Access and Beyond: An Intersectional Approach to Women's Everyday Experiences with Information and Communication Technologies

FATMA MATIN KHAN, London School of Economics

ABSTRACT

Information and Communication Technologies (ICTs) are seen as the pathway not just to (economic) development, but key to ensuring good governance and removing social inequality. At the heart of this narrative is the assumption that technology is neutral and an a priori source for good which can be used for the inclusion of marginalised communities. Through in-depth interviews with working class women in New Delhi, India, my paper seeks to understand how an intersectional social location affects women's experiences with ICTs, and argues that they are mired in complex ways with structures of caste, gender, class and education. The study builds on feminist insights that technology must be seen as a set of practices, deeply implicated in power relations. Thus, young women's usage of mobile phones is shaped by upper-caste norms of femininity. For other women, ICTs become a nuisance which allow employers more access to them. This paper underscores the importance of a more bottom-up understanding of the ways in which technology and society shape each other, and reflects on implications for policymaking and future scholarship.

KEYWORDS

intersectional feminism, ICT4D, India, digital divide, women

Introduction

In December 2016, introducing a government application for digital transactions, the Prime Minister of India, Narendra Modi, underlined the importance of Information and Communication Technologies (ICTs) for the future of India:

> Technology is the biggest strength of the dalits, the oppressed, the exploited and those deprived. It is a myth that it is a treasure for the rich and educated. No, it

> is the treasure for the poor. It is going to empower the poor, the small business traders, the farmers in far and very far off villages, the tribal living in the forest.[1]

This 'magical thinking' in relation to ICTs (Eubanks 2013) has been called into question by civil rights activists and researchers. While the ICT boom in India made it the poster-child for ICT4D (ICTs for Development) rhetoric (Sarkar 2016), this has not seemed to benefit everyone. Though the average income has increased, the gap between the rich and the poor has widened (Open Society Foundation Report 2012). Atrocities against minority groups such as Dalits, Muslims and Adivasis have increased (Teltumbde 2010). While the World Bank applauds India's AADHAR program as the largest of its kind, and famously, India is said to have more mobile phone users than toilets; civil rights activists claim that digitisation of services is resulting in further exclusion of the most marginalised in Indian society.[2]

Nowhere does the contradictions of the ICT imaginary seem more apparent than in India. India is the largest exporter of ICT services in the developing world, and also the home of the largest offline population in the world.[3] Figures like the second largest market of users abound, and yet, 59.2% of India's population lives on less than 2 dollars a day (ADB 2015, cited in Banaji 2017, 47). As apparent in the speech by Modi, ICTs are seen as the tools which can bridge the gap between the advantaged and the disadvantaged in society (Gurstein 2003). The rhetoric of the information and knowledge society is increasingly being called into question, and yet, continues to hold power over the imaginations of policy-makers, politicians, tech-gurus, and citizens all over the world (Mansell 2012). In such a scenario, efforts to bridge the digital divide are seen as a priority by the government, international agencies and NGOs, and corporate institutions alike.

However, ICTs are not just communicative resources, but as Wajcman (2007, 582) writes,

> Technologies embody and advance political interests and agendas and they are the product of social structure, culture, values, and politics as much as the result of objective scientific discovery.

Building on the work of Iris Marion Young, Virginia Eubanks (2013, 26) also criticizes the distributive logic of the digital divide rhetoric, and argues that it is oppression, and not equality, that must be at the centre of any analysis of technology and justice:

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[1]http://www.narendramodi.in/text-of-pms-speech-at-digidhan-mela-in-new-delhi-stalkatora-stadium-30-december-2016-533672 (translated by the author)

[2] For just one example, look at Scroll.in's coverage of the issues linked with making the biometric identity card (AADHAAR) mandatory for government schooling and other services. https://scroll.in/topic/38792/identity-project

[3] http://www.dw.com/en/world-bank-points-to-indias-digital-divide/a-19246910

> Seeing high tech equity only as broadly shared access to existing technological products ignores other social values, neglects decision-making processes, sees citizens only as consumers, and ignores the operation of institutions and social structures.

