

Phoning it in: Theory in mobile media and communication in developing countries

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Abstract

As 75 percent of the world's mobile subscriptions are in developing countries, studies of use patterns are essential to broader understanding. However, scholars should engage with existing theory and literature in order to operate within a framework and expand readership. Rigorous and ethical research from a variety of methodological perspectives is encouraged.

Keywords

developing countries, m4d, mobile, mobile phone

A journal dedicated to the study of mobile media and communication would be remiss not to consider mobile use in the “developing” world.¹ As of 2011, more than 75 percent of mobile subscriptions worldwide are based in developing countries (International Telecommunication Union, 2012), and as such, the patterns of mobile use in these countries are essential to understanding the antecedents to and outcomes of increasing mobile adoption.

Mobile media and communication studies in developing countries' contribution to communication

Studies of mobile media and communication in developing countries can speak to mobile media and communication more broadly. Studying people's use of mobiles in developing countries allows us to challenge “pre-existing structures in society and pre-existing notions of how interaction should take place” (Ling & Horst, 2011, p. 365). Moreover, in developing countries, resource-constrained individuals can be innovative in their use of mobile media and communication (with practices like beeping (Donner, 2008a) and SIM

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card swapping to use the mobile in the most cost-effective way). Such innovation helps us understand the social antecedents and outcomes of mobile media and communication better. Finally, most media and communication theories that are considered universal have not been tested outside of North America and Europe. Taking these theories to new contexts, and with regard to mobiles specifically (where the majority of global use is occurring) extends theoretical perspectives by visiting theoretical assumptions under different circumstances.

Theoretical perspectives

However, the first step in extending theories beyond North America and Europe is engaging with them in the first place. Much of the research on mobile media and communication in developing countries does not engage with existing theory, frameworks, constructs, or even literature, despite a dearth of appropriate perspectives. While certainly social research can exist without theory, the use of theory strengthens a study by providing a framework of concepts, definitions, assumptions, and existing literature. A theory allows a phenomenon not only to be described, but also generalized under particular circumstances. Theory also allows a study to live beyond its origins by more meaningful engagement with future studies. This article notes several communication theories relevant to the study of mobile media and communication.

Contribution of communication science to studies of mobile media and communication in developing countries

What does communication as a discipline bring to the understanding of mobile media and communication use in developing countries? First, communication is unique in its support for multiple levels of analysis within the discipline and even within a particular study. Second, communication provides theoretical rigor and perspectives. As a discipline, communication not only has theories that examine mobiles specifically, but also broader communication theories that speak to innovations and media more widely. There are a number of communication theories that could be used for studies of mobiles in developing contexts.

Diffusion of innovation. Diffusion of innovation is the theory of how, why, and at what rate new ideas and technology spread through social systems (Rogers, 2003). An extensive body of research has brought about considerable theoretical development and empirical support for Rogers' work. A number of studies have used diffusion as a theoretical orientation for mobile phone adoption. One illustrative example is Wei's (2006) finding that the desire to be seen as Western was a motivation for use of pagers and mobile phones in China. This research not only extended diffusion theory to China but also moved beyond demographic variables to lifestyle variables as predictors. Diffusion of innovation is a natural fit for studies of mobile media and communication in developing countries because of its demonstrated utility for studying technology in such environments as well as its application at both the individual and societal level. Thus, diffusion of innovation can aid understanding in the often misunderstood individual–society interactions in developing countries.

Domestication. Another theoretical perspective that aligns well with mobile adoption and use is domestication (Haddon, 2003). This theory concentrates on how individuals go through the process of discovering, purchasing, and integrating devices into their lives, and helps to account for how individuals judge others' use of the devices as well as the social consequences of the device. An example is Donner, Gitau, and Marsden (2011) which considers domestication of mobile devices in the absence of experience with a computer. Domestication can be a fruitful theory to use in developing countries because it accounts for social uses and consequences. Understanding cultural and economic variations through domestication enriches both the theory and our insights into mobile media and communication.

Uses and gratifications. The study of media choice of the mobile phone and other information communication technologies is sometimes examined from a uses and gratifications perspective. This approach is concerned with establishing the linkages between the kinds of motivations an individual might have for media. It has been used to study needs and gratifications in mobile phones (Leung & Wei, 2000; Wei, 2008). This perspective can be well-used in mobile media and communication studies in developing countries. Assumptions about motivations for use in different environments can produce erroneous conclusions. Thus, uses and gratifications could be a base for further investigation without presuppositions.

Digital divide. The digital divide, while not a theory, is a popularly used term that originally was created to describe the socioeconomic gap between computer users and non-users. It has been expanded to encompass any divide between people or groups in their awareness, adoption, and use of, and skill with communication technology, although the term "digital divide" generally implies differences in adoption or use based on socioeconomic divisions (van Dijk, 2005). Much research on mobile phone use in developing countries references digital divide, although the term is used inconsistently between studies (Srinuan, Srinuan, & Bolin, 2012; Wareham, 2004). Future research conducted in developing countries can help extend the theoretical relevance of the digital divide. Specifically, mobile media and communication in developing countries can provide new perspectives from resource-constrained environments. It is assumed that mobiles are less expensive than personal computers and are therefore a means to leapfrog the digital divide. While there is no empirical evidence for capital-enhancing outcomes from the mobile phone that equal the outcomes of personal computer use, studies that can test policy beliefs will be of great use to development practitioners, policymakers, and scholars.

