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Internet Studies and Development Discourses: The Cases of China and India

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This paper investigates Internet studies in two leading developing countries (i.e. China and India) and finds that the Chinese scholarly community relies on the discourse of liberation from the state as a form of critique, whereas Indian Internet studies question the discourse of modernization to contemplate about the success and failure factors of information and communication technologies in development. The difference generally reflects the academic responses to the development discourses embraced by the two governments. We suggest that Internet studies should not only respond to the realities but also transcend the contextual constraints to direct attention to the often neglected dimensions of development, which are to make actual impacts through allowing the people and the communities to define their own development discourses as well as building research institutions that are oriented to influence policy-making.

Keywords: China; discourse analysis; India; Internet; liberation; modernization

1. Introduction

The advent of modern information and communication technologies (ICTs),¹ especially the Internet, has been deemed one of the most important forces transforming the global order (Castells, 2000a; Hutton & Giddens, 2000; Rantanen, 2001), particularly for those countries aiming to leapfrog stages of development (Steinmueller, 2001). Features of the Internet, such as instantaneous access to a treasure trove of information, enhanced networking possibilities, exponentially increasing storage capabilities, and the easing of space and time constraints, led to a belief that a seminal transformation was afoot (Baym, 2001; Castells, 2000b; Wellman, 2001). Studying the impact of the Internet, then, becomes critical in understanding the potential, as well as the challenges, for development posed by these new ICTs. Equally important, however, is the examination of our stances as scholars toward the role of information and communication technologies in development (ICTD), which are driven by our affiliations to particular discourses of development.

This paper focuses on Internet studies in the context of two leading developing countries in Asia (i.e. China and India), chosen for their parallel post-colonial trajectories, their abandonment of initial socialist leanings which is replaced by capitalist economic principles, and their concomitant rapid growth in ICTs within the same period, the last quarter century. We aim to contribute a more nuanced understanding of two discourses of development, that is, development as modernization and development as liberation, through examining their manifestation in academic inquiry regarding these two countries. While others, such as Goulet (1979), have

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examined cases of development as liberation previously, this updated study compares and contrasts discourses embedded in Internet studies of China and India in relation to their historical ICT growth policies and strategies. The objective is to illuminate the stances that Internet scholars have taken toward these Asian giants, thus allowing for a discussion of the academic and policy implications of taking such stances.

2. Development as modernization and liberation

The contestation regarding development is seen in two competing perspectives – development as modernization and development as liberation (Rahman, 1995; Sen, 1999). The post-World War II era gave rise to the dominant discourse of development as modernization with the global onset of development practices. Regardless of the social, political, and cultural differences between various countries, improving the living conditions of citizens became an unchallenged goal in the developing world. Modernization, despite its multiple connotations, such as economic growth, social evolution, and individual change, was defined through the historical experience of the global North (Melkote & Steeves, 2001, p. 92). Developing countries, according to this modernist discourse, are understood as traditional societies that need to evolve linearly toward becoming more like the developed countries. Further, within this modernist discourse, various traditional components in these societies, such as extensive family bonds, non-Christian religions, and indigenous knowledge and cultures, are considered impediments to development (Unwin, 2009).

As a critique of this modernization discourse, development as liberation “prioritizes personal and communal liberation from oppression, as the key to empowerment and self-reliance, which is the goal of development” (Melkote & Steeves, 2001, p. 35). The capability approach, sometimes termed “development as freedom” (Andersson, Gronlund, & Wicander, 2012), overlaps with the liberation discourse in recognizing that building the “actual ability to achieve various valuable functioning of a part of living” (Sen, 1993, p. 30) should be the evaluation criterion of successful development. If being free and self-reliant is the ultimate goal of development, any controlling authorities that restrict people’s ability to do so become the target of change. Following this viewpoint, both oppressive states and capitalist powers can be seen as the objects of liberation. Certain state polities curb individual freedoms, among other restrictions. Alternatively, capitalist systems, chasing profit maximization, lock people into the roles of consumers and/or workers, thus prevent the achievement of their full human potential.

