Flipping the Context: ICT4D, the Next Grand Challenge for IS Research and Practice

Introduction

We often talk about a flipped classroom in on-line learning, where the traditional concept of learning in a classroom is flipped on its head. As Senior Editors for this special issue of "Information and Communication Technology for Development (ICT4D): The Next Grand Challenge for Information Systems (IS)", we asked ourselves the question – 'What if we flipped the context of ICT4D research on its head? What if we reimagined ICT4D not simply as a niche area for IS, but as an opportunity for learning for mainstream IS? Our motivation then was not only to showcase high quality ICT4D research, but also to demonstrate that this area of research has come of age and can contribute to all of IS research. The aim of this special issue is twofold. First, it seeks to improve our understanding of the notion of "development", reflecting the socio-economic growth of a country by seeing it as more than an arena for empirical research. Instead, it is a vehicle to perform a substantive analysis of the core phenomenon of interest, namely how ICT can foster Development. The second aim follows the idea of a 'flipped context'. Here, we challenged authors to identify learning in their work in the ICT4D field that could inform and contribute to the evolution of the broader discipline of IS.

The first aim responds to calls by various scholars (for example, Orlikowski and Iacono (2001), Davison and Martinsons (2014)) to be more precise about both the primary object and context of research. The second aim is more specific, standing in stark contrast to earlier recommendations (Walsham 2017) that the ICT4D field should engage with and learn from theoretical and methodological developments in mainstream IS. The emergence of "reverse innovations", whereby mainstream IS can learn from ICT4D research, reflects not only the steadily increasing maturity of the ICT4D field, but also highlights the importance of development as a phenomenon, that concerns each and everyone in the world, not only those living in so-called "developing countries". This special issue is thus timely given the global context of great complexity, uncertainty and new challenges (e.g., security, migration, and, climate change to name a few), and the need for the IS field to cumulatively evolve to better support these challenges. Our hope is that we can inspire more IS researchers to consider this changing global context, and join ICT4D researchers in a quest for achieving social impact beyond the traditional confines of IS research. By conveying this important message through the pages of this prestigious journal, we hope we can help to galvanize a larger community of researchers to contribute to both the research and practice of ICT4D.

The structure of this editorial is as follows. In the first section, we briefly trace the historical evolution of the two domains (ICT4D and mainstream IS), which, despite attempts to develop closer links between the two, are seen as following divergent paths. We argue that this is a false dichotomy, and suggest adopting a more synergistic view that the IS research community take on ICT4D as a "grand challenge". . We then describe the process of how this special issue came into being and introduce the four papers therein, all of which focus on the conceptualization of development and the emerging reverse innovations. We conclude by discussing the systemic

challenges experienced by researchers in ICT4D and how they need to be addressed to make research contributions more relevant and insightful for the IS discipline as a whole.

A brief historical overview of the fields of ICT4D and mainstream IS research

ICT4D research

We refer to ICT4D research as the body of studies that analyzes the complexities and debates surrounding the role of ICTs in the development of low and middle-income countries (LMICs) also referred as the "South" in the development discourse[1]. Within the conceptual and theoretical frameworks of ICT4D, as well as empirical research, we seek to understand the challenges provided by the socio-political context in which ICTs are used in LMICs. The concerns are not just technical; they also include social, organizational, economic, legal and ethical aspects. The overarching question that lies at the heart of ICT4D research is whether ICTs actually contribute to development. In the words of Geoff Walsham (2005: 8), "we should be trying to make a 'better' world with ICT". In our experience, most ICT4D researchers acknowledge the role of their own values in their work, or, to paraphrase Walsham again, they acknowledge that making a better world with ICT is not measured simply in economic terms, but is related to a wider global agenda of social and spiritual welfare (Walsham 2005).

