MFANINGFUL MOBILITY

Gender, development and mobile phones

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In this paper we explore development, gender and technology through a focus on mobile phones and examples of their everyday use by rural women in India. We introduce ways in which technologies might be thought about in terms of "meaningful mobilities" by discussing attachments, structures of labour, agency and specifically how mobiles are an active agent in complex and evolving gendered relationships.

KEYWORDS mobile phones; mobiles for development; gender and technology; development; mobility

Introduction

Mainstream narratives around the growing penetration of mobile phones in developing countries largely focus on their role in economic growth (Francisco Osorio & John Postill 2010). Even though Jonathan Donner (2009) has recognised how mobiles blur the lines between lives and livelihoods "economic development" remains the dominant framework. Conversely, discussions of mobile phones in the West and the rise of social networking are more likely framed by social and cultural preoccupations (Mizuko Ito, Daisuke Okabe & Misa Matsuda 2005; James Katz & Mark Aakhus 2002; Richard Ling 2004) changing work patterns and work/life balance (Judy Wajcman, Michael Bittman & Jude Brown 2009), the implications for young people (Kate Crawford & Gerard Goggin 2008) and gender and household organisation (Leopoldina Fortunati 2005, 2009).

The implications of mobiles for development are magnified by the sheer uptake of mobile phones in the Global South, and the fact that for many they provide first access to electronically mediated communication. As such, mobiles are held up as a key instrument of development, and yet ethnographic research on the everyday uses and implications of mobiles in developing countries points to a range of implications beyond the economic (Richard Ling & Heather Horst 2011).

In this paper we explore the relationship between development, gender and technology through a focus on mobile phones and their everyday use by women in rural India. We consider the gendered meanings embedded in the use of mobiles and what it means to be "meaningfully mobile." We found that spatial, social and economic mobility is



often defined by gender, and such gendered inequality can be better understood through a focus on mobile phones within a wider social context.

Fortunati (2009) calls for research that studies the role of mobile phones from the perspective of women's life conditions. She asks, "What types of experiences and agencies does the mobile phone give to women?" (2009, pp. 23–24). For example, does it reduce women's "double work" (home and paid labour), and does it improve the social conditions of women?

This paper examines these questions by considering how technologies might be thought about in terms of meaningful mobilities, through discussing ideas of gender and attachments, structures of labour, and agency. Further, we analyse gendered tensions, concepts of ownership and usage. We conclude by discussing the limits of modernising approaches to development generally, and to understanding technologies and social change specifically. Mobiles are presented as an active agent in evolving gendered relationships that must be understood within their culturally embedded everyday uses and settings.

We draw on qualitative research undertaken with two initiatives that work with women in relation to food sovereignty and secure livelihoods: the Deccan Development Society (DDS) and the Self Employed Women's Association (SEWA). This research was part of a study called "Moving Content," designed to explore how digital technologies are being used in innovative ways in low infrastructure areas of India. Fieldwork was conducted with DDS in 2009, and with SEWA in 2010. Follow-up fieldwork was carried out with SEWA in late 2010 and early 2011 to study the ways in which technologies facilitate meaningful attachments.²

DDS works in the Telangana Region of Andhra Pradesh with low caste marginalised women farmers. For more than twenty-five years, DDS has worked to develop effective and sustainable food systems (The DDS Community Media Trust, PV Satheesh & Michael Pimbert 2008). In the process the women have developed a wealth of local knowledge and sustained improvements in local agricultural practices that draw on local farming traditions. These women operate their own Community Media Trust, which includes a community radio station that broadcasts in the local dialect and a video initiative aimed at sharing their knowledge with other farmers, policy makers and government departments.

SEWA, or the Self-Employed Women's Association, is a women's group that was originally formed as a women's self-employed textile workers union in 1972, and through the years has grown to over 1.5 million members in many different occupations, including farming, factory work, and varied home-based small businesses (Ela R. Bhatt 2006). SEWA has over 600,000 members in the State of Gujarat, where we conducted our research. Organised at the grassroots level to maintain a participatory decision-making process for its actions, it provides not only a large social network for poor women, but has also formed a bank, a marketing association, and an educational group. SEWA encourages the use of new technologies like computers and recently has begun to offer loans for mobile phones.