As a common intellectual pursuit toward solving the global development puzzle, Internet studies emerged at the historical moment when the international community accepted the Millennium Development Goals (Best, 2010; United Nations, 2008). As an obvious combination of these interests, the field of ICTD was born (Heeks, 2009). An early techno-deterministic stance adopted by the ICTD community, later critiqued, hoped that development problems could be solved by the adoption and usage of ICTs (Burrell & Toyama, 2009).

Studies framed within the modernization paradigm suggested that there might be a positive link between Internet access and overall economic growth (Pohjola, 2002), such that the Internet could help the trailing Third World countries to “leapfrog” the traditional linear stages of development (Steinmueller, 2001). Furthermore, economic growth seemed to correlate with political changes; scholars such as Morley (1999, p. 31) observed that “countries with low levels of economic development tend to have autocratic governments, those with high levels of economic growth tend to have democratic forms”. Critiques of the leapfrogging argument range from the radical to the revisionist. Some claimed that there was no relationship between ICT deployment and development (Brown, 2001; Chowdhury, 2000), while others suggested that the pace

was too slow (Bezmen & Depken, 2004). Yet other critics stated that the Internet was not as effective in facilitating modernization when compared to traditional media, such as radio and telephony (Kenny, 2002). Furthermore, ICT investments were blamed for shifting financial and human capital away from critical primary investments, such as those in health and education (Heeks, 2009).

Studies that have examined the Internet as a tool for liberation also remain contested. Castells (1999) argued that the Internet helps to bypass state control, thanks to the flexibility and ubiquity of modern information networks, while others counter that ICTs such as the Internet foster greater government surveillance (Kleine & Unwin, 2009; M. Wu, 2008). Dutta (2006) proposed an economic critique, claiming that ICTs serve as tools to expose developing countries to exploitation by turning them into markets or sources of low-cost labor. A socio-cultural strand of the liberation argument is found in the gender literature (Chib & Chen, 2011), suggesting that ICTs allow women to become empowered and gain agency and autonomy in male-dominated societies. Yet other scholars (Wallis, 2012) have pointed out that the adoption and usage of new ICTs was still subject to the influence of gender inequalities.

The conceptual review of development discourses, embedded in Internet studies, is summarized in Table 1. This table shows that there are multiple dimensions associated with each of the two distinct discourses of development, that is, modernization and liberation. The resultant research investigation thus examines the points of convergence and departure between these two discourses. Beyond contributing a more nuanced understanding of these two discourses, we aim to advance an academic approach that transcends the contextual constraints to direct our attention to the often neglected dimensions of development. To do so, we first examine the creation and growth of the telecommunication sectors in China and India.

3. ICT growth in China and India

Recently, China overtook the USA as the country with the largest number of Internet users,² while India did likewise in terms of mobile subscribers (Gupta, 2011). Despite the impressive growth in ICT penetration, the development trajectories in these two Asian giants still remain heavily influenced by their respective recent colonial histories. India had the nightmare of the East Indian Company and the British Raj, whereas China had its counterpart in the Opium Wars. Both colonial experiences, although quite different, left profound and enduring impacts on the two countries and their respective leaderships (Mazzarella, 2009). From China’s “strengthening the nation” to India’s “Quit India Movement”, the liberation from colonial powers discourse has always been salient, at least within the circle of local elites.

Creating an ICT infrastructure is an integral part of the larger economic imperative in the project of nation-building in China. In order to secure the legitimacy of the nation-state without democratic processes, the Chinese leadership draws heavily upon livelihood improvement as the foundation of its rule. ICTs, to the ruling party, function as a pillar of sustainable economic growth and an effective tool for political control (Zheng, 2007). The

Table 1. Concept matrix.

Development as modernization	Political
	Economic
Development as liberation	From the state
	From global capitalism
	From socio-cultural power imbalances

telecommunication infrastructure, the backbone of the Internet as well as mobile networks, was singlehandedly built and coordinated by the central government (Tan, Foster, & Goodman, 1999). Taking such a centralized planning approach toward the telecommunication sector may be either beneficial or detrimental, depending on whether the state has the ability to render good governance in an equitable manner.