To trace some of the historical underpinnings of this field, we draw upon Walsham's recent review, in which he identifies three broad periods of evolution (Walsham, 2017). In the first period (mid 1980s to mid 1990s), known as the "early beginnings", the ICT4D field as a research discipline was established, at least in terms of formal research being published in journals and presented at specialized conferences. The Information *Technology for Development Journal* (ITDJ) was first published in 1986, and the first IFIP W.G. 9.4 conference on *Social Implications of Computers in Developing Countries* was held in New Delhi, India in 1988. Walsham noted that the research themes discussed in this period were broadly taken from mainstream IS research, such as the significance of context, the need for indigenous development, and the recognition that technology is only one element of broader change efforts. Researchers also began to examine the meaning of "development" by drawing inspiration from a parallel debate in the reference discipline of Development Studies. The conceptualization of development began to move beyond the dominant perspective of "modernization" (i.e., developing countries should strive to become like developed countries by emulating the path followed by the latter), towards the current view of alternative trajectories of development. A more popular view of development

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[1] The North-South Divide is the socio-economic and political division that exists between the wealthy developed countries, known collectively as "the North," and the poorer developing countries or "the South." Most nations comprising the "North" are located in the Northern Hemisphere, and mostly cover the West (called the First World) and many of the East European countries (called the Second World). All the members of G8, the group of eight most developed countries are from the North. On the other hand, the "South" is somewhat vaguely defined. Nations that do not qualify for "developed" status are deemed part of the "South" and are mostly located in Africa, South America, Asia and the Pacific Islands (also called the Third World). The North-South divide is often viewed as a political division to facilitate targeting of aid flows and has more recently been named the development gap thus placing greater emphasis on closing the evident gap between rich countries and poor countries. As countries become developed, they may become part of the "North," regardless of geographical location. A good measure of on which side of the gap a country is located is the Human Development Index. The nearer this is to 1.0, the greater is the country's level of development and the further the country is on its development pathway. For a succinct overview, see https://www.rgs.org/NR/rdonlyres/6AFE1B7F-9141-472A-95C1-52AA291AA679/0/60sGlobalNorthSouthDivide.pdf

in ICT4D is rooted in Amartya Sen's conceptualization of development as freedom of choice (Sen 1999). In this view, development should enlarge people's choices and remove the power of oppressors. ICT's role is to enhance this freedom by building the capabilities of individuals and the society in which they live. The paradigm is that of human development and the most commonly used theory for human development is the Capability Approach (Sen, 1999). ICT4D researchers have increasingly adopted this paradigm of development (Sein and Harindranath 2004, Thapa et al. 2012).

The second period (mid 1990s to mid 2000s), termed as "expanding horizons", saw the enhanced use of ICTs for development, fuelled largely by the proliferation of the Internet. The theme of understanding "development" went beyond purely economic and market concerns, drawing instead upon the interdisciplinary research approaches that gained prominence in this period. The third period (mid 2000s to present), known as the "proliferation", saw the dramatic expansion of ICT use for development, fuelled to a large extent by the spread of mobile technologies to all sections of the population, impacting upon the lives of the poorest. In addition, ICT4D research started to contribute to the area of development and development studies. For example, Thapa et al. (2011) examined "collective capability" to address the criticism of Sen's focus on the individual in his capability approach. Seen in this light, ICT4D research is also an "outreach" activity — it seeks to contribute to Development Studies by explicitly introducing the role of technology, specifically ICT, into the discourse.

In closing, Walsham (2017) identified some topics of future relevance for the ICT4D field, including addressing systemic poverty, global health, humanitarian crises and the dark side of ICTs. The underlying and sustaining focus in these areas of research remains the challenge to IS researchers, which were first raised by Walsham (2005) over a decade ago: "we should be trying to make a 'better' world with ICT". Other scholars have continued in this vein. For example, Sahay (2013) addressed this question in a plenary talk at the IFIP W.G.9.4 conferences in Jamaica, which was followed up with papers by Sahay (2016) and Qureshi (2016) in ITDJ on the same topic. We expect this question to be of increasing relevance to both ICT4D and mainstream IS in the future as ICTs become more pervasive, permeating all aspects of our everyday work, personal and social lives.