Social cohesion and maintenance. Mobile phones can affect social ties and cohesion. Through small rituals enabled by mobiles throughout the day, individuals maintain social cohesion that was not possible before (Ling, 2004, 2008; Rice & Hagen, 2010). Mobiles can intensify social cohesion in developing countries (Pertierra, 2007; Tenhunen, 2008). And social cohesion explains high adoption of mobile phones in Ghana (Slater & Kwami, 2005) and Armenia (Pearce, 2011). Slater and Kwami's (2005) study of Ghanaian mobile phone users is illuminating in terms of social maintenance. Ghanaians use mobiles to

reproduce, manage, and reduce the costs of relational obligations. More studies exploring social cohesion and maintenance can be useful for scholars for mobile media and communication more broadly. As social connections are essential to survival in developing countries (Pearce, 2011), understanding social connection and cohesion via mobiles in such a context is an important contribution (Horst & Miller, 2006; Pearce, 2012).

Mobiles in developing context

While not a theoretical perspective, there has been a great deal of work on mobiles in developing countries. The most cited and notable piece is a comprehensive literature review from Donner (2008b). He categorizes the studies up to that point as either focused on the determinants of adoption, the impacts of use, or interrelationships between mobiles and users, or as focused explicitly on development – especially economic development.

Research on the relationship between economic development and mobiles is scarce. Some (Aker & Mbiti, 2010; Sreekumar, 2011) have found a positive relationship between mobile ownership and economic development at the individual level, though the evidence is inconclusive. Others have found national-level effects of mobile phone penetration on economic growth (Waverman, Meschi, & Fuss, 2005). To the best of our knowledge, no one has applied multilevel modeling techniques, to develop a set of theoretical propositions about how national mobile phone penetration and individual mobile use are associated with both individual and national economic growth, as well as how these associations may vary by a country's political and cultural environment. Furthermore, research has yet to make a strong case that economic growth seen is generalizable. As Donner (2010) eloquently writes: "*some* calls or text messages individuals *might* choose to make *might* lead to beneficial development outcomes" (p. 3, emphasis mine). Claims are made by policymakers and development agencies about the economic impact of mobile phones – usually through a correlational study of mobile subscriptions and GDP over time – without conducting any multivariate analysis or attempts at determining directionality. Well-conducted studies could clarify this relationship.

The Information Technology for Development (ICTD) perspective, connected to computer science and human-computer interaction, "considers how technologies such as the personal computer, mobile phone, and the Internet can contribute to global socio-economic development of economically impoverished communities" (Toyama, 2010: 4) and often studies interventions. Related is the Mobiles for Development (M4D) community of practice, which emphasizes affordable handsets and mobile internet (Gitau, Marsden, & Donner, 2010). And while much of the work on mobiles in developing countries comes from these perspectives and is published in their journals and conference proceedings, not all of this work engages with theory and literature and some of it uses controversial theoretical perspectives that some argue do not meet contemporary ethical standards. Despite these shortcomings, Communication scholars working on studies of mobile media and communication in developing countries should be reading this work and conducting studies that address the limitations of it.

Methodological orientation

Regardless of theoretical perspective, methodological rigor is essential for studies of mobile media and communication use in developing contexts.

Conducting research

There is a set of challenges inherent to conducting research in developing countries. However, studies employed in difficult environments still must use rigorous methods, maintain high ethical standards, and be culturally sensitive.

Methodological perspective

Mobile media and communication use in developing countries is not dissimilar from other topics in that no single study or method is sufficient to address such a multifaceted topic. More qualitative work should connect to theory and literature and speak to larger constructs and audiences. Quantitative studies should go beyond descriptive analysis and use multivariate analysis to provide better understanding of the causal relationships between variables. And while certainly the small samples reflect the challenges associated with data collection in developing countries, microlevel datasets that are nationally representative as well as alternative quantitative data like phone records, are available through Global Barometers, the World Bank, and telecommunication companies.

Conclusion

Studies of mobile media and communication in developing countries can develop deeper understanding of the impact of mobiles generally and deserve to have a place in the broader conversation about mobiles. While there are exemplar studies, what is required is deeper engagement with theory, literature, and rigorous methods in order to speak to a broader audience. Ensuring that we are as theoretical and methodologically thorough as our peers working in less difficult environments will open doors for our work and for the stories of those we study. And this perspective will enrich the broader conversation about mobile media and communication.

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Note

1. A note on terminology: referring to non-industrialized countries is wrought with challenges. Thus, dated and loaded terms like “third world” (which the World Bank “banned” in 2009) will not be used (See Solarz, 2012, for a history of this term). And while political economists prefer to use “lower income countries”, we find that this limits our understanding of development issues to purely economic ones. More inclusive terms include the phrase “majority countries” and the European-favored “global south” – which does not acknowledge

development contexts north of the equator. “Bottom/Base of the Pyramid” has grown in popularity due to its use in business and finance circles but it is problematic. Thus, the imperfect euphemism “developing countries” will be used because it is familiar to most readers. The World Bank, which considers an annual gross national income of under US\$12,000 to be “developing,” cautions that while “developing” is a convenient term “it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. Classification by income does not necessarily reflect development status.” Authors are welcome to use their preferred phrasing, but are asked to consider the implications of their choice.

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