The extant literature indicates that the growth of ICT in China has been a fast-growing but highly unbalanced enterprise (Chib & Zhao, 2009). Initially, infrastructure deployment favored urban areas in order to achieve rapid industrialization, ignoring the needs of the rural masses (Xia, 2010). This led to an evident, and increasing, digital divide. Rural Internet penetration increased steadily over the year, from only 2.6% in 2004 to 27.6% in 2012. Yet simultaneously, the rural–urban gap tripled, from 14.3% to 44.8% (China Internet Network Information Center, 2010, 2012). A lack of infrastructural support in terms of both hardware and connectivity was cited by 23.2% of farmers as a barrier to usage, while 38.8% indicated that technological unfamiliarity prevented them from getting online.

In contrast, while recognizing nation-building as a fundamental goal of development, the Indian conceptualization of the nation-state differs from that of China. Tracing the evolution of Indian nationalism to the colonial years of the 1800s, Chopra (2008) found that the British rulers treated the Indians as subjects who needed to be civilized by a superior culture (through, for example, the introduction of the English educational system). The visions of the Indian nation-state arose as a response to this historical experience. Until 1947, there were still competing visions, including Gandhi’s “decentralized, industry-free” nation, Savarkar’s “modern Indian nation-state that would derive its strength from its essentially Hindu core”, and Nehru’s “technologically developed, economically prosperous and socially progressive” nation (Chopra, 2008, pp. 95–96). The liberalization of 1991 marked the abandonment of the Nehruvian socialist model, which was replaced instead by a neoliberalism tinged with Hindu-centered nationalism. Development was understood as modernization, particularly espousing the values of the free market and liberal democracy.

The ideological shift over time could be observed in changes in Indian’s ICT deployment strategy. The Indian telecommunication industry began with the government monopoly, the Videsh Sanchar Nigam Limited (VSNL), a counterpart of China Telecom.³ The Department of Telecommunications was the counterpart of the Chinese Ministry of Industry and Information Technology. In 1992, financial reform undertaken under pressure from both international (e.g. World Bank) and local (e.g. industrial conglomerates) actors led to the privatization of the telecommunication industry, with the government relegated to a regulatory role. The New Telecom Policy of 1999 clearly stated that the telecommunications sector had to adapt “to a greater competitive environment in both urban and rural areas providing equal opportunities and level playing field for all players” (Gupta, 2011). Subsequent policy decisions included the revenue-sharing mode enabled by license fees and the removal of constraints on private operators, as well as the privatization of the hitherto state-owned monopoly VSNL. Mobile penetration increased to 72% in 2012 from a base of 1% in 2002, while the wired Internet lagged behind, diffusing to only 10% of the population (International Telecommunication Union, 2010). Like China, a significant urban–rural divide continues to exist (Telecom Regulatory Authority of India, 2009).

Whereas China is racing ahead led by an ideological system known as the “Beijing Consensus”, India’s embracing of the neo-liberalism model has led to a more leisurely “Hindu rate-of-growth”. The development discourses adopted by the two governments take a competing, if not contradictory, stance. Although both countries are essentially developing a capitalist model of the modern state, China relies on a nationalist ideology to justify its centralized control. In contrast, democratic India favors a liberalized market that cedes the lead to private corporations. The

question then arises whether the examination of Internet studies in these two countries parallels that of the development models advocated and practiced by the respective governments. Thus, the objective of this paper is to conduct a review and an analysis of the literature that answers the following research questions: What are the similarities and differences in the Internet studies regarding China and India? How do the patterns observed in the literature mirror the development as modernization and development as liberation discourses, respectively? Finally, what are the academic and policy implications arising from these particular stances taken by Internet scholars?