Mainstream IS research

"Mainstream" IS research, on the other hand, typically focusses on the managerial concerns of how IT supports, enables and influences the effectiveness and competitiveness of enterprises that are typically located in developed countries in North America and Europe (referred to as "the north" in development literature). In current times, such countries as India, China and Brazil have also gained the attention of mainstream research efforts; however, the focus is typically not on development-related concerns, but on the experiences of businesses that operate in developing countries, exemplified by the growth of outsourcing research (Sahay et al 2003). Mainstream research concerns are typically driven by the need to expand efficiencies, how new and emerging technologies promise new benefits, the challenges posed in attempting to adopt them, and the benefits that accrue (or not).

Various accounts have been presented by scholars of the IS discipline overall (Davis, 2000, Hirscheim and Klein 2012) as well as those related to specific "non-developing" countries such as the UK (Land 2014) and Australia (Clarke 2006). There is a general consensus that the IS discipline was born in the 1960s (Davis 2006) and that its origins lay in computer science, which itself originated in the 1940s. The primary object of IS research has been the study of technology

in organizations, mostly business entities. The first IS educational program was established in Minnesota in 1968. It was only in 1976 that IFIP organized Technical Committee 8, which was on IS issues, thus formally recognizing IS as a separate field within computing. Davis (2006) has attributed this time lag between the origins of computer science and recognition of the IS discipline to the absence of interesting issues in IS research (beyond data processing) and the greater diversity of IS researchers, who come from such diverse disciplines as business studies and its sub-groups of accounting and finance. The mainstream IS field was far from homogenous with different perspectives taken by researchers in the UK, Scandinavia and US.

In tracing the history of mainstream IS, Hirschheim and Klein (2012) identified four periods, starting with the "first era" (i.e., from inception to the mid-seventies) when the first IS educational program and TC8 were established. The field evolved within business schools in the US and informatics departments in Europe. In terms of research, a dominant theme was around "systems", including Inquiring Systems (Churchman 1987), Hard Systems (Langefor 1977), Socio-Technical Systems (Mumford and Weir 1979), Soft Systems (Checkland 1981) and Decision Support Systems (The Minnesota School). The "second era" (i.e., mid 1970s to mid 1980s) saw the growth of personal computers and the enhancement of computing power, reflected by the Japanese Fifth Generation Computer Project. The premier conference in the field, International *Conference on Information Systems* (ICIS), was first held in 1980 and the premier IS journal *MIS Quarterly* was launched in 1977. The research themes addressed in this era were broadly around understanding of the environment or context of IS projects (captured in Kling's (1980) web model), the different problem areas addressed by IS, the impacts of IS (Delone 1988), and the role of users, reflected through the later popularity of the Technology Acceptance Model (Davis 1989) and the growth of participatory design methods. The "third era" (mid 1980s to mid 1990s) saw the rise of personal and departmental computing, which brought to the fore new research challenges, namely data incompatibility, integration, connectivity, and data integrity. With increasing investments by organizations in IS applications, there was heightened interest in understanding how IS strategies could better align with business strategies, as well as concerns around the productivity paradox. The dramatic rise of research on outsourcing reflects concerns about both strategies and investments. The fourth era (mid 1990s to date) is being shaped by the commercialization of the Internet and the growth of the globalization phenomenon. Cross-cultural issues have gained increasing attention, creating overlaps with developing country research, which operates within a different context. As a discipline, there has been growing existential anxiety about its relevance and place, typified by Markus's (1999) question of "what happens if the IS field as we know it goes away". This question asks, in essence: "is IS research making things better?" and "should we view our research as IS for 'something'"?

What do these histories tell us?

At a macro level, these abridged historical accounts of the two fields of research show that they have distinctly different origins and trajectories of evolution. The research agendas of mainstream IS, itself a function of its origins in business schools in North America, highlight a dominant techno centric or technologically deterministic and rational perspective. On the other hand, given its primary concern on development, and that the founding researchers were primarily from Europe, the ICT4D field is primarily dominated by a social sciences perspective, which focuses on issues of context and draws on an interpretive tradition of case-study based research. For ICT4D researchers, case studies in context have long been the dominant mode of inquiry. This stands in stark contrast to mainstream IS researchers, who to a great extent are