Eubanks argues that we need to ground the information revolution by recognising that it does not affect social groups in the same way. For example, the information revolution from the perspectives of women of colour in Eubanks' hometown of Troy showcases an increasing precarity and marginalisation not in spite of the digital revolution, but because of it. Thus, she argues that social location shapes people's experiences of technology and the digital world, and critiques the celebratory accounts of cyberfeminism.

Cyberfeminism celebrates the revolutionary potential of new technologies for a new gender order. This has included the celebration of the way activities like gender-swapping online encourages people to challenge traditional notions of gender and acquire a 'new sense of gender as a continuum' (Turkle 1995, 314) as well as the potential of new reproductive technologies to overcome the embodied basis of gender difference (Haraway 1984). Much feminist research has also focused on the systematic marginalisation of women from jobs and professions that are defined as technological (Cockburn 1983; Hacker 1989; Wajcman 1991). However, intersectional and third world feminist argue that these concerns largely reflect the concerns of middle-class white women in the West (Gajjala 2004; Eubanks 2013). For example, a tendency to focus on the number of women in the tech industry often looks at only the white-collar jobs, ignoring the large number of women occupied in blue-collar jobs in relation to technology, in the global North and the global South.

An intersectional approach to ICTs seeks to analyse the way structures of class, caste, gender, religion and sexuality etc. intersect and form a mutually influencing relationship with technology. For example, the edited anthology *The Intersectional Internet* applies an intersectional framework to 'trace the types of uneven power relations that exist in technological spaces' (Noble and Tynes 2016, 5). Similarly, Gajjala (2012) applies a postcolonial feminist lens to not only consider the relation of gender to privilege offline and online, but also how this relates to larger structures of political economy and power relations between the global North and global South. Intersectional lenses have also been applied to the study of media in India.

Instead of abstract, self-sustaining theories of justice where technology is always already empowering or disempowering, there is a need for 'normative reflection that is historically and socially contextualised' (Young 1990, 3). Thus, this study takes as its starting point that social forces and technology influence and shape each other, and that intersectional approaches to

social location can be used to understand the lived experiences of ICTs in the lives of marginalised women in India.

Methodology and Reflection

My initial inspiration for this study was to attempt to map out the complexity of the experience of digital exclusion in India. On deeper reflection, I realised that though I critiqued the distributive paradigm in my conceptual framework, I continued to function within it by making value judgements about who was not connected, and by my desire to map the barriers which hindered this connectivity. Inspired by the work of scholars such as Virginia Eubanks (2013) and Shakuntala Banaji (2017), I realised that it was important to acknowledge my presupposed assumptions (Groenwald 2004), and instead, be led by what the women I spoke to felt was important in their lives, and the value (or lack of) ICTs in them.

For this, qualitative methods such as interviews and ethnography seemed suitable practically and epistemologically. Since my aim was to 'understand the meaning of respondents' experiences and life worlds' (Warren 2002, 83), focus groups were not considered appropriate, and I decided to use semi-structured in-depth interviews inspired by a phenomenological and postcolonial feminist perspective (Oakley 1981; Visweswaran 1994; Shome and Hegde 2002; Gajjala 2004, 2012; Donald 2009). Ideally, it would be interesting to interview women from a diverse range of backgrounds all over India. However, considering the limited scope of this study and the abundance of studies exploring the study habits of the middle-class in India, as well as the diversity in India, I decided to focus on the experiences of working-class women, ensuring that it included diversity in terms of religion, age, caste and hometown. Though many axes of marginalisation exist, social class seemed the best starting point for a study such as this. Thus, I used a mixture of theoretical and snowball sampling, where my selection criteria were a rough indication of class status. Overall, thirteen interviews were conducted over the months of June and July 2017. A small cash supplement was provided to the interviewees.

Following ethical approval from my supervisor, a consent form and an information sheet were prepared in Hindi and Urdu. However, on realising that the interviewees were more comfortable with verbal explanations, and wary of signing documents, I chose to give oral explanations and recorded verbal consent before each interview. I made sure that they were aware that they could refuse to answer any questions, or stop the interview at any time, and gave them my contact details if they wanted to change their mind later.