4. Method

Three sources were used for the review of Internet studies on China and India: area studies, communication research, and ICTD research. Whereas the previous two were identified as the research disciplines that have prioritized attention to the Internet (Kluver & Yang, 2005), ICTD research is an emerging field that fully devotes itself to the topic of using ICTs for the purpose of development (Gomez, Baron, & Fiore-Silfvast, 2012). Area studies were obtained by searching the Social Science Citation Index (SSCI). The keywords used included “China and Internet”, “India and Internet”, “China and cyber*”, “India and cyber*”, “China and web*”, “India and web*”, “China and ICT*”, and “India and ICT*” in abstracts. Only books and peer-reviewed journal articles were included. No time limit was imposed. The search generated 95 articles related to China and 34 related to India (see Table 2 for a summary). Communication-oriented Internet studies were obtained from the Communication & Mass Media Complete (CMMC) with the same settings as in SSCI. The search generated 182 articles related to China and 62 related to India. ICTD research was obtained via a full-text search of ICTD journals (all peer-reviewed) compiled by Richard Heeks⁴ using the keywords “China” or “India”. Sixty-seven articles were found about China and 125 about India. Transnational organizations’ publications on their funded projects (e.g. International Development Research Center, United Nations Development Programme, United States Agency for International Development, World Bank) were also included as sources for ICTD research.

All of the studies included were written in English because we were interested in Internet studies that could engage in a conversation with the rest of world.⁵ Some articles were cross-listed in more than one database, but obtaining accurate numbers on this point is not the focus of our analysis. The analysis provides an examination of discourses, rather than a quantitative report of basic characteristics of the publications (e.g. topic areas, methods used, theories used, and publication outlets, as reviewed in Kluver & Yang, 2005; Lo & Wei, 2010; Wei, 2009). The objective was to generate a sufficient sample of such studies to represent the diverse discourses on development and ICTs, rather than to locate an exhaustive list of publications on the topic. The analysis, based on the directions by Webster and Watson (2002), was conducted in several stages. First, the researchers separated the literature into three groups: China-focused, India-focused, and comparative studies. Second, we organized the articles using

Table 2. Literature sources.

	China	India	Total
Areas studies. Source: SSCI	95	34	129
Communication research. Source: CMMC	182	62	244
ICTD research. Source: Richard Heeks’ list	67	125	192

the proposed concept matrix (Table 1) to classify the underlying development discourses adopted in the articles. Finally, we synthesized the results to discuss the academic and policy implications.

5. Results

5.1 *Internet studies in China*

We find that the emphasis of Chinese Internet studies clearly reflects the discourse of development as liberation from the oppression of the state. Development endeavors in China essentially equate to state-driven initiatives, regardless of whether they are urban or rural in scope (Liang, 2010). While modernization seems to be a shared goal across most developing countries, the power of the Chinese state in its realization is exceptional. Therefore, prominent Internet studies in China center on state power and the resistance it engenders. On the one hand, scholars investigate how the authoritarian state successfully maintains its power through ICTs (e.g. the sophisticated system of censorship; Qiu, 2007). On the other hand, scholars document how citizens, non-government organizations (NGOs), and other non-state players take advantage of the Internet to resist the totalitarian force of the state (e.g. online activism; Yang, 2010). While development is generally portrayed as a struggle between civil society and the state, the underlying theme focuses on democratization (Meng, 2010).

When considering development as liberation from the state, researchers first establish the oppressive nature of the state. Next, they analyze the persistence of authoritarian power despite the transformational characteristics of ICTs. Consequently, the flagship area of censorship studies has received the most public attention, with an emphasis on surveillance, control, and the Great Firewall (Wang & Hong, 2010; Y. Zhao, 2008). These studies start from the assumption that ICTs are double-edged swords that both enhance individual freedom and facilitate state control, but the latter argument seems to be more pervasive. From technological means, infrastructure building, administrative arrangements, and regulatory regimes to hegemonic control, Internet censorship in China indicates an unprecedented level of state control. A related thread of research establishes how the state takes advantage of public sentiment by manipulating nationalist jingoism to reinforce control (Pan, Lee, Chan, & So, 2001; Qiu, 2006; X. Wu, 2007). Prescriptions for easing the power of the state are few, with political reform emerging as a preferred candidate, and with democratization as the favored solution.