positivist oriented and primarily focus on lab experiments and survey analysis. Arguably, conducting case studies tends to be more time consuming and involve greater travel and budget requirements (compared with conducting lab experiments; conducting surveys often requires considerable resources). As a consequence, such an approach can be less rewarding in terms of submitting publications to "high profile" journals. Thus, ICT4D and mainstream IS researchers have tended to publish in different journals, contributing to different trajectories of research and focus. Mainstream IS research concerns have primarily remained those of the developed world (the "north"), whilst ICT4D by definition has focused on the developing world (the "south") as its empirical setting. In each, research communities have evolved along these lines, with separate conferences and publication outlets. Even when mainstream IS has shifted its research gaze to the south, the locus of interest has remained on the concerns of the developed countries. Outsourcing research is a prime example, because although conducted mostly in LMICs, its perspective is that of the benefits derived for enterprises in developed countries.

On first impression then, the two streams appear to have diverged. Mainstream IS research remains the "convention" while ICT4D has happily settled into its own world of niche conferences and journals. That said, we have seen the focus of mainstream IS research move beyond organizations towards a more social agenda. The theme of ICIS in 2013 was 'Reshaping Society through Information Systems Design' and in 2014, the theme was "Building a better World through Information Systems" . . The advent in the past few years of AIS SIGS, with an interest in green IT, social inclusion and global development, represents more socially conscious strands of research in the discipline.

Towards a synergistic view

From the preceding sketches, it is quite easy to get the impression that ICT4D and mainstream IS research represent diverse areas with little in common. We contend that this view is myopic and comprises a false separation between developed countries and LMICs, to the detriment of both. This separation denies us all the vast potential for synergistic learning in a variety of research settings, whether developed or not. Take, for example, the topic of eGovernment, where research focusses on how ICT can, or has the potential to, transform the relationship between government and citizens. Specifically, research looks at issues related to the better provision of services to citizens, better governance and increasing citizen participation. While a vast body of research exists in eGovernment, the empirical setting has, in the main, been developed countries. However, there is much to be learned from eGovernment research in LMICs that can be applied to developed countries. LMICs are rapidly adopting eGovernment initiatives. These are often out of necessity, although admittedly there are other motivations such as modernization or the sheer influence of funding and aid agencies. The weaker and different socio-economic context of LMICs, often coupled with a less open and relatively unstable political climate, has fostered many innovative approaches to eGovernment. Innovations in the developing world are happening in other areas as well, driven to a great extent by mobile technology. For example, Kenya has been leading the world in mobile payments for almost a decade – technologies that are just taking shape in the US and Europe.

The more developed countries can learn much from this. Moreover, there are sizeable pockets of underdeveloped areas within the developed world; indeed, developed countries still need to address extreme social deprivation in some urban and rural settings. Qureshi's work in the deprived neighborhoods of Omaha in US is a good example (Qureshi 2015). At the very least, the more complex context of underdeveloped areas and LMICs provides a rich arena for theory

building and testing for IS researchers. The transformational potential of ICT could initiate fundamental and structural changes, which in turn could increase our understanding of the role of the intertwined relationships between ICTs, organizations and society.

This potential for cross-fertilization has not gone unnoticed. Some ad hoc attempts have been made to bring synergies between these two domains of research. For example, in 2005 the IFIP 9.4 (on Social Implications of Computers in Developing Countries) and IFIP 8.2 (Organizational Implications of ICTs) held a joint conference in Athens, Greece in order to develop such synergies. The establishment of the AIS special group on Global Development in 2008 (SIGGlobDev) is a further step in this direction. With the same aims, we have seen special issues of mainstream IS journals like *MIS Quarterly* and *The Information Society* relating to IS in developing countries. However, such efforts have been too few to create the required momentum for the two research domains to mutually contribute systemically. The interest in ICT4D has remained minimal in mainstream IS. Through this special issue, we argue that these efforts towards synergy need to be reinvigorated rather than be allowed to fade away, leaving each domain to continue to pursue their respective aims. If the broader IS research community is to better respond to the challenges facing the world today and evolve into a unified body of knowledge (Hirscheim and Klein 2012), there is an urgent need to explicitly try and build these synergies. This special issue seeks to do exactly this, but with an important difference. In our view, the synergies can be better achieved by challenging the traditional model of knowledge flowing from the mainstream to the "periphery". Instead, we put the case that reverse innovations from so-called 'niche' fields like ICT4D are both possible and desirable. In short, we are "flipping the chart"