Kamala Visweswaran (1994) highlights the role of location in affecting the power relations in the interview process. I conducted interviews wherever the participants felt it was most

convenient, whether it was at their workplace when there was a lull in the work, or in their homes. While most interviews were conducted alone, this was not always possible. Locations such as one-room homes, or a terrace which was also used as a playground by the children of the building meant neighbours or children were sometimes present.

A topic guide was developed, but I was guided more by what the participants themselves wanted to talk about, listening closely, and asking follow-up questions. The interview data was transcribed verbatim, and I chose to conduct the analysis with untranslated text. Since my choice of method of analysis is thematic analysis, this did not produce as much of a challenge. However, in translating the passages I choose to include here, I was aware of the many cadences and nuances lost, and I have tried to include notes where word choices seemed significant. After I fully transcribed the recordings, the data was analysed through thematic analysis, a 'form of pattern recognition within the data, where emerging themes become the categories for analysis' (Fereday and Muir-Cochrane 2006, 4). Open and Axial coding procedures were employed, which were then organised into themes.

I reflected on the various speaking positions and the fractured subjectivities (Warren 2002) that came up during the interview. For instance, my class identity seemed to be encapsulated in the use of a high-end smartphone to record the interviews. It was often used as a reference point such as when Seeta said to me 'No one in my family has a phone like that yet'. At other moments, shared solidarities emerged between the women and I. One such instance was when Shagufta, a few years older than me, realised that we both planned to teach, and offered me advice about resources I could seek out. At other times, the interviewees adopted the role of the older woman who had to guide my choices, especially relating to matrimony.

Sitara, in her late 30s, who has known me for some years, advised me seriously about the need to find the right balance between education and career, and fulfilling the expectations of my family and society. I found a strange mirroring when I said that like her eleven-year-old daughter Rumi, who gets annoyed when her extended family bring up the issue of her marriage, I too wanted to follow my dreams first. This mirroring was distorted and made terrible by the fact that I am more than a decade Rumi's senior.

Thus, the deep disjunctures between our worlds were much larger than the overlaps. In showcasing their voices, I am aware of the privilege which grants me the power of the pen to write texts inaccessible to many of them.

'These phones are not for people like us': Issues of Ownership

Technology was an ubiquitous presence in women's lives. Whether they took the form of medical machinery and the computerised entry system in their workplace; the admission system in the government school; the computer and machines which take your biometric identity; or the TV and multiple gadgetry present in the houses they cleaned. However, this did not mean that they owned phones or computers. Out of the thirteen women I interviewed, only four owned their own phones, and one had a laptop in the household. Out of these, three were smartphones. A further three had owned personal phones in the past. Everyone's household contained at least one mobile phone, but they usually belonged or at least stayed in the possession of husbands or sons.

Yaseeran, in her forties, lives in a one-bedroom flat. Her household consists of her husband, a daughter and a son, his wife, and a grandson. Shifting to Delhi from rural West Bengal more than a decade ago, she is the primary earner of the family, along with her son who drives an e-rickshaw in the neighbourhood. She works in four homes where her duties consist of buying ingredients, cooking meals, and doing other household tasks. Her description of her household situation was as follows:

> **IR**: Who has the phone usually?
>
> **Yaseeran**: My son takes it outside. Sometimes he takes it, sometimes he leaves it. That's what he does. I tell him to keep the phone at home, if I have some work, I might get a call. Some employer wants to call me, or any other thing… Then how can I call and tell them without a phone?

This was considered ordinary by most of the women, though Yaseeran expresses some frustration here. However, the difficulty which not having the phone in your possession resulted in sometimes is highlighted in the story of Sitara, who is also from a village in West Bengal, as she told me the story of how she happened to come to Delhi. She described the moment she realised that her husband had gambled away the last of their money, and how she had to 'hide (chipke)' and make a call from his mobile. This seemed to hold true even more in the case of younger girls. Both Yaseeran and Sitara spoke about their daughters who begged their mothers to buy phones for them. Sandhya, the youngest of the interviewees at eighteen, humorously described the way she had to cajole and bribe her elder brothers so she could have some time on their phones.

Many women saw smartphones as a luxury product, one which they did not consider 'appropriate' or useful in their own lives. Seeta, a forty-year-old, who does part-time work hemming clothes and attaching buttons and hooks, brought up the issue of affordability.

