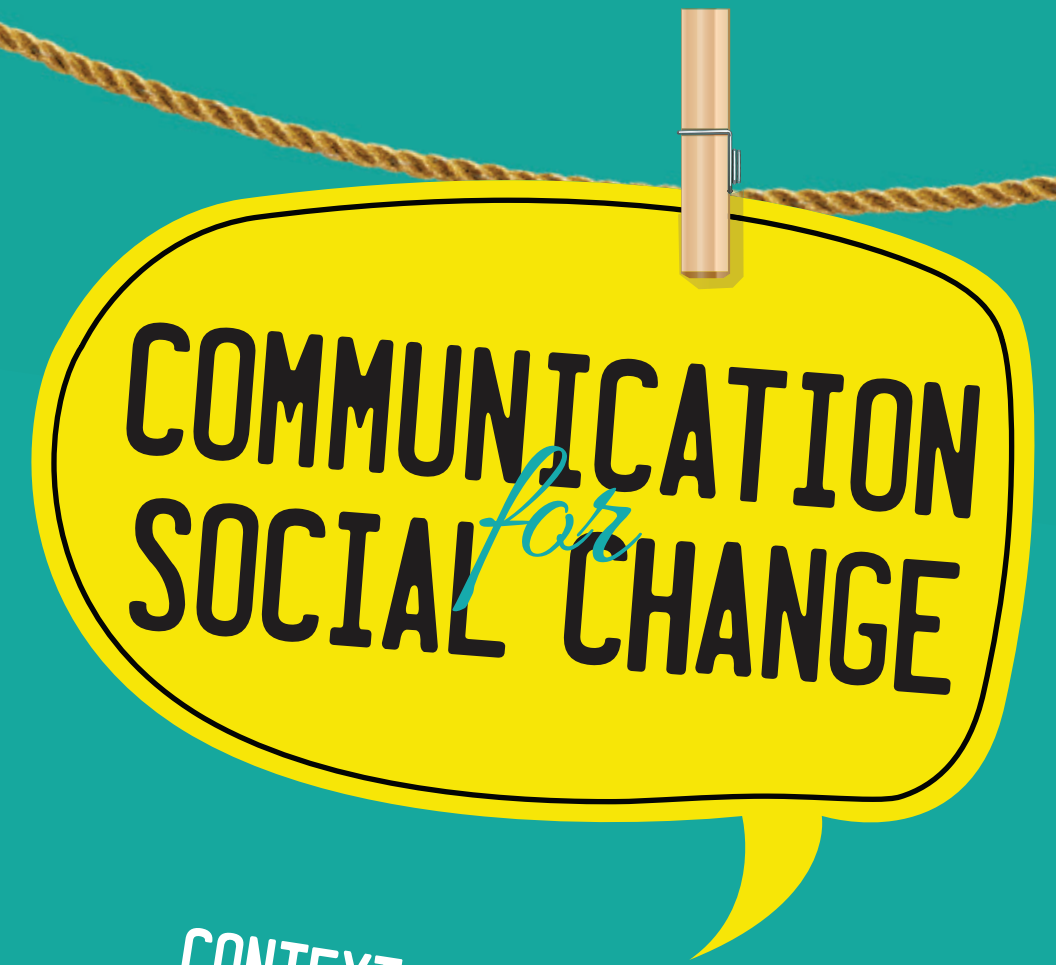
PRADIP NINAN THOMAS



COMMUNICATION *for* SOCIAL CHANGE

CONTEXT, SOCIAL MOVEMENTS AND THE DIGITAL

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PRADIP NINAN THOMAS

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To my larger family:
Daddy, Mummy, Praveen, Preetha,
Priya, Aji, Anna, Joel and Sara

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CHAPTER 1

Communication for Social Change

An Extended Introduction and Critique

This short book provides an update on the theory and practice of communication for social change (CSC). It offers insights into both the historical continuities within this field of study and the departures that have been hastened and shaped by new conjunctions between ideas and practice as well as by technology, context, social movements and social change. This volume includes chapters that specifically focus on the affordances, opportunities and limitations of *digital* interventions in CSC today. However, and against the rather typical tendency to celebrate the digital, the chapters in this volume engage critically with the digital and make a case for understanding digital actionings within defined contexts. It also focuses on the need for CSC theorists and practitioners to take *context* seriously. In other words, factoring in and understanding the contexts of communication and social change interventions can be key to the successful operationalisation and sustainability of such projects. The inability to understand context can lead to conflict and, in the extreme case of Maoism in India, has led to armed resistance against the growth paradigm favoured by the State at the expense of its indigenous communities. Chapter 3 highlights the struggles over the definitions and ownership of context.