Papers in this special issue

In the call for papers, we invited papers that examine the mutual synergy and cross-fertilization potential between ICT4D and mainstream IS research. We set two strict criteria: first, papers must have LMICs or underdeveloped areas in the developed world as a primary focus. They must emphasize how ICTs can foster development. Second, papers should clearly elaborate how the lessons learned from the papers can inform and transform mainstream IS research.

Prospective authors were invited to send in abstracts so that we could give feedback on how to develop them further into full papers or advise on whether the envisaged paper would fit into the aims of the special issue. This process was intended not to filter submissions, but to introduce a developmental stage for authors. In total, we received 58 submissions, a healthy figure that reflects the extent of ICT4D work in our field and perhaps also a perceived lack of outlets for ICT4D in mainstream IS journals. The 19 papers that passed editorial screening were sent out to at least two reviewers in the first round. The reviewers were members of an editorial review board set up for the special issue and consisting of experienced and well-published researchers from both ICT4D and mainstream IS areas. The guest editors then sent the reviewers' reports directly to the authors where they were given the opportunity to respond to the reviewers' comments and to describe the strategy they would adopt to address the concerns raised. This innovative approach to review gave us, as guest editors, more information on which to assess the authors' ability to engage with and respond to the review process. The authors' responses and the reviewers' comments were then read together considered by us in deciding which papers would be advanced to the next round. Twelve papers made the cut. The same process was followed in the second round, after which six papers were advanced to the final round. Out of the six, all of which were impressive, we selected four for the special issue. In our opinion, these four papers

are particularly strong in contributing to our aim of distinct reverse innovation. We hope these papers will be widely cited by both ICT4D researchers and mainstream IS researchers alike.

The paper by Holmen and Barrett titled "Insights from an ICT4D Initiative in Kenya's Immunization Program: Designing for the Emergence of Sociomaterial Practices" addresses the developmental challenge of providing improved healthcare through a case study of the cold storage of vaccines in Kenya in which ICT played a vital role. The study provides a fresh perspective on the longstanding concern with local context in ICT4D research. The authors' contribution to mainstream IS research is in revealing specific activities through which designers may guide the emergence of socio-material practices. The premise for these activities is based on the concepts of material back talk and break down. In doing so, Holmen and Barrett have drawn upon established concepts and theories of mainstream IS research. Through insights from their case, they contribute to the discourse on these concepts and the practice of design, especially contextually aware design research frameworks. For practitioners, focusing on practice break downs and material back talk can help them grapple with the complexities of the implementation bottleneck in global health and development.

The paper by Bernardi is also set in Kenya. Titled "Health Information Systems and Accountability In Kenya: A Structuration Theory Perspective", it examines how the information generated by Health Information Systems becomes a means of accountability that is more meaningful to government and aid agencies than to those who are responsible for local health services. Using a theoretical perspective developed from structuration theory and the technology domain of HIS, Bernardi analyzed the emergence of local accountability practices. The developmental challenge addressed by her is the same as that addressed by Holmen and Barrett, namely, the improvement of healthcare in developing countries. The paper informs mainstream IS research by addressing a long standing criticism of the research stream that uses structuration theory; namely, that technology and materiality has a limited, if any, explicit role in structuration. By combining structuration theory and materiality, this paper provides a sharper interpreting lens for the mainstream IS research community.

The paper by Dobson and Nicholson, titled "Exploring the dialectics underlying institutionalization of IT artifacts", is a case study that analyzes the problems related to IT introduction in micro enterprises in a rural village in Mexico. The case has been contextualized through a review of institutions in Mexico and the "e- Mexico" government policy to stimulate increased penetration of IT usage based on espoused development goals. This paper highlights the contradictions between the introduction of IT artifacts (specifically cell-phones, an Internet-based ordering system and digital catalogues) and local historically embedded social and cultural institutions. The focus of this paper is on how contradictions can be resolved through the lens of dialectics between each side of the contradiction and the active praxis that impacts on the use or rejection of the IT artifact. The paper contributes to discourses around human-centered approaches to development with a focus on the freedom of individuals to improve their lot in life, while also acknowledging the institutional conditions and constraints that exist. The use of the dialectical lens to examine the institutionalization of IS innovations and how these are intertwined with contestation processes are important contributions to mainstream IS research.