Explaining why she prefers a new non-smartphone over a used smartphone, she also brings up the fragility of mobile phones.

> **IR**: Okay. And which phone do you have now? The small one?
>
> **Seeta**: Yes, it is the small one (non smart-phone). Dear, till now I have not been able to buy such a phone (pointing at my phone). No one in my family has a phone like that yet. Because, dear, if you have money, only then you will buy these things. For instance, if such a mobile costs 7000 rupees, so if you buy a mobile which costs 7000, what will you eat all month? Everything has to be considered. So I take phones that are of my level (aukat). I bought a phone of 1200 rupees now.

Seeta's use of the word 'aukat' (level/status/position) is very significant, and points to a clear demarcation in her mind between those who can successfully use smartphones, and for herself, for whom it would be overstepping some kind of class boundary. This is articulated by Salma as well.

Salma, who migrated from Bihar some years ago, works as a domestic help in one of the gated communities in Delhi. When I asked if she ever used her phone for anything else besides making calls, she had a scathing reply which makes a clear link between social class positions and benefiting from ICTs:

> **Salma**: What else will I use it for? We are poor people.. When there is need to call home (her village), I recharge the phone for 20 rupees. We don't have hundreds of rupees balance all the time, like you. Where I work, there, they sit like fat queens (maharanis) and order this, that, do shopping worth lakhs from their phones... This is for you all. These phones are not for people like us.

Many women talked about how easy it was to break and lose phones, and thus, how they were something that constantly need to be replaced or repaired. Some women had owned phones in the past, which for one reason or another, could not be replaced or renewed. One reason for women not keeping the household mobile phones with them was that many did not know how to perform basic operational functions on them. The biggest factor in this, according to them, was that of literacy and education.

'When I haven't studied anything, then from where will I know how to make phones work?': Literacy, Education and Stigma

As per the 2011 census, the overall literacy rate in India is 74.04%. However, this varies dramatically by region and gender. Thus, the literacy rate for women is 65.46% against 82.14% for men.[4] While Delhi has relatively high literacy rates for women (80.76%), many of the

[4] http://www.census2011.co.in/literacy.php

interviewees were from neighbouring states such as West Bengal (70.54%), Uttar Pradesh (57.18%) and Bihar (51.50%).

Many women explained that lack of literacy or education was the reason ICTs were not for them. Rameshwari, a Dalit woman who travelled hours to reach the neighbourhood where she collected garbage from the homes and cleaned out the drains, answered thus when I asked her if she used the phone:

> **Rameshwari**: No, no, I don't know all that. When I haven't studied anything, then from where will I know how to make phones work? My children sometimes say to me, Mummy, this is how, but I forget after a while, I don't know these things. Yes, when they put the call on the phone and hand it to me, then I talk to my daughters, then I am able to talk on it.

The link between ICTs and educational attainment is well-documented empirically. Thus, education is seen to be positively related to Internet adoption because of 'greater awareness, training, capabilities, and ability to evaluate content' (Pearce and Rice 2014, 4).

Though the use of ICTs and education is well-linked in the digital divide literature, a few things become significant here. One, some women pointed to their lack of proficiency in English as a barrier. Even with government and corporate efforts to create content in local languages, both hardware and software use requires some proficiency in a global language (Pearce and Rice 2014; Wijetunga 2014; Grazzi and Vergara 2014). What is more significant is the psychological link between English and upward social mobility in India. This was also articulated by other women. For Pammi, computers and English seemed to be exclusively linked together. Thus, when I asked her if she ever thought she would learn computers, she said matter-of-factly that she would never be able to learn as she did not know English.

Second, what seemed especially significant was that it did not seem to affect men the same way. Thus, while Pammi's husband worked in the same position as her and only had a year or two more schooling than her, he not only used a smartphone, but navigated the internet with confidence. Pammi spoke with pride of how he watched *YouTube* videos and learnt to fix phones and how he sent money to the village through his phone. It was his old smartphone that Pammi had, but she did not do much except attend calls and was slowly learning to read better by recognising how names and numbers connected to each other.

This was also apparent in the case of Shail and Shabana. Shail who was relatively well-educated and had studied until class 10 had a non-smart phone and had never used the internet. Shail, whose husband is an auto-rickshaw driver, became embarrassed when I asked her about the phone I saw lying on the bed. It was small, and had a crack across the screen. She told me that her husband had two smartphones.