In both cases, while there are central concerns with livelihood issues, DDS and SEWA consider issues around women's paid work or ability to sustain themselves and their families to be far broader than just poverty reduction or economic growth. Rather, the focus is on developing women's agency and influence. This is significant since as Naila Kebeer (2011, p. 1) demonstrates in a study of approaches to women's paid work, "it is women's capacity to exercise voice and influence in the key arenas of their lives that provides the impetus for change." Positive social change in women's lives consists not simply of generating income; change is brought about by the ability to make life choices, exercise

voice and be heard, and influence relationships. Beyond this, it includes the capacity to act collectively, to work on equal terms with men, and shape society.

Our two studies employed ethnographic interviewing methods and consisted of two or more field visits. We conducted initial scoping work and preliminary interviews to understand the initiatives, the locations, and the local populations. We followed up with semi-structured and open-ended interviews held with staff, members, service users and the local population. Field visits lasted two weeks, during which we interviewed more than fifty people in either group or individual settings. We also conducted interviews that allowed us to understand women's communicative ecologies (Greg Hearn, Jo Tacchi, Marcus Foth & June Lennie 2009): which devices women owned, shared, and their associated communicative practices. We also worked with multilingual research assistants and interpreters, supplemented by local interpreters when necessary. Interviews were recorded and visual documentation of fieldwork was made. In both cases we included at least three villages, with contrasting demographics, infrastructure and geography.

Meaningfully Mobile

Donner describes Mobiles for Development (M4D) as a distinct field with a "dual heritage" (Donner 2010). On the one hand M4D is framed by ideas of the mobile phone as an enabler of choice, where "user choice" is the way to understand the impact of mobiles. From this perspective, some uses may lead to positive development outcomes. On the other hand, M4D is framed within a broader Information and Communication Technologies for Development (ICT4D) perspective where technologies can be designed and woven into social systems in order to bring about positive social change; "embedded directionality," which requires not only a goal (a development direction and outcome) but also an appreciation of social structures and contexts. A key difference between research undertaken by social scientists or humanities scholars, and M4D or ICT4D researchers is their approach to development itself (Unwin 2009).

To be more explicit, M4D and ICT4D tend to envisage instrumental outcomes from the introduction and implementation of technologies and lean towards an understanding of development as an economic measure such as increasing a person's income. Social scientists and humanities scholars tend towards understanding the sometimes intangible benefits: personal empowerment, gender equity, emotional fulfilment, etc. As Donner (2010, p. 9) points out, "most benefits of the mobile in development processes remain unobserved and under-studied, in unorganised 'peer-to-peer' voice calls and text messages."

Attachments

Our concept of attachment emerged from a visit to DDS in 2009. Sitting outside of their community radio station one day, a group of women started talking about mobile phones. They loved the way mobiles opened up possibilities for intimate conversations: they talked about the comfort they could bring in allowing them to speak with their married daughters about things that otherwise were not possible to discuss through public phones, where others could overhear. Those women who had mobiles carried them tucked into their blouse under their sari along with their other personal objects. There was a strong sense of intimacy, and of comfort in their talk about these devices. This evocative sense of

attachment led us to a follow-up project that explicitly explored the nature of the uses of new and traditional technologies, and their links to emotional states and connections to others.

Of the women we talked to, only a few had individual ownership of a mobile phone. Most shared the phones of male family members. We explored the connections and relationships facilitated or altered by mobiles, as well as how women feel about them, and through them. This research focused on attachments to technologies, and how technologies facilitate certain kinds of social attachment.

For example, Chandramma is a sixty-year-old widow who farms twenty acres, manages the DDS seed bank, and has five grown children and seventeen grandchildren. She is a busy matriarch who wakes at 5 a.m. to cook, bathe and clean, and visit her farm before 9 a.m. when she starts work at DDS. She manages the farm and seed bank, attends DDS meetings, and produces content for Sangham Radio before leaving work at 6 p.m. Then she spends time with her family, eats around 8 p.m. and sleeps by 10 p.m. She uses her mobile phone regularly throughout the day to keep in touch with her family and DDS, and to arrange daily labourers to work both her and DDS farmlands. She has her own phone, to use as she wishes, while most other women used the phones of their husbands, brothers or sons. Many women talked about the ability to communicate with family as the most satisfying aspect of the mobile phone, and Chandramma was no different—she called her daughters every morning.