Navigating the Text

The volume is structured in such a way that it enables readers to begin with an understanding of the state of communication and social change theory before systematically dealing with chapters that highlight content related to three key areas: context, social movement and the digital. This introductory chapter focuses on CSC theory and practice and, in particular, introduces a critique of current approaches that are grounded in behavioural change communication (BCC). It makes a case for why context, social movements and the digital are important to theorising CSC and highlights the ways in which a reading inspired by political economy can throw light on the limitations of a major public–private health communication project—the Mobile Alliance for Maternal Action (MAMA). It also highlights CSC advocacy at a global level—the Marrakesh Treaty for the Visually Impaired is an example of the actioning of communication rights, in particular the right to copyright exemptions for the visually impaired and its contributions towards easing the 'book famine' currently faced by this community. The introductory chapter also includes a review of current, critical writings on CSC theory. Chapters 2 and 3 deal with the context. While Chapter 2 focuses on why and how the context should be factored in to understanding CSC theory with the help of insights from the critical geographer David Harvey, Chapter 3 deals with the perils of not understanding context by highlighting the case of Maoist struggles in the eastern and central states of India, at least some of which are committed to preserving the lives and livelihoods of indigenous people against the state's attempts to impose its own context that is based on neoliberal development. Focusing on Maoist targeting telecom infrastructure, it deals with the question of infrastructures that enable and disable, thereby also introducing readers to 'infrastructure studies'. Chapters 4 and 5 are on social movements. While Chapter 4 includes a broad introduction to social movements and social movement theorists, it concludes with a section on what CSC theory can learn from social movement studies. Chapter 5 focuses on the nature of 'contentious actions', in particular the use of the 'public hearing' in the Right to Information (RTI) movement in India that is arguably the most important movement in post-Independent India. The following

four chapters focus on the changing nature of the digital in the context of social change. Chapter 6 deals with the role played by Big Data in the context of humanitarian crises while Chapter 7 explores the role played by community telecommunications by highlighting the case of Rhizomatica in Mexico. Chapter 8 explores the relationship between the state, digital technologies and social change with a focus on the e-government and the role played by Open Data and the Public Sector Software (PSS) in facilitating citizen access to and use of information. The final chapter, Chapter 9, highlights an issue that is rarely, if ever, dealt with—the obverse of digital plenty—that of digital waste and the political economy, and impact of this waste on communities, especially in the South. It makes a case for sustainable uses of new technologies.

Taken together, the chapters in this volume highlight new thinking, offer a critique of existing practices and explore new sources for a renewal, revision and recalibration of theory in line with contemporary challenges and opportunities to think through CSC theory for another era. While there certainly are continuities in terms of theory, there are both departures and, just as importantly, a focus on issues such as 'context' that has systematically been ignored and/or marginalised altogether in CSC theory. I have argued that this neglect and/or marginalisation of context has been detrimental to community-based understandings of needs that are grounded in culture and every day life. All CSC projects are shaped by a context that includes pre-existing institutions, social practices, cultures, power flows, hierarchies and the quality of empowerment, and their quality will simply be based on how much thinking has been factored in to understanding how communication can make a difference in often-fraught contexts in which divides are real. If markers of identity that have real material consequences such as caste, class and gender are not factored in, then CSC projects are destined to reinforce the status quo. As someone who has had practical experience in working with CSC projects, in planning, evaluation and advocacy, for over more than a decade, of research-led teaching in both UG and PG programmes, and in engaging with the global CSC community, I firmly believe that theorists have a role to play in highlighting new opportunities for theorising CSC based on new ideas, alerting readers to the persistent gaps in the

field, and offering pathways towards a renewal of CSC theory and opportunities to move beyond the status-quo-oriented engagements with the knowledge that contemporary CSC theory suffers from. Since CSC theory has always relied on borrowings from a great variety of disciplinary areas, that tradition simply has to be continued, given the real dangers that stem from the ossification of theory, and/or reliance on a narrow theorising or eschewing the need for a theorising based on engagements with inter- and multidisciplinary perspectives. Arguably, social movements today have become the laboratories for a variety of CSC practices, and have become sites for engagements with concepts and ideas (participation and empowerment for example). And there is therefore an absolute need to engage with social movement theory as there is the need to engage with theory that has thrown light on the affordances of the digital and digital advocacy. Another dimension to CSC theorising that I have not dealt with adequately in this volume is the need for an appreciation and engagement with often unheralded local practitioners and communication rights advocates who have contributed to innovations in the operationalisations of 'participation' and 'participatory communications' across the world. There is definitely a need for another volume that explicitly foregrounds the contributions of those whose CSC-linked work is grounded in commitment, an appreciation of the local and a deep understanding of communication that makes a difference in people's lives.