This requires further research to explore if the stigma of being 'less educated' affects men and women differently. Shail struck me as a very driven woman, running a tailoring business from her home, extremely concerned that her thirteen year old daughter should not do household chores or learn traditionally feminine skills like stitching and embroidery but focus on her education. When I asked if she had ever used the laptop (some employer had given her husband his old and slightly defective laptop), she said 'I'm not interested in these things. (Mujhe ye sab ka shauk nahi hai)'. During analysis, I was struck by the word, which came up often in the transcripts.

'Giving an unmarried girl a phone is wrong': Upper-caste Femininity and the Governance of 'Shauk'

The word 'shauk' is originally from the Urdu language, but has become part of Hindi as well. In the context of the sentence spoken above, it can be translated as 'interest' but it also used for 'hobby' and less commonly 'desire'. Thus, the adjective 'shaukeen', a derivative of shauk, has upper-class connotations as it refers to someone who has a lot of (usually expensive) tastes or hobbies.

What struck me during analysis was the prevalence of women who said they were not interested in technology. In theory, most felt that the world has overall become a better place through technology, and made life easier. It is completely credible that they did not find a lot of use of ICTs – and not just because they felt they could not fully use it. As Eubanks (2013, 30) points out, this should not be taken as technological pessimism but the beginnings of a critical outlook which makes the connections between technology and inequity.

However, at least in the case of upper-caste, single, young women (Sandhya, Shagufta and Seema), other social forces seemed to be at play. In their declarations, they often painted themselves against others, real or imagined.

Thus, when I asked about her sister, Shagufta said 'She has *shauk* for laptop, for a big mobile phone. Her phone is more expensive than mine.' And when I asked if she likes using her phone, she drew a clear line between 'those who are stuck to their phones 24/7' and herself, who uses phone 'very little', 'by chance'. Similarly, Seema, said, 'I'm not very interested in these things, because I don't get time at all. I work full time, seven days a week, and when I come home, I want to spend time with my son.' but talked about her younger brother 'who has a lot of *shauk* - for latest mobile phones, bikes, cars etc'.

Interestingly, when I talked further about what they used their phones for, both Shagufta and Seema said they logged into *Facebook* and used *WhatsApp* almost every night. For Shagufta,

it was a routine - 'I scroll through *Facebook* every night, look at what my friends are posting, their status, timelines, share a few photos with messages, then I go to sleep.'

Sandhya, an eighteen-year-old in high school and the only girl in the family, lives with her parents and her two brothers. It was in her case that the links between upper-caste notions of respectability of women, and usage of ICTs became most apparent. During our one hour interview, she repeated the sentiment that she didn't need phones and wasn't interested in them, at least five times, sometimes attributing it to her friends, with whom she agreed. And yet, she expressed her frustration when her elder brother does not let her use his phone, and her joy at using her father's.

Leela Dube (2003) analyses the gendered structures that caste practices rely upon, and highlights that notions of caste morality and caste purity are exercised through the gendered regulation of sexuality. Thus, a concern with the 'purity' of upper-caste women results in restrictions placed on young women's mobility and life choices, guised in the rhetoric of women's safety, ensuring their 'sexual safety as defined by patriarchal families, the community, and the state' (Phadke 2005). Thus, Sandhya explains why her aunt and mother oppose the use of phones by young women:

> **Sandhya**: No one thinks phones are a good thing, not my mother, not my aunt. She says, 'what use do girls have of phones?' She says, 'when you're married then you can have your own phone, you can fulfill all your desires (*shauk*), no one will stop you then. But giving an unmarried girl a phone is wrong'. So I said, 'yes, you are right. Whatever you say, that will be done'. *laughs* Anyways, I say, what use do I have of phones?

As Sandhya talked about the 'bad atmosphere' (kharab mahaul) of her co-ed government school, she differentiated between girls who 'disappeared with boys' and her own group of friends, who were 'good girls' and agreed that 'they had no use for phones'. Thus, notions of the 'good girl' include not only not using phones, but not even wanting them. That this governing of desire is linked to women's sexuality and purity is apparent when phones are seen to be permissible after marriage by Sandhya's mother (depending on her husband's permission, of course).