Activism studies serve as a counter-theme to censorship research, focusing on participation, engagement, democracy, civil society, and the public sphere. The assumption is that the control of the state still leaves a large space of struggle for citizens and NGOs, empowered by the usage of ICTs as highly promising and fundamentally liberating (Yang, 2010). Although censorship research reveals a densely knit web of state control, Chinese citizens seem to be able to probe blind spots to promote social advancement in various situations. Case studies of citizen empowerment range from online fan communities (Zhang, 2006) to social networking sites (Zhang & Wang, 2010). Public spheres flourished on the Internet to allow the public expression of opinions and debates (Cheong & Gong, 2010; Dai, 2007; S. Li, 2010; M. Wu, 2008; Zhang, 2012), which were rarely seen in the state-controlled commercial mass media (Reese, 2009). The challenges posed by the Internet for traditional media are discussed extensively in Y. Zhao's (2008) comprehensive book on the media regime in China. However, the democratization potential of the Internet in China is still contested and is far from settled, even after a decade of study (Huang, 1999; Stanley, 2010; Taubman, 1998; Yuan, 2010).

The censorship vs. activism dualism dominates the debate regarding the role of the Internet in China. The ultimate question seems to rest upon who will win the battle with the tools of ICTs, the state or civil society. If ICTs help activists win, a democratic government will emerge, and if

ICTs stand at the side of censorship, the state will continue as an oppressive apparatus. Zheng's (2007) book rightly pointed out that the Internet empowers both, with victory dependent upon particular circumstances. There will not be a simple answer to the "who wins" question, since the dispute is not a zero-sum game. Meng (2010) critiques the binary "democratize or die" argument as limiting because it is "an essentially Western-centric view that treats China as the inscrutable and inferior 'other' to be converted to 'one of us' ('us' as liberal democracies...)" (p. 502). Meng (2010) called for a shift in focus from the presumed framework of democratization to the emerging analysis of mediation practices. The core inquiry becomes how the Internet in China is both "embedded in and reshaping the specific Chinese context" (p. 505).

The other end of the discursive spectrum, development as modernization, is seen, although less prominently, in Chinese Internet studies. On the one hand, the emphasis on economics leads to investigations on how the Internet changes business practices – advertising (Li, Li, & Zhao, 2009; Riegner, 2008), marketing (H. Li, 2009; Xue, 2008), management (Shoosmith & Hearn, 2004), public relations (Han & Zhang, 2009; Zhang, Shen, & Jiang, 2009), consumer research (Guo & Wu, 2009; Kwak, Zinkhan, Pan, & Andras, 2008), industry development (Li, Lin, & Xia, 2004; MacInnes & Hu, 2008), and business ethics (Fam, Waller, & Yang, 2009; Martin, 2008). Development as modernization, on the other hand, suggests the elimination of rural underdevelopment. Empirical research examines issues such as adoption (Chan & Leung, 2005; Lu, Zhou, & Wang, 2009; Zhang & Wei, 2009; Zhu & He, 2002), diffusion (Zhao, Hao, & Indrajit, 2006; Zhu & Wang, 2005), content (Fu, 2004; Singh, Zhao, & Hu, 2005), education (Liu & Oppenheim, 2006; Tang, 2000), health (Tang et al., 2009), poverty alleviation (Soriano, 2007), and the urban–rural digital divide (Fong, 2009).

5.2 Internet studies in India

Compared to China, Indian Internet studies are dominated by the modernization discourse. Over the last two decades, India has witnessed the shift of the ICTD model from state-centric technology transfer to civil society-based initiatives with private partnerships (Sreekumar & Rivera-Sanchez, 2008). The Indian state is considered only one of the many stakeholders who play a role in the development enterprise. Consequently, research on the Internet has veered from an e-governance focus (Dabla, 2004; Madon, 2009; Shah, 2007) to case studies of public–private partnerships or individual donor-funded projects. The overarching problem translates into a focused inquiry – how to make ICTD work through a techno-deterministic prescription. The majority of the Indian Internet research, therefore, chronicles the reasons for the success of ICTD projects and focuses less on critical inquiry into failures, in terms of reaching modernist development goals such as agricultural productivity, economic growth, industry building, livelihood enhancement, governance improvement, etc. We note, however, that a small number of works criticize neoliberalism, pointing out that digital capitalism further deprives the global South (Sreekumar & Rivera-Sanchez, 2008).