The paper by Kelly and Noonan titled "From representing to edifying — encounters with 'data', movement, and practices of exposure in the Indian public health service", examines the question of the role of data in organizational innovation. The setting is Health Information Systems in India and the focus is on the efforts made to use data for grass roots decision making. The authors

have taken a unique performative, practice-based approach to theorizing data practices, making a distinction between two broad forms of such data practices – datafication, and the 'edifying' practices of datafication, which involve data being enacted or performed in different ways. Through their case study of a state government agency and the fascinating story of an individual in that agency, their paper explores the power of these different kinds of datafication practice and demonstrates how each is deeply implicated in the (re)production of different forms of human sociality. Describing these socialities as 'authoritarian bureaucratic' and 'dialogic', they explore the distinctive kinds of moods and affectivities generated, arguing that the social and organizational dynamics depicted in the paper should be recognizable to those with no experience of LMICs or the Indian health system. The paper contributes to all organizations that engage in data-led initiatives, including big data analytics, by encouraging us to examine deeply what people do with that data.

Grand challenges for IS research: how do we approach them?

The papers in this special issue have identified challenges related to the use of information for the improvement of health management (Kelly and Noonan), the contradictions inherent in ICT-enabled change efforts (Dobson and Nicholson), the design of ICTs to enable the emergence of socio-material practices (Barrett and Holmen) and the relationship between structure and agency in the context of the implementation of health information systems (Bernardi). These identified challenges are not unique; nor are they particular to ICT4D. They do, however, represent problems facing the mainstream IS field. All of these papers could easily have been published in a standard issue of a mainstream IS journal. The discerning reader will note that three of the four papers focus on ICT initiatives in the health sector. This is purely co-incidental; however, it also serendipitously highlights the relevance of ICT4D research for health, which has been made a major priority in the UN's Sustainable Development Goals (SDG). Indeed, these papers contribute to making the world a better place.

Taken together, the papers in this special issue send the message that research in ICT4D is not an outlier, or an exotic niche, but very much a part of mainstream IS research. Research in both domains is concerned with an analysis of similar issues, knowledge gaps, and empirical problems, and is informed by similar theories. By the same token, then, such research contributes to discourses on these very same issues and theories. At the very least, these papers make us aware that this has always been the case, and that it is more of a matter of informing than substance. The relationship between context and generalization is intricate and at times dialectical As Davison and Martinsons (2016) have pointed out, a good understanding of context is essential for good theory building in our discipline. The ICT4D dimension of the papers has shown how their understanding of context informed their research. Theory building, on the other hand requires the abstraction of knowledge through de-contextualization. It is this inferential leap from the specifics of settings to the realm of the concepts that informs mainstream IS research. In our opinion, all four papers have met this challenge.

While we have highlighted the similarities, it would also be legitimate to question the differences in the two arenas of research. It can be argued that one key difference is that the challenges examined in ICT4D research represent microcosms of empirical contestations from which we can zoom out to analyze broader development processes (e.g., those relating to public health concerns in India and Kenya). A focus on development concerns is not central to mainstream IS research. Arguably then, while the means for analysis (theories and methods) in both domains may have

similarities, the end focus varies. Linked to these varying aims, it can be argued that ICT4D researchers are more likely to also understand and question the moral and ethical basis of ICT projects, as these shape their contributions to the development agenda. For many, these are intrinsically tied up with social justice issues.