'I will be trapped. That's why I don't want a mobile.': ICTs and Employers

Some women felt that phones not only did not add any value to their lives, but were in fact an hindrance. When I asked Sitara if she wanted her own phone, she said no. When I asked why, she started laughing. With an arch look, she said

> **Sitara**: Look, I work in four homes everyday. Suppose I am working, and my mobile is ringing. So will you work or pick up the phone? So this is why, if you

> keep mobile, they will say give me your number, she will say give me your number.
>
> **IR**: Who?
>
> **Sitara**: Where I work. Everyone will ask for my number. And then if they have any need, it will be 'please come Sitara, please come Sitara' *laughs*. I will be trapped. That's why I don't want a mobile.

For her, mobiles were considered a tool employers could use to take advantage of you. This was also the case with other women who worked as domestic servants. Salma and Vimla talked about how they would ignore calls from their employers when they skipped a day off work. Vimla explained that once you pick up the call, the employers would say, 'come, we will give you money for medicine', but once you are actually there, they make you do all the work. The dynamic between middle-class women and their domestic help is such that the latter often do not feel able to refuse something directly.

'I will teach her computers, even if it means not eating vegetables': Computers and the dream of employment

Aside from Shail's home, which had a slightly defective laptop, none of the households contained a computer. Interestingly, mobiles and computers seemed to be regarded as two completely separate categories. Thus, for example, the restriction on phones did not seem to extend to computers. Thus, Sandhya talked about wanting to learn to use the computer from a nearby NGO. She added it to a long list of skills she had to learn before marriage: stitching, cooking, and the beautician and computer course at the NGO.

This interesting juxtaposition of learning to use computers as a skill which not only increases your employment opportunities but your bridal prospects could be seen in the imagination of Seeta. Thus, explaining why she wanted her daughter to study further than class 8, Seeta says:

> **Seeta**: So I think that I will definitely teach her computers. Even if it means not eating vegetables. It is the truth. I will eat chutney-roti, but I will teach her computers. I will teach her computers, then I will prepare for her marriage.
>
> **IR**: So do you really think learning computers is so beneficial, for anyone..?
>
> **Seeta**: Yes, for anyone. Who knows how many people you will find with computers. I have two girls in my extended family. Everywhere, my dear, everywhere they are using computers for their work. Who knows how many boys, how many girls they require for this. When you have this skill in your hand, then you will find a lot (of jobs).

For Seeta, her daughter can escape the difficulties of her own life, by getting married into a rich household, where she can help earn, if needed. And 'learning computer' seemed to her the best way to achieve this dream. However, it became apparent that she would not be allowing her daughter much say in this decision. When she vehemently expressed that she would not

give her daughter a mobile phone even when she grew older, I asked her: wouldn't those same things be available if she learns computers?

> **Seeta**: If I ever see her... Doing something dishonourable (oonch-neech)... Then I will not educate her, because then, something else has entered her mind. Then I will make her sit at home, and I will get her married.

Thus, her dreams for her daughter functioned within strictly defined caste and gender norms.

Women who had more experience of ICTs, did not seem to think that learning to use computers led to better employment opportunities on its own. Twenty five year old Shagufta, pursuing a masters through distance education, spoke at length about how useful she has found the internet, in opening new avenues for her. Being the eldest in the house, with a mother who does not work and a father who does not provide support, Shagufta was keen on getting a good job for herself. I asked her if she thought computer classes would aid her in this, but she felt that since she already knew the basics, learning more would not be a big help. Similarly, Seema also felt that it would be much better for her to do vocational course instead of learning to use computers, if she wanted to find a better job for herself, and create a better future for her son.

Conclusion

Through semi-structured interviews, this study has attempted to explore the role of ICTs in the lives of working-class women in Delhi. A few important themes have emerged. While this study focused on computers, mobile phones and the internet, there is a need for a broader conception of technology and a need to look beyond access. A focus which only thinks of justice and technology in terms of distribution is unable to recognise when technology becomes part of the oppressive mechanism which employers use to exert control on women, or when it becomes part of the government system which refuses to recognise you and shows you your helplessness.

