explore—in different ways—specific aspects of mobiles and empowerment, which collectively demonstrate some of the ways we might question widespread assumptions or truisms about mobiles and their relationship to empowerment through the study of actual use, to challenge "monolithic visions" of their effects (Ling & Horst, 2011). Wyche and Olson critique the role of mobiles in the Africa Rising narrative by examining the experiences of rural women. Hassan et al. draw attention to the general lack of research on ICTs and sexual harassment in the Global South and the need for more research in different contexts. Their study in Pakistan, specifically, demonstrates that an inattention to the use of mobile calls and texts in favor of the more talked-about and recognized use of online and social media for harassment misses important and prevalent practices that need to be addressed, echoing Donner's earlier observations of the unobserved and understudied voice call and text uses of mobiles (2010). While Pakistan presents an interesting location for research on this darker side of mobiles and mobile Internet, Hassan et al. recognize the need for more research on mobiles, gender, and harassment in more places. Zelezny-Green explores how individual use of mobiles by Nairobi schoolgirls is far more complex than an individual choice framework can account for, where girls might exercise agency to use mobiles to construct their own identities. Rather, choice is tied up with structure and agency. Schoolgirls' appropriation of mobiles after school is a negotiation among structural elements controlled by adult intermediaries.

Faith wants us to look closer at and unpack the relationship between affordances and capabilities. In this way we might think of mobiles as boundary objects with affordances that are enacted and made meaningful in different ways in different settings. The notion of *affordances* refers to all possibilities for action in the social environment (Gibson, 1977). Possibilities for action do not, per se, depend on the subject's capability to recognize them, but at the same time can only be afforded if individuals are able to see those possibilities. Context is important to understanding mobile use, but there are particular affordances and constraints implicated in technologies, however differently experienced they might be in a range of cultural, social, and political contexts (Coleman, 2010). Mobiles and mobile Internet have provided new ways to connect people in economic and social networks and can amplify ongoing processes of social change, but local and enduring structures of meaning cannot be ignored (Tenhunen, 2008). We cannot understand the relationship between technologies and social change without capturing the particular details of how they are experienced (Tacchi, 2014).

Donner (2015) proposes six affordances of mobile Internet in resource-constrained settings. These affordances pertain to (1) the availability of relatively inexpensive devices, (2) usage-based pricing, (3) wireless connections, and (4) the personal, (5) the universal, and (6) the task-supportive natures of devices supporting mobile Internet. The articles in this Special Section recognize some form of affordances of mobiles and mobile Internet, and they more or less explicitly acknowledge the role these affordances may play in some particular aspects of development. The translation of such affordances into empowerment, however, is a matter of discussion in all four articles. In Zelezny-Green this is conditional to the enactment of choice, which is influenced by girls' personal characteristics and adult intermediaries. In Faith's and Wyche and Olson's articles, empirical data challenge the dominant narratives on the link between mobile uptake and development, whereas in

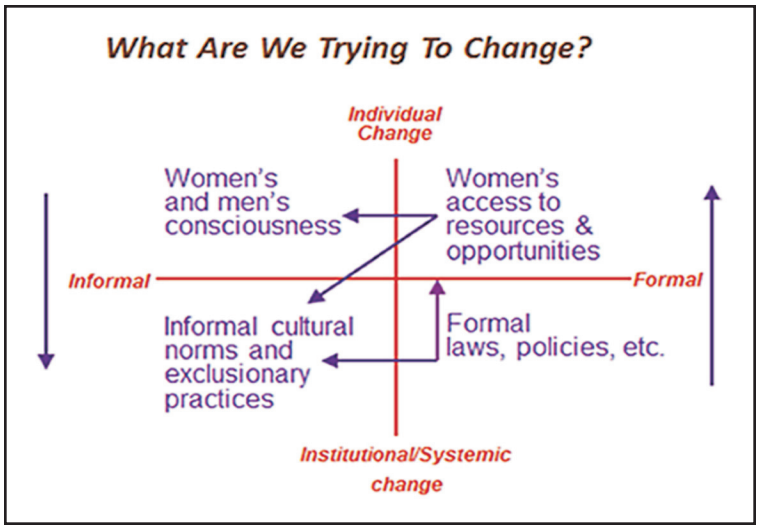

Figure 1. Cornwall's conceptualization of empowerment.
Source: Cornwall (2016, p. 346).

Hassan et al. mobiles are discussed in relation to the perverse downsides of ownership, connected to unwanted visibility and harassment. This contributes to the problematizing of a contingent and often double-edged role for mobiles in the making of gender-based empowerment.

All this leads to the question: What do we mean by "empowerment"? While the word has been much discussed, particularly in gender studies (see Batliwala, 2015; Kabeer, 1999; Rowlands, 1995), theoretically, we see little deconstruction of it in terms of gender, mobile, and development. One particular perspective, while not ICT-specific, drew our attention as an overarching framework for these four articles. Cornwall (2016) conceptualizes empowerment as quadrants of formal and informal contexts and of individual and institutional/systemic change (Figure 1).

Simply put, even if women have access to mobiles and mobile Internet, this may not be paralleled by a shift in consciousness, either through formal laws and policies (e.g., regarding online harassment) or through informal cultural norms: All need to change together for empowerment to occur. Control over resources, per se, does not determine sustainable increases in women's control of their lives. Cornwall illustrates how this must be accompanied by shifts in consciousness (male and female), which determine women's ability to maintain control. Shifting from the notion of resource ownership, empowerment is hence conceived by Cornwall as involving transitions in human consciousness as well as in formal laws and cultural norms. This Special Section contributes to the cause of problematizing and theorizing gender, mobiles, mobile Internet, and empowerment (not all reviewers agreed on the interpretations of the latter). While these articles go some way to exploring these challenges, there remains a need to further expand the theories and frameworks, exposing more of the negative or dark aspects and exploring the nuances of the intersection of gender, mobiles, and empowerment. We look forward to more work in this area. ■

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