ICT4D research addresses problems that are vital and intricately anchored to practice. In the longstanding (and never ending) debate on rigor versus relevance, it is sometimes argued that whilst ICT4D research is unquestionably relevant, it may not display the same degree of rigor as IS mainstream research, especially in terms of publication in high profile journals. Putting aside different interpretations of rigor, the element of rigor may not be well developed in the field of ICT4D given its more recent origins. However, we argue that weak rigor is a trait that is not necessarily inherent or natural to the field. As the papers in this special issue demonstrate, it is possible to combine both relevance and rigor, which are often reflected in more than a decade of longitudinal empirical analysis. Through such a combination, the papers in this special issue contribute to debates in mainstream IS research, and the authors have used them to strengthen their own research efforts.

We made a point earlier that all four papers in the special issue could easily have been published in a regular issue of any mainstream IS journal (including JAIS). One reason is that all the authors are also prominently published in mainstream IS literature. This still leaves the issue of how to encourage researchers who publish primarily in ICT4D outlets to contribute to the mainstream IS literature. There may be researchers who are content with this status quo and do not wish to "cross over" into mainstream. To them, we re-iterate that they implicitly address mainstream IS issues, perhaps inadvertently. Likewise, the vast majority of researchers in mainstream IS who have no interest in development. However, for those who do wish to contribute to both areas, a way forward is to collaborate to build on the strengths that each bring in. For instance mainstream IS researchers who see the south as the arena for empirical research can collaborate with ICT4D researchers who can bring in their understanding of development. Consider research on outsourcing. While mainstream IS literature focusses on the efficiencies, competitive advantages and benefits derived for organizations predominantly located in the "north", an added ICT4D perspective can shift the focus to the developmental implications of outsourcing

In discussing the similarities and differences between these two streams of research, it is also germane to point out the ways in which research practice varies. Typically, research in mainstream IS research, with a few exceptions, is conducted by researchers from universities based in the "north". While ICT4D research is conducted by researchers from the same kinds of institutions, they often have their roots in developing countries (as is the case for two of the three guest editors of this special issue). These researchers (including all three guest editors) have the privilege of straddling both the worlds of mainstream IS and ICT4D. Often, research sites in developing countries tend to be passive providers of data rather than active co-constructors of research insights. Consequently, we have the stark reality that researchers based in institutions located in developing countries make limited contributions to both the mainstream and ICT4D fields. Tellingly, none of the authors of the papers in this special issue are from institutions in developing countries. Even though countries such as India and China represent global hotspots of ICT initiatives, research outputs from academics based in these countries is not commensurate with the ICT activity that takes place there. Whilst the aim of this special issue is not to understand why this is the case, we believe it is important to flag this constraint as it potentially shapes the quality of any developed insights. Arguably, insights developed by researchers who

are situated within a context are richer than those developed by researchers located at a distance – both geographically and culturally. Addressing this constraint is a non-trivial challenge, as there are various structural, financial, and institutional conditions in play. For example, developing countries are characterized by limited access to literature and communities of practice, and even basic training in information systems (compared with computer science education). Some positive steps have already been taken. For example, AIS adjusts membership fees based on the Human Development Index. More can be done to support researchers based in the "south"; an audit of research interests and of home country of AIS members could be a good first step in appreciating the diversity of members and the research they do.

In highlighting some of these similarities and differences, our aim is not to intellectually "other" either of the fields; indeed, it is to the contrary. It is important to understand what contributes to this perceived "othering" (as is the case today), namely practice-based constraints, and seek to acknowledge and try to address them. Building meaningful partnerships between researchers, both north-south and south-south is key to addressing these constraints. Given this concern, we are glad to note the next IFIP W.G. 9.4 conference to be held in Tanzania in 2019 has as its theme: ***Strengthening southern-driven cooperation as a catalyst for ICT4D.***

The objective of this special issue is to stimulate and re-ignite this interest by advocating ICT4D as the next great challenge for IS research. We live in a global world with global concerns. Many of us also see a role for IS in furthering important social agendas such as the alleviation of poverty and the combatting of climate change. In our view, the ubiquity of technology and the way it is intertwined with every aspect of human life only increases our obligation to engage with ethical and justice concerns, including understanding what we mean by ICT4D. We should indeed be making a better world with ICTs.

Sundeep Sahay, Maung Sein and Cathy Urquhart, November 2017

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