Working class women in India exhibit a range of opinions about and experiences with ICTs. What has emerged is that social location deeply affects women's experiences with technology. ICTs are mired in complex ways in the production of caste, gender, class and religious identities through cultural norms.

The policy implications of this are manifold. The assumption that technology is neutral and an a priori source for democratisation and participation for everyone, must be rethought. Justice is not only a matter of having access to the digital infrastructure or the internet, but experiences with ICTs are profoundly shaped by existing inequalities in society. Dorothea Kleine (2013) finds that though installed with the best intentions of transparency and efficiency, the e-

procurement system in Chile resulted in the marginalisation of small traders. As Robin Mansell (2012, 186) writes,

> Adaptive action is needed to encourage correction such that investment in hardware and software is not treated as a proxy for the capacities of people to make sense of their mediated worlds [...] Public and private investment in ICTs would be scrutinized in the light of competing claims over scarce resources.

Arguments about development and social inclusion of marginalised communities through ICTs must confront these issues.

In this study, I have attempted to be explicit about my location, and how it has shaped this project. While caste is seen as a uniquely Indian phenomenon, the issues highlighted in this study should not be taken as specifically Indian problems, those related to the 'developing' world, or as analysis of the essentialist category of the 'third world woman' (Mohanty, 1991). Instead, I have attempted to reflect on the intersectionality of women's experiences, and reflect on how this disrupts the dominant imaginary in relation to ICTs and marginalised communities.

A larger project which employs a mixed methodology of critical analysis of documents, ethnography and participant observation with all genders, can overcome some of the limitations of this study. Research must explore further the links between caste practices and technology in contemporary India. There is also a need to connect this to the political economy of ICTs. Finally, as Snyder and Prinsloo (2007, 175) write,

> Social context, far more than hardware, shapes the use of new technologies; new technologies do not hold the key to human progress; new technologies are neither causes nor cures as the context in which they are used or not used is all-important.

References

Banaji, S. (2017) *Children and Media in India: Narratives of class, agency and social change*. New Delhi: Routledge.

Cockburn, C. (1983) *Brothers: Male Dominance and technological change*. Cambridge: Polity Press.

Donald, D. (2009) 'Forts, Curriculum and Indigenous Metissage: Imagining Decolonization of Aboriginal-Canadian Relations in Educational Contexts', *First Nations Perspectives*, 2(1), 1-24.

Dube, L. (2003) 'Caste and Women' in A. Rao (ed) *Gender and Caste*. Delhi: Kali for Women, pp. 223-248.

Eubanks, V. (2013) *The Digital Dead-end: Social justice in the Information Age*. MA: MIT Press.

Fereday, J. and Muir-Cochrane, E. (2006) 'Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development', *International Journal of Qualitative Methods*, 5(1), Article 7. Retrieved [12 July 2017] from http://www.ualberta.ca/~iiqm/backissues/5_1/html/fereday.htm

Gajjala, R. (2012) *Cyberculture and the Subaltern: Weavings of the Virtual and Real*. Plymouth, UK: Lexington Press.

Gajjala, R. (2004) *Cyber Selves: Feminist Ethnographies of South Asian Women*. New York: AltaMira Press.

Gerster, R. and Zimmerman, S. (2003) 'Information and communication technologies (ICTs) for poverty reduction?' (Discussion Paper) Bern: Swiss Agency for Development Cooperation.

Grazzi, M. and Vergara, S. (2014) 'Internet in Latin America: Who uses it . . . and for what?', *Economics of Innovation and New Technology*, 23(4), 327–352.

Groenwald, T. (2004) 'A Phenomenological Research Design Illustrated', *International Journal of Qualitative Methods*, 3(1), 7-26.

Gurstein, M. (2003) 'Effective Use: A Community Informatics Strategy Beyond The Digital Divide'. *First Monday*, 8(12). Retrieved from https://firstmonday.org/article/view/1107/1027

Hacker, S. (1989) *Pleasure, Power and Technology*. Boston, MA: UnWin Hyman.

Haraway, D. (1984) 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in A.C. Hermnn and A.J. Stewart (eds) *Theorizing Feminism: Parallel Trends in the Humanities and Social Sciences*. Boulder: Westview Press.