Many women we met lived in households with multiple mobile phones belonging to male relatives. In the evenings, when husbands or sons came home from work and when calls were cheaper, women had greater access to these phones. In this patrilineal society, where married women move into their husband's family home, staying in touch with daughters and mothers was of particular importance. Many women talked about how mobile phones consolidated their sense of attachment to their married daughters, or mothers, whom they could now call regularly.

Talking with a group of twenty women in a SEWA centre in a village in Anand District, it was clear that the connection with maternal homes was both emotionally significant, and created a kind of accountability within domestic spaces. Women described how they had a greater sense of security and protection from domestic abuse as it was understood that now women could call their parents with ease, thus making the potential abuse known. This real and perceived reduction of domestic violence through more regular connections with maternal homes has also been reported in research on mobiles in villages in West Bengal (Sirpa Tenhunen 2008).

In the communities we visited, mobile phones effectively facilitated attachments with new and different degrees of privacy. For example, mobiles enhanced the process of being listened to, as well as escaping being overheard. First, women could take calls and move away from potential eavesdroppers, or send text messages beyond the gaze of observers. Second, in many villages being outside the home after dark was generally prohibited, as was travelling beyond their neighbourhoods at any time unless accompanied by a male family member. The mobile allowed for the maintenance of social relationships with family and friends beyond village boundaries, after daylight hours and without concern for distance.

Structures of Labour

A lack of socially sanctioned mobility affects women's ability to work outside of the home, exacerbated by the demands of household work and childcare responsibilities. A SEWA member we met in a computer training centre in Ahmedabad told us that now she can exchange SMS messages with her children at home she has greater confidence to be away, to work and undertake training. Similarly, a female salt worker and her husband talked about how, during seasonal work in the salt deserts, they leave their children with her family in the village where they attend school. This is common practice for children who are of school age, as the desert environment is harsh. Extended kin networks are utilised and they are able to call neighbours to send or receive messages about their children, providing peace of mind.

Mobiles were also useful for work related calls, saving time, travel and money. During a large meeting of more than forty women at a SEWA Centre in Anand, women agreed that access to mobile phones helps SEWA leaders consolidate networks at local (village) level and with head offices. Nevertheless the importance of face-to-face meetings and visits was still emphasised. In the last five years since the participants have been using mobiles, their networks have consolidated and expanded, but initial face-to-face contact remained vital. This is in large part due to the difficult process of encouraging women to join SEWA against a background of (largely male) resistance, generally only overcome when monetary and other benefits start to become evident.

Once women did join, however, the financial benefits often dissolved concerns. Kapilaben, for example, is a lily farmer with 24 guntas of land (just over a half acre). She picks the flowers each morning, and sells them in local markets. She took a SEWA loan for 3000 rupees³ to buy a mobile phone. Where once she would spend the whole day going from one market to another, searching for traders to purchase her flowers, now she calls different markets to negotiate sales in advance. She had attended SEWA training on how to operate a mobile phone, as well as how to cut out middlemen and obtain the best price for goods and services. This has saved time and money, freeing her up to consider starting another enterprise with a group of SEWA members.

She encouraged her fifteen-member SEWA group to borrow 150,000 rupees and buy ready-to-sell, SEWA-produced food products. The group had strong success, selling all their products in just eight months. This process helped to convince many male village members of the benefits of supporting women and allowing them to join organisations like SEWA. The mobile phone was a contributing agent on Kapilaben's path towards meaningful mobility, bolstering her livelihood and positioning her as a local leader, role model and mentor for other women.

Agency

As well as income security, the kind of meaningful mobility that Kapilaben has achieved consists of a number of key elements, including self-esteem, empowerment, and leadership. This story resonated with many of the women we spoke with.

In a village in Anand District, a group of SEWA members talked about four key aspects of SEWA's aims: (i) recognition of the long working hours of women (often farmers); (ii) income that is commensurate with the amount of work they do, and with the income of men doing the same work; (iii) *swabhimaan* (which translates as self-respect, but here is

used interchangeably with the English word ownership); and (iv) ultimately, equality. *Ownership* in this context is not simply about ownership of property. Here, as in many parts of India, women are rarely given the status of "farmers" or landowners. In fact, many of the women we met talked about how, until they became part of SEWA, their identity had always been subsumed under their husband's identity. Thus, the idea of ownership raised by the women goes well beyond poverty and wealth to include a sense of individual identity, agency and wellbeing—including what Gandhi described as *swaraj* (self-rule or self-reliance).