Guided by livelihood objectives, health information systems were designed to provide medical services to the poor (Bavdekar & Pawar, 2005; Rao, 2000; Sahay & Lewis, 2010) and telecenters to offer basic access to information (Best & Kumar, 2008; Rao, 2008). Certain local governments, responsible for the delivery of services to citizens, actively implemented e-government projects to improve their performance (Bailur, 2007; Bhatnagar & Singh, 2010; Thomas, 2009). ICTs were also used to aim for economic growth in the public sector, notably healthcare (Chib et al., 2012) and education (Komathi & Chib, 2011), and in the private sector (Donner, 2007; M. Sharma, 2010; Tarafdar & Vaidya, 2004), as well as in innovative services, such as Internet banking (Donner & Tellez, 2008; Malhotra & Singh, 2010).

The Indian state, despite of the central vision of promoting ICTD, does not have as powerful and cohesive a governmental system as that of China. Therefore, given the decentralization of the federal structure, the Indian state is unable to enforce laws and policies, gather enough financial resources, or provide administrative efficiency within a nation-wide ICTD project. ICTD instead becomes an endeavor that has to rely on external funding from private industry, such as the TATA and ITC groups, and from the global North, including international donor organizations such as UNDP and USAID, industry leaders such as Microsoft and Nokia, and academic research funding. Local governments, NGOs, and private companies are reliant on these funding sources to implement projects with a local scope. As a result, imperatives to remain in the lime-light have led to a plethora of Indian case studies in the publications of leading donor institutions and transnational organizations. This has meant that evaluations of ICTD projects such as Gyan-doot (Bailur, 2007; Cecchini & Raina, 2004; UNDP, 2004), Warana (Gandhi, Veeraraghavan, Toyama, & Ramprasad, 2009; UNDP, 2004), Tarahaat (UNDP, 2004), and Drishtee (C. Sharma, 2004), as well as community-level projects such as hole-in-the-wall (Dangwal, Chatterjee, & Mitra, 2005), e-choupal (C. Sharma, 2004), and SARI (Kumar & Best, 2006), flourished. Summary reviews of such project evaluations are seen, too (Bhatnagar & Singh, 2010; Manohar, 2005; Rao, 2009).

Another significant strand of research emphasizes the liberation of the powerless groups, with women and rural dwellers as salient examples. The branch of research that focuses on the empowerment of marginalized communities represents a discursive turn in ICTD studies by proposing a liberation perspective that goes beyond being anti-state or against global capital. Instead, social, political, economic, and cultural constraints that discriminate against marginalized communities are examined to gauge whether ICTs reinforce the power imbalance. For example, women as a disempowered group found it difficult to take advantage of ICTs in “a Western sense” (Anderson & Shrum, 2007; Patel & Parmetier, 2005). Rather, ICTs allowed Indian female professionals to circumvent gender codes that impose constraints on them. However, whether this circumvention could be called empowerment would have to be based on a change of assumptions – empowerment would have to be redefined in the unique Indian context of power relations. A relevant proposition is that development projects have to be based on community needs and run via participatory approaches (Cecchini & Scott, 2003; Roman & Colle, 2003; Srinivasan, 2006), which should allow the communities that need to be developed to define their own priorities and agendas. Both arguments suggest that development should be interpreted as liberation from an unequal power hierarchy (e.g. male-dominated, caste-orientated), but how liberation is carried out would have to be defined by those subjugated.

6. Discussion and conclusion

To answer the questions on the similarities and differences in the Internet studies regarding China and India and how the patterns observed in the literature mirror the development discourses adopted by the two governments, this paper demonstrates that Internet scholarship on China is dominated by the “development as liberation from the state” discourse as a critique of the fact that development in China is achieved through the tight control of the multi-layered government. The (so-far) successful development led by the Chinese state triggered scholarly interest in describing and explaining this rather paradoxical phenomenon – a market economy without liberal democracy. The Chinese research on the Internet as a modernization tool has increased steadily, yet it still centers on the government and how it may promote development through a top-down approach. In contrast, Indian Internet studies scholars have adopted the modernization discourse from the earliest age of Internet diffusion. ICTD projects,

conducted by multiple partners, have been examined on a case-by-case basis to provide some generalizable conclusions regarding possible factors of success or failure. Although most of these projects assume modernization (e.g. poverty alleviation) as their guiding discourse, it is interesting to see a growing body of research that takes the perspective of development as liberation from the existing social and cultural inequalities (e.g. gender).