Kleine, D. (2013) *Technologies of Choice?* London, England: The MIT Press.

Mansell, R. (2002) 'From Digital Divides to Digital Entitlements in Knowledge Societies', *Current Sociology*, 50(3), 407-426.

Mansell, R. (2012) I*magining the Internet: Communication, Innovation, Governance*. Oxford: Oxford University Press.

Oakley, A. (1981). 'Interviewing Women: A Contradiction in Terms?', in H. Roberts (ed) *Doing Feminist Research*. London: Routledge.

Open Society Foundations (2012) 'Mapping Digital Media: India'. Retrieved from https://www.opensocietyfoundations.org/sites/default/files/mapping-digital-media-india-20130326.pdf

Mohanty, C.T. (1991) 'Under Western Eyes: Feminist Scholarship and Colonial Discourses', in C. Mohanty (ed) *Third world women and the politics of feminism*. Bloomington: Indiana University Press, pp 51-80.

Newhagen, J.E. and Bucy, E.P. (2005) 'Routes to media access', in E. Bucy (ed) *Living in the information age*. Belmont, CA: Wadsworth, pp. 221–230.

Noble, S.U and Tynes, B.M. (eds) (2016) *The Intersectional Internet: Race, Sex, Class, and Culture Online*. New York: Peter Lang, Inc, International Academic Publishers.

Pearce, K.E. and Rice, R.E. (2014) 'The language divide — The persistence of English proficiency as a gateway to the Internet: The cases of Armenia, Azerbaijan, and Georgia', *International Journal of Communication*, 8, 2834-2859.

Phadke, S. (2005) ''You can be lonely in a crowd': The production of safety in Mumbai', *Indian Journal of Gender Studies*, 12(1), 42-62.

Rao, A. (2003) 'Introduction: Caste, Gender and Indian Feminism', in A. Rao (ed) *Gender and Caste*. Delhi: Kali for Women, pp. 1–47.

Sarkar, S. (2016) 'Beyond the 'Digital Divide': The 'Computer Girls' of Seelampur', *Feminist Media Studies*, 16(6), 968-983.

Schwittay, A. (2008) "A Living Lab": Corporate Delivery of ICTs in Rural India', *Science Technology and Society*, 13(2), 175–209.

Shome, R. and Hedge, R.S. (2002) 'Postcolonial Approaches to Communication: Charting the Terrain, Engaging the Intersections', *Communication Theory*, 12(3), 249-270.

Snyder, I. and Prinsloo, M. (2007) 'Young People's Engagement with Digital Literacies in Marginal Contexts in a Globalised World', *Language and Education*, 21(3), 171-179.

Teltumbde, A. (2010) The *Persistence of Caste: The Khairlanji Murders and India's Hidden Apartheid*. New Delhi: Navayana.

Turkle, S. (1995) *Life on the Screen: Identity in the Age of the Internet*. New York: Simon and Schuster Trade.

Visweswaran, K. (1994) *Fictions of Feminist Ethnography*. Minnesota: University of Minnesota Press.

Wajcman, J. (2007) 'ICTs and Inequality: Net gains for women', In R. Mansell, C. Avgerou, D. Quah, and R. Silverstone (eds) *The Oxford Handbook Of Information And Communication Technologies*. Oxford: Oxford University Press, pp. 383-403.

Wajcman, J. (1991) *Feminism Confronts Technology*. Cambridge: Polity Press

Warren, C.A.B. (2002) 'Qualitative Interviewing', in J.F. Gubrium (ed) *Handbook of Interviewing Research: Context and Method*. London: Sage Publications, pp. 83–101.

Wijetunga, D. (2014) 'The digital divide objectified in the design: Use of the Mobile Telephone by Underprivileged Youth in Sri Lanka', *Journal of Computer-Mediated Communication*, 19, 712–726. doi:10.1111/jcc4.12071.

Young, I.M. (1990) *Justice and the Politics of Difference*. Princeton: Princeton University Press

Fatma Matin Khan is an independent researcher based in New Delhi who is interested in minority subjectivity, gender, violence and new media. She has completed a MSc in Media and Communications from the London School of Economics.

Email: schuze@gmail.com.