The women talked variously about how SEWA gave them a sense of belonging, solidarity through networks, identity, recognition, security and a certain weight (social, cultural, political) and sense of completeness. Our translator described the overarching emotion the women described as a feeling of "solidness." Solidness included the mobilities gained through SEWA membership, the spaces (social, cultural, political) that had opened up to them, their access to a range of savings and loan schemes. Solidness was invoked when women recounted transformations in local level politics, and broader government agendas, gaining a sense of visibility and recognition. The concept was also raised in relation to gaining a sense of individual privacy, choosing when they were being overheard, and determine their own listening environments.

Tenhunen's (2008) research in rural West Bengal shows how mobiles serve to amplify ongoing processes of cultural change, broaden culturally constructed space and facilitate new discursive formulations. Our research offers similar findings in that mobiles bring benefits in terms of social logistics, such as the ability to call for help, save time and get market information. However, local culture shapes the appropriation of mobiles, accentuating kinship relationships and reshaping rather than rejecting the traditional gender code of conduct. Tenhunen observed that women's lives were changing, with most of these changes being cultivated by organised women's movements in the region. These broader processes of change are the essential context in which the role of mobiles can be better understood: these technologies are not significant in isolation, but as actors within a socio-technical network. In the next section we look in more detail at the sites of our research as settings for ongoing change.

Contextualising the Mobile

In both research sites, we explored mobiles in the context of long-term initiatives working to improve the condition of women. DDS is concerned with food sovereignty, while SEWA works for livelihood security. As we saw in the story of Chandramma, her life was significantly transformed due to her own hard work, and the opportunities presented her by DDS, as she gradually moved from poverty and insecurity to a more sustainable livelihood.

Similar stories were told within SEWA. One sunny afternoon in November 2010, sitting beneath a sprawling banyan tree, a group of fifteen women talked about their organic farm and nursery, their lives and livelihoods, and SEWA itself. The banyan tree also happens to be the official symbol of SEWA, the branches and leaves representing the women's groups and members. The women talked about the "transformative agency" which participation in different SEWA networks and activities has allowed them. They felt that their social, cultural, political, economic and spatial mobility has been transformed.

This narrative was reiterated throughout our fieldwork. Dhuliben, the coordinator of the farm and nursery told us that before she joined SEWA she was referred to as her husband's wife, but now people know her by her own name. The women noted that this marked a significant achievement. Lalitaben, the SEWA district coordinator, said that when she first arrived in a village to mobilise women, she had to deal with a lot of social pressure and criticism. One of the biggest challenges was to convince men to allow women to travel outside the villages. A key factor in winning the trust and approval of men was through the "tangible" impact of the involvement in saving groups. This opened up avenues for women to participate in other projects and initiatives, and brought more money home to their family. Furthermore, respect, acknowledgement and a stronger sense of identity were consistently raised by the women as benefits gained through being part of the SEWA network. They felt "listened" to, their "voice" was more commonly acknowledged, and government officials no longer ignored their opinions.

By simply talking to these women about mobiles, without appreciating underlying processes and drivers of change, one would gain only a very partial understanding of the depth of change and its implications. This indicates the importance of taking a holistic approach to understanding the role of technologies in development and social change, and more broadly understanding women's life conditions (Fortunati 2009) within multiple social, cultural and gendered structures. Close studies of mobile phone use in the Global South reveals how uptake can make existing social relationships, and processes of change, more visible (Ling & Horst 2011). Mobile phones can help to challenge power structures and alter communicative practices and norms, but not as a singular catalyst. They contribute to processes of development (Araba Sey 2011) in the ways in which they highlight, extend and magnify communicative and other capabilities and freedoms (Sen 1999).

We argue that while mobile phones can be considered to be contributing in important ways to transforming lives, they are agents within a much wider set of social and cultural changes. They are not a one-size-fits-all technological solution to the issues of development, inequality and exclusion, and can in some cases highlight and amplify existing tensions.

Gendered Tensions

Arul Chib and Vivian Chen (2011) demonstrate the importance of considering underlying gender dynamics when trying to understand the role of mobile phones for midwives in Aceh province in Indonesia. They found that mobiles serve as a symbol of developed society which give midwives a high status as well as access to medical information and the ability to respond quickly to medical emergencies. Yet this violates the perception others hold of their low social position, and causes the midwives a degree of discomfort as the phone contrasts with their low social status while simultaneously suggesting a desire to challenge this. While there is general consensus on the positive nature of mobiles in development, "questions over ownership, use and empowerment arise... when considering specific uses and when the technology is mapped onto pre-existing gender dynamics that often favor men as opposed to women" (Ling & Horst 201, p. 369).