A Brief History of CSC Theory

To reiterate, this volume focuses on both the gaps in contemporary theorising of CSC and its analysis along with the persistent and emerging concerns in CSC that require further research. The history of CSC theory has been recounted elsewhere, and I do not want to repeat that history. However, for the sake of readers who may be new to this field, a brief history will enable the critique of CSC theory to be placed in context. With its roots in rural sociology in the Midwest in the USA and the tradition of effects research, CSC theory, in its early days, was rather singularly interested in exploring the impact of new technologies, new ideas and new information across various

development sectors, such as agriculture and health, on people's behaviours. This tradition of CSC is predicated on the assumption that exogenous technologies and ideas hasten behaviours that assist in the growth of the modern individual who is at ease with the demands of living in a modern world. The three scholars who are most often associated with the 'dominant paradigm of CSC'—Everett Rogers (2003), Wilbur Schramm (1964) and Daniel Lerner (1958)—were fervent admirers of modernity, and their writings—be it on the 'diffusion of innovations' (Rogers) or on psychological modernity (Lerner)—supported the view that the overcoming of 'tradition' was critical to the spread of modernity globally. Writing in the era of the Cold War, it was not surprising that the key message of the dominant paradigm was the need for all countries in the developing world to follow the tenets of capitalist growth. In an era characterised by bilateral aid in agriculture and health, there were major investments in the diffusion of an exogenously inspired growth paradigm, and until the late 1970s, the dominant paradigm reigned supreme. The first critiques of this paradigm emerged from Latin America where scholars began to take note of the 'development of underdevelopment' that was a direct consequence of a reliance on exogenously inspired development—a tradition of critique most famously associated with a group of thinkers collectively known as the 'dependency' school. Their critique of the diffusion model, its focus on elites and the reality of large-scale poverty, led to calls to decolonise information—a case that was first taken up by the Non-Aligned Movement and later by UNESCO. In 1980, UNESCO published the landmark study on the status of global communications *Many Voices, One World* by the MacBride Commission (1980). This commission was made up of a group of international scholars under the chairmanship of the Nobel Prize winner and supporter of decolonisation, the Irish Republican Sean MacBride. This commission made more than 80 recommendations towards the re-drawing of the terms of global communication flows, and explicitly supported communication investments in the South, introduced the notion of the right to communicate and included a critique of the dominant ideology of Western media representations of the South. This critique of unequal information and

communication flows between the 'West and the Rest' and the media in the West was interpreted as an attack on Western values, and the USA under the Republican Ronald Reagan and the UK under the Conservative Margaret Thatcher who withdrew their memberships from UNESCO. While these withdrawals led to the whittling down of UNESCO's advocacy mandate in communications, the Commission had put in motion a change in thinking from one that was based on top-down communications to a bottom-up, participatory model of communications in development (CSC, in its earlier incarnation, was referred to as communication for development). This turn towards participation in communication was influenced immensely by the writings of the Brazilian pedagogist Paulo Freire (1972) whose work the *Pedagogy of the Oppressed* inspired the participatory practices of civil-society-based movements and non-governmental organisations throughout the world. The Commission also recommended the need for media alternatives, and today we have literally thousands of alternative media practices and projects—inclusive of community radio and community telecom, hacker-inspired access and connectivity initiatives—along with many diverse media practices committed to the cause of participatory communications. This, in a nutshell, is the history of theorising in CSC. However, one of the big questions today is whether participation itself has become the 'dominant paradigm', since it is now invoked by all and sundry involved in development. There are concerns that participation has been stripped of its radical edge and has become the means to reinforce the status quo.