To answer the question on the academic and policy implications arising from the particular stances taken by Internet scholars in China and India, our analysis shows that academics have been actively engaging the development discourses embraced by the government in both countries. Instead of simply accepting the state-embraced development discourses, scholars have taken on the challenge of criticizing discourses like those seen in China; liberation from the state is employed to question the state-dominant approach. In India, a careful evaluation of various development projects has been carried out, with an increasing emphasis on individual empowerment and the reduction of socio-cultural inequalities. However, academics are still limited in terms of actual impact if the critiques stay only on paper. In order to effect real influence, there are at least two directions that can be taken. First, recent scholarship has pointed out that we have to listen to the people and the communities that are being helped (Heeks, 2009). A bottom-up approach requires us to begin our research practices by identifying the development discourses that are embedded in the everyday experiences of the people and the communities and then allow these communities to invent and utilize technological tools to achieve their own ends. Second, scholarship needs to generate impact in the domain of policy-making (Chib & Harris, 2012). We note that, whereas there are a few institutions in India that are actively developing a policy orientation via research, such as ARI, DEF, LIRNEAsia, OWSA, SIRCA, civil society counterparts in China are rarely seen. Such institutional efforts are needed to extend academic impacts to policymakers.

Our conclusions are drawn based on research from the fields of area studies and communication research, in addition to the ICTD scholarship. This strategy is adopted as an answer to previous calls for an “interdisciplinary and holistic” perspective (e.g. Best, 2010). To our satisfaction and hopefully the readers’, too, this expansion of literature sources did bring us new insights regarding the topic of the Internet and development. Another contribution of this paper is to provide a discourse analysis of the literature, using a conceptual framework (Table 1) central to the development field. This conceptual framework helps to organize our understanding of the development field and brings to light the neglected dimensions of development, at least within the two countries examined here. A third contribution is to use a cross-country comparison as part of our research design. This comparative method reflects an attempt to answer many previous calls, such as the need for state- or nation-level analysis (Walsham, 2010) and geographic diversity (Walsham & Sahay, 2010).

There is still ample space for future research along these lines. Our sampling of Internet studies in China and India could be made more comprehensive by including literatures from Information Systems, Computer Science, and more disciplines. It would also be illuminating if our collection of development discourses can be extended to those of the people and the communities. Our review and analysis focus on the Internet, whereas mobile phones clearly represent the rising trend in developing countries (Gomez et al., 2012). There is a need to conduct research on mobile phone studies and development discourses in order to understand whether and how our academic inquiry made its way to people/communities after Heeks (2009) called for an ICT4D 2.0. Our study includes China and India as the contexts, and we can imagine many fruitful cross-national comparisons in order to learn from each others’ experiences. In addition, we think that cross-national collaboration is important for both researchers and practitioners. While there are institutional arrangements for academic collaboration (e.g. academic visiting), a mechanism for collaboration among practitioners from different countries still must be built.

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Notes

1. In this paper, ICTs refer to a wide range of technologies that can be used to access, store, transmit, and manipulate information, including the Internet, mobile phones, computers, and many more. Internet studies become relevant to other forms of ICTs when the hardware (e.g. mobile phones and computers) and software (e.g. web browsers and mobile applications) are used to access the Internet.
2. Retrieved April 14, 2011, from <http://www.internetworldstats.com/stats3.htm>. We need to note that in 2012, 74.5% of Chinese Internet users access the Internet through their mobile devices (China Internet Network Information Center, 2012).
3. China Telecom is a Chinese state-owned telecommunication company. It is the largest fixed line service and the third largest mobile telecommunication provider in the People's Republic of China.
4. Retrieved April 9, 2011, from <http://ict4dblog.wordpress.com/2010/04/14/ict4d-journal-ranking-table/>.
5. Wei (2009) reviewed new media research written in the Chinese language by searching a Chinese academic database. He did find some differences in the research conducted by Chinese scholars, such as a heavier emphasis on mobile phones than the Internet compared to the international community of Internet studies.

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