As women negotiate the gendered tensions around their mobile use, they are challenging accepted norms and behaviours. As Cara Wallis (2011) found in her study of mobile phones and labour relations for young migrant women in Beijing, gender, age, class

and place-based power relations produce severe constraints on these women and their effort to generate higher income. While mobiles might allow for lateral job movement, only those women who incorporate phones into pre-existing micro-enterprises, or women who use phones to generate higher income for employers who are also relatives, see economic gains. Conversely, some employers use mobiles for surveillance and to harass young female employees. For some of the women we interviewed, the benefit of being able to stay connected by mobile calls to their maternal home produced the negative effect of not receiving permission to visit as often as they once did. Their husbands would ask why travel was necessary if they were already speaking to their families so often.

Some women emphasised how the purchase of a mobile phone increased their debts—they had to pay off the loan while also spending a regular amount every month on calls. Mobiles are mostly used to receive incoming calls; and if the matter is urgent, and the balance is low, the practice is to recharge it with low denomination coupons—the cheapest being 5 rupees. One older woman was very concerned about the cost of recharging and complained to the group about her daughter-in-law who spends a good deal of the balance calling her parents. She felt she had no way of controlling this, and sometimes prefers not to have any balance. The daughter-in-law was using the mobile in a way that village women valued highly—to connect with her maternal home—yet the tension arose for this particular woman as she felt she needed to control the usage and limit the costs.

Media technologies operate in a complex dynamic with engrained power structures. In India gender and caste combine to produce formidable constraints. On its own, the introduction of mobile phones does not produce rapid change, although it can both highlight and challenge points of strain in gender, class and caste relations. As Wallis describes, mobiles can be understood as "technologies without guarantees," introducing new capacities while also aggravating existing tensions in different settings.

Conclusions

We have argued that an over-emphasis on economic development in the M4D literature has left us with a narrowed view of the full set of meanings that are associated with communications technologies. Mobile communications cannot be properly understood without paying close attention to the local contexts, social relations and power structures within which they are used. To do so, we have drawn on multiple sites and stories that illustrate the complexity regarding mobiles in relation to gender, agency, ownership and structures of labour.

Mobile communications can highlight and reinforce underlying gendered inequalities and constraints, and challenge them. Processes of reinforcement, tension and opposition must be contextualised within wider power structures operating in a local context. Certainly mobiles are active agents and facilitators of change within the evolving field of gendered relationships in India. However, they must be understood within their everyday uses and settings, in order to understand the range of ways in which they contribute to social spaces, and what part they play in social and economic meaningmaking. Then we will have a much deeper perspective on what constitutes "meaningful mobility" for individual women, as well as for the organisations in which they participate.

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NOTES

- 1. Three-year project (2007–2010) "Moving Content: Creative Engagement in Marginal Spaces," funded by Intel and led by Jo Tacchi and Jerry Watkins in collaboration with Kathi R. Kitner, Jay Melican and Sue Faulkner from Intel. We worked with Research Coordinator and fieldworker Kiran MS, and fieldworker Tripta Chandola. We conducted three case studies, including the two reported upon here.
- 2. These two follow on projects were "Technologies of Attachments" and "Smartphones and Social Participation" funded by Intel. Jo Tacchi and Kate Crawford collaborated with Kathi R. Kitner, we worked with Kiran MS, and Tripta Chandola in India.
- 3. The average daily wage for rural women's casual labour is 86 rupees, according to official figures from India's Ministry of Statistics and Programme Implementation (2012). In Gujarat the average wage is closer to 83 rupees (TNN 2011). Daily wage workers, by definition, have unreliable work and income.