This volume takes the view that to focus exclusively on CSC practices such as health communication that is divorced from a comprehension of the institutions, motivations, interests and the larger political economy of aid can result in skewed understandings of a sector that has agenda-setting powers and that is global in scope. The geopolitics of global health funding in health communications simply cannot be ignored, given that its financing through public–private partnerships (PPPs) is largely supported by US-based corporations and foundations. Arguably, and in this context, concepts such as participation and empowerment are little more than 'empty signifiers' since there often is very little correspondence between the rhetorical investments

in the actions and processes related to such concepts against their actual operationalisations. In other words, participation and empowerment often act as a fig leaf to cover the persistence of the 'dominant paradigm' in CSC that is indeed well and thriving in most parts of the world. There is a straight-forward explanation for this state of affairs: 'power' is not a concept that CSC theorists readily include in their theoretical investigations, and yet, the power to decide, the power to impose, the power to resource, the power to create, the power to define and the power to invest are all necessarily key to understanding the nature of CSC today. To reiterate a well-known example, the vast resources that the Bill and Melinda Gates Foundation have expended on health and health communication have arguably skewed this sector in a particular direction that is supportive of an individual-focused, neoliberal, big-pharma approach to global health. The voices of MNCs and other powerful actors have drowned the voices of ordinary people for whom health divides are one aspect of the other divides that they face in society. The media academic Nick Couldry (2010) has, in an important contribution to CSC theory, made a case to reclaim ordinary voices along with the provisioning of enabling environments supportive of such voices against the tendency in neoliberalism to only listen to a handful of powerful voices and deny the voice of ordinary people.

Zizek's appraisal of cultural capitalism and salvation through consumption, in his slim volume *First as Tragedy, Then as Farce* (2009), offers, for example, a cogent critique of the development industry and the limits of participation. He uses the example of a Starbucks coffee advertisement that sells a 'coffee ethic' through linking the consumption of coffee to fair trade, ethical investment and the enjoyment of good 'coffee karma', thereby enhancing our enjoyment of feel-good consumptive practices. As he points out: 'The "cultural" surplus is…spelled out: the price is higher than elsewhere since what you are really buying is the "coffee ethic" which includes care for the environment, social responsibility towards the producers, plus a place where you yourself can participate in communal life…' (2009, 53–54). The upshot of our involvement in such circuits of cultural consumption is that we end up contributing to initiatives that are destined to forever deal with the symptoms of poverty but never with its causes

that include unjust trade practices, poverty and exploitation, the issue of land, etc. Participation in this utopia is limited precisely because it does not give either the producer or the consumer the opportunity to take part in an exercise of freedom. It is very similar—to the 'slacktivist' cultures that are rife in the era of social networking. This is a culture that encourages people to click and contribute to online polls and issues, but does not enable an engagement with real issues in the world of the here and now. NGOs, for the most part, tend to replicate the logic of neoliberalism and participation, and therefore tend to become the means for extending the project of neoliberalism through enabling people to participate in a variety of forms of 'compassionate capitalism'.

The CSC theorist Silvio Waisbord's (2015, 155–56) critique of the lack of understanding of policy advocacy in the context of global aid includes the following observations that mirror my own thinking.

> It is also important to recast communication in global aid as a field interested in the complexity of social problems that require nuanced, wide-ranging thinking and actions. *The intellectual richness of communication scholarship lies precisely in its iconoclastic nature and openness to multi-disciplinary theories. It is not the caricature of quick formulae and predetermined actions, dissemination materials and media, and clever messages that remains all too common in certain quarters inside global aid agencies. This is why continuing to clarify the meanings and contribution of communication research is a priority.* (emphasis mine)

There have been a few textured accounts of context inclusive of Richey and Ponte's (2008, 2011) works that explore the relationship between celebrities and international development and the political economy of 'causumerism'. This is the basis for large, multi-corporation anti-AIDS projects in Africa such as Product Red, fronted by Bono along with the involvement of American Express, Converse, Gap, Emporio Armani, Hallmark, Dell and Microsoft. Wilkins and Enghel (2013) have also explored the role of communications in the privatisation of development and projects such as the Living Proof campaign supported by the Bill and Melinda Gates Foundation and Bono.

Accounting for Context

The critical geographer David Harvey (2003, 2016) has used the phrase 'accumulation by dispossession' to make sense of the global context of neoliberal-led development in which vast numbers of people are being uprooted from their lands and have lost their livelihoods due to deeply destructive, predatory forms of capitalism. The edited two-volume account of social inequalities in the media by Servaes and Oyedemi (2016) offers an expansive view of media disenfranchisements and the reality of poverty and inequality that simply have to be taken into account in any interventions in CSC that involve communication technologies. Inequality manifests itself through markers of identity such as class and race; is operationalised via hierarchical relationships, the force of custom and everyday practices such as humiliation faced by the lower castes in India; and is operationalised through differential access and the denial of opportunities to participate as full citizens. More often than not, inequality is a key factor and the background for CSC interventions, and closing this gap remains a key objective in CSC. However, more often than not, CSC interventions simply do not deal with the root causes of poverty or account for the fact that technology-based interventions in hierarchal contexts can actually exacerbate and deepen inequality divides. Dutta (2011) has made a case for culture to be factored in our understandings of CSC. Arguably, such studies provide insights that can be usefully employed by CSC theorists and practitioners to understand the context of CSC. In my way of thinking, the glossing over, or worse the denial of the specificities of context, remains one of the major gaps in the theorising of CSC, and this book attempts to provide insights into how an understanding of the context can inform approaches to CSC, to understanding communities, and why they can be responsive, and for that matter unresponsive, to CSC initiatives. One chapter in this volume deals with the Maoist movement in India and its specific attempts to destroy the infrastructures of modernity, given that such infrastructures often play a role in taming, curbing, marginalising and destroying indigenous peoples and their cultures, livelihoods and futures. Modernisation, in other words, is a two-edged sword. Projects committed to modernisation do contribute to large,

scaled-up solutions in health and education, although they typically ignore, circumvent or ride roughshod over needs grounded in locality and culture. There is, therefore, a case to be made for locally defined development, although a number of communities just do not have access to the enabling environments consisting of local institutions, local decision-making, local resources, local autonomy, etc. that are required for local solutions. In the absence of such opportunities, large-scale sectoral development is bound to remain the major approach in global development for the foreseeable future. Perhaps the only solution, in the absence of decision-makers in development making global demands for transformative social change, is to try and ensure that such approaches are responsive to people's felt needs.

Learning from Social Movements Involved in Social Change

While understanding and learning from context is important to both CSC theory and practice, so is the need to learn from social movements. The CSC theorist Thomas Tufte (2017) has made a case for CSC theory learning from the experience of global social movements that have contributed to the invigoration of participation and empowerment, and to new possibilities for people-led change in the context and aftermath of the global crisis in the banking sector, education and dominant politics. Given my own experience in coordinating and in teaching a PG course on communication and social movements for over a decade, Tufte's perspective is a welcome and refreshing addition to theory in CSC. While social movements most certainly are crucibles for exploring alternatives to the dominant order, there is also the need to be critical when assessing social movements and to distinguish movements that have contributed to the fulfilment of long-term goals against time-bound movements that have promised much but have been unable to translate the initial euphoria of change into real, long-lasting change. Arguably, the RTI movement in India (see Chapter 4)—that began in a very low key manner in a few villages in the western state of Rajasthan but became national in scale and scope, and whose impact is still being played out in matters related to transparency and accountability of public

institutions—was successful precisely because it was an indigenous movement that was a response to acutely felt needs related to the access to information. The access to and use of information have made a difference in the quality of lives that some communities lead, since this access has enabled them to claim and enjoy rights that were hitherto denied to them. In contrast, with the benefit of hindsight, the Arab Spring promised much and delivered little. The over-hyped role of social media, evidence of at least some manipulation from Washington to bring about regime change in countries in the Middle East and the inability to translate popular support into national alternatives, can be illustrated by the fact that except for the revolution in Tunisia, the Arab Spring has been followed in its wake by failed states such as Libya and Yemen, military rule in Egypt, continuing conflict in Syria, and the persistent rule by conservatives and elites in Saudi Arabia, Bahrain and other Gulf States. Arguably, a technological determinist argument related to the singular power of social media to effect regime change dominated global media during the heady days of the Arab Spring. That trope was globally distributed and consumed, and became synonymous with the Arab Spring. Evgeny Morozov (2011) in his book *The Net Delusion* deals with this technological determinism, particularly the cyberutopianism and net-centredness that are rife today.