REFERENCES

- BHATT, ELA R. (2006) We are Poor but so Many: The Story of Self-employed Women in India, Oxford University Press, New Delhi.
- CHIB, ARUL & CHEN, VIVIAN HSUEH HUA (2011) 'Midwives with mobiles: a dialectical perspective on gender arising from technology introduction in rural Indonesia', *New Media & Society*, vol. 13, no. 3, pp. 486–501.
- CRAWFORD, KATE & GOGGIN, GERARD (2008) 'Handsome devils: mobile imaginings of youth culture', Global Media Journal, vol. 2, no. 1, [Online] Available at: http://www.commarts.uws.edu.au/gmjau/iss1 2008/crawford goggin.html (20 Dec. 2011).
- THE DDS COMMUNITY MEDIA TRUST SATHEESH, PV & PIMBERT, MICHAEL (2008) Affirming Life and Diversity: Rural Images and Voices on Food Sovereignty in South India, The International Institute for Environment and Development (IIED), London.
- DONNER, JONATHAN (2009) 'Blurring livelihoods and lives: the social uses of mobile phones and socioeconomic development', *Innovationsi*, vol. 4, no. 1, pp. 91–101.
- DONNER, JONATHAN (2010) 'Framing M4D: the utility and continuity and the dual heritage of "mobiles and development", *The Electronic Journal on Information Systems in Developing Countries*, vol. 44, no. 3, pp. 1–16.
- FORTUNATI, LEOPOLDINA (2005) 'Mobile phones and fashion in post-modernity', *Telekronikk*, vol. 3, no. 4, pp. 35–48.
- FORTUNATI, LEOPOLDINA (2009) 'Gender and the mobile phone', in *Mobile Technologies: from Telecommunications to Media*, eds G. Goggin & L. Hjorth, Routledge, London, pp. 23–34.

- HEARN, GREG, TACCHI, JO, FOTH, MARCUS & LENNIE, JUNE (2009) Action Research and New Media: Concepts, Methods and Cases, Hampton Press, Cresskill, NJ.
- ITO, MIZUKO, OKABE, DAISUKE & MATSUDA, MISA (eds) (2005) *Personal, Portable, Pedestrian: Mobile Phones in Japanese Life*, The MIT Press, Cambridge, MA.
- KATZ, JAMES EVERETT & AAKHUS, MARK A. (eds) (2002) *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge University Press, Cambridge.
- KEBEER, NAILA (2011) 'Contextualising the economic pathways of women's empowerment: findings from a multi-country research programme', *Pathways Policy Paper*, October 2011, Pathways of Women's Empowerment RPC, Brighton.
- LING, RICHARD (2004) The Mobile Connection: The Cell Phone's Impact on Society, Morgan Kaufmann, San Francisco, CA.
- LING, RICHARD & HORST, HEATHER (2011) 'Mobile communication in the global south', *New Media & Society*, vol. 13, no. 3, pp. 363–374.
- MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION. (2012) 'Key indicators of employment and unemployment in India, 2009–10', [Online] Available at: http://pib.nic.in/newsite/erelease. aspx?relid=72839 (21 March 2012).
- OSORIO, FRANCISCO & POSTILL, JOHN (2010) 'Mobile rewards: a critical review of the Mobiles for Development (M4D) literature', *EASA2010: Crisis and Imagination*, Maynooth, Ireland (24–27 Aug. 2010).
- SEN, AMARTYA (1999) Development as Freedom, Anchor Books, New York.
- SEY, ARABA (2011) "We use it different, different": making sense of trends in mobile phone use in Ghana', New Media & Society, vol. 13, no. 3, pp. 375–390.
- TENHUNEN, SIRPA (2008) 'Mobile technology in the village: ICTs, culture, and social logistics in India', Journal of the Royal Anthropological Institute (N.S.), vol. 14, no. 3, pp. 515–534.
- TNN. (2011) 'Gujarat govt hikes minimum daily wages', *The Times of India*, 19 October, [Online] Available at: http://articles.timesofindia.indiatimes.com/2011-10-19/ahmedabad/30297023 1 wages-rural-areas-urban-areas (21 March 2012).
- UNWIN, T. (ed.) (2009) *ICT4D: Information and Communication Technology for Development.*Cambridge: Cambridge University Press.
- WAJCMAN, JUDY, BITTMAN, MICHAEL & BROWN, JUDE (2009) 'The Impact of the mobile phone on work/life boundaries', in *Mobile Technologies: From Telecommunications to Media*, eds Gerard Goggin & Larissa Hjorth, Routledge, London, pp. 9–22.
- WALLIS, CARA (2011) 'Mobile phones without guarantees: the promises of technology and the contingencies of culture', *New Media & Society*, vol. 13, no. 3, pp. 471–485.
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