> If anything, the Iranian Twitter revolution revealed the intense Western longing for a world where informational technology is the liberator rather than the oppressor, a world where technology could be harvested to spread democracy around the globe rather than entrench existing autocracies…. The fervent conviction that given enough good gadgets, connectivity, and foreign funding, dictatorships are doomed, which so powerfully manifested itself during the Iranian protests, reveals the pervasive influence of the Google Doctrine. (pp. 5–6)

Learning from Communication Rights Movements

For information and communication rights activists, practitioners and theorists, the United Nations (UN) World Summit on the Information

Society (WSIS) held in two phases in Geneva in 2003 and Tunis in 2005 provided the space to both highlight the potential and the possibilities for information in social change, and to respond to major gaps such as the digital divide. While, in hindsight, WSIS did not advance the global need for communication and information rights in any substantive manner, it nevertheless was among the first to provide opportunities for civil society and information rights movements to organise around key issues related to the information society and social change. WSIS was in some respects a watershed moment for those involved in communication and information rights movements, and for campaigns such as the Communication Rights in the Information Society (CRIS). A lot has been written about the experience of civil society at the WSIS—its organisation, the role played by civil society, its contributions to global media policy, etc., notably by Mark Raboy (2004), Claudia Padovani (2004) and Sean O'Siochru (2004) among others. While one key recommendation related to the need for a digital solidarity fund floundered and died, another—the need for an Internet governance forum (IGF)—mooted at this summit, was perhaps the most successful outcome from this gathering. The involvement of civil society in the governance of the Internet, both at global forums such as ICAAN and at a national level, affirms the expertise and experience of civil society in shaping the information society. Arguably, these shapings are for the moment at least minimal, given the overwhelming role played by powerful entities such as the US government and corporates in shaping the what and how of multi-stakeholder policy-making in which some stakeholders are more equal than others. Nevertheless, a principle has been established, and that is the recognition that the expertise, knowledge and energies in civil society can and should be harnessed towards the shaping of information societies and in policy-making. The expertise now available in organisations such as the Centre for Internet & Society, Bengaluru, India is quite extraordinary given that they are involved at the cutting edge of policy-making, providing international advice; contributing to practical, informed solutions; and bringing the needed critique to the often top-heavy, status-quo-oriented discussions related to many aspects of Digital India.

For those involved in information and communication rights, the WSIS was by no means a successful summit, given that it did not advance these rights in a meaningful manner. While such summits are a rarity and therefore deserve discursive scrutiny, arguably, there have been other less well-known UN initiatives such as the World Intellectual Property Organization (WIPO) Treaty for the Visually Impaired (2012) from which lessons can be learned. This treaty has contributed to global communication rights for the visually impaired and to social change, although this example is yet to be discussed and celebrated by communication theorists. This example highlights the outcomes of a successful, focused campaign by social movements involved in disability rights. Under the aegis of the World Blind Union, this movement focused on a moral issue—that of copyright-free access by the visually impaired to the world's print resources, and their right to translate published material in languages of their choice. Perhaps the outcome of this campaign highlights the fact that a single issue related to communication rights rather than a multiplicity has far more chance to be successfully negotiated at a global level.

Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled, 2013

According to WHO (2017) statistics, there are about 273 million people worldwide who are in one way or the other visually impaired, and who have historically experienced a 'book famine'. India is home to 40 per cent of the world's visually impaired people. Traditionally, people with disabilities in India have been among the most culturally and socially marginalised people in the country. Despite Constitutional guarantees and special legislations such as the Persons with Disabilities (Equal Opportunities, Protection and Full Participation) Act, 1996, including Sections 27 and 28 that require the government to both design and invest in research in assistive devices, and make resources accessible in relevant formats, there has been a disconnect between policy and practice. However, in the preceding decade, state–NGO

collaborations related to disability access have led to significant progress in national commitments to people with disabilities. Key NGOs that played a major role include the Bengaluru-based Centre for Internet and Society (CIS), the Daisy Forum of India and the Kerala-based NGO Inclusive Planet. Special mention needs to be made of the efforts made by the lawyer-activist Rahul Cherian, whose untimely passing in February 2013 has been a loss to both international and national advocacy related to rights for people with disabilities. This section follows the lobbying work carried out by Rahul Cherian, especially in connection with the WIPO Treaty for the Visually Impaired. A number of documents related to his efforts at WIPO are available on the CIS website. As a result of the lobbying by disability activists and NGOs in India, the Copyright Amendment Bill, 2012, access commitments for the visually impaired are among the most progressive in the world today. Previously, any conversion of cultural resources into special formats required the prior permission of the copyright holder, and conversions were restricted to 'special formats'. The process of clearing permission was often onerous, made difficult by the lack of interest shown by copyright holders. 'Special formats' automatically marginalised those who were not versed with the Braille language. The amendments made to the 2012 Bill have turned the access right for the visually impaired into a natural right. As Prakash (2012) has commented,

> Section 52(1)(zb) allows any person to facilitate access by persons with disabilities to copyrighted works without any payment of compensation to the copyright holder, and any organization working [for] the benefit of persons with disabilities [are allowed] to do so as long as it is done on a non-profit basis and with reasonable steps being taken to prevent entry of reproductions of the copyrighted work into the mainstream.

Clause (zb) allows for fair use including the adaptation, reproduction and production of material for educational and personal use, and the sharing of such material among people with disabilities. This can be carried out by any organisation involved either primarily or secondarily in disability rights. This clause nullifies the previous requirement

that any organisation applying for a compulsory licence to reproduce material for the disabled had to be registered, work solely in this area and be recognised by the government. Furthermore people with disabilities could not apply for such licences by themselves (see Saikia 2010, 8). Section 31(B) allows any person working in the area of disability to apply for a compulsory licence to publish any copyrighted work for the benefit of the disabled. Furthermore, there is now a correspondence between the amended copyright act and domestic disability legislations such as the Draft Rights of People with Disabilities Bill, 2012 (GOI 2012).

51. Access to Information and Communication Technology

(1) Appropriate governments and establishments shall take measures to ensure that:
   a All content in whichever medium whether audio, print or electronic shall be made available to persons with disabilities in accessible format;
   b Persons with disabilities have access to electronic media by providing for audio description, sign language interpretation and close captioning;
   c Accessibility to telecommunication services where telecommunications will include any kind of transmission of information of the user's choosing without change in form or content of information as sent or received;
   d Electronic goods and equipment of everyday use shall follow the principles of universal design;
   e Schemes are formulated or amended to ensure affordable access to Information and Communication Technology & Electronics for persons with disabilities in rural as well as urban areas;
   f Incentives and concessions are provided to support existing websites to make them accessible to persons with disabilities. (2012, 37)

However, progress on the domestic intellectual property (IP) front has been in marked contrast to the negotiations at WIPO. The negotiations on the WIPO Treaty for the Visually Impaired have been fraught

with difficulties and have pitched the contingent from the developing world—in particular Africa, Latin America and India—against those from the USA and the EU countries. At these negotiations that began in 2008, the EU and the USA initially lobbied for a soft, non-binding instrument that allowed only 'authorised entities' who were licensed to convert material to accessible formats, thus ignoring the rights of the vast majority of disability organisations to undertake such conversions. Moreover the rules and procedures related to licensing were intentionally complex. As McClanahan (2012) writing in *The Guardian* has observed,

> A binding agreement would mean people in the global south could get immediate access to books that have already been translated into accessible formats in other countries. A treaty would also lead to enormous cost savings, as expensive translation has to be replicated in every country that wants to produce an accessible form of a given book.

Visually impaired people face a book famine in which close 95 per cent of all books published are not accessible in friendly formats. Rahul Cherian (2012a), who had been involved in the negotiations in Geneva on behalf of the World Blind Union, has written a very forthright piece on the negotiations in Geneva, the lack of transparency, the marginalisation of accredited organisations such as the World Blind Union and the closed door discussions at which only representatives of nation states were invited. This marginalisation of civil society is by no means unusual given the experience of civil society at the first iteration of the WSIS held in Geneva in 2003. Cherian (2012b) has attempted to demystify the 'legal' language—as for example the phrase 'commercial availability', and its links to exceptions that would make it impossible for any practical and effective solutions related to access. The copyright industries in the USA in particular, and in this case, the Association of American Publishers, played a key role in limiting meaningful progress in the negotiations. At the 25th Standing Committee on Copyright and Related Rights (SCCR/25) at WIPO, held in November 2012, and in line with the European Parliament,

the EU agreed to a treaty for the blind, leaving the USA as the only country against the road map towards the Diplomatic Conference in 2013 and eventually to a full-fledged binding treaty. This was followed in 2013 by WIPO establishing the Accessible Books Consortium (ABC), an initiative that supports and promotes inclusive publishing, hosts the TIGAR database consisting close to 240,000 titles and facilitates book exchanges in 55 languages, and provides a practical means to operationalise the Treaty. While the USA eventually signed the Treaty in 2013, the USA and the EU are yet to ratify this Treaty and bring it into force. In fact, the Obama administration had sent it to the Senate where it was stalled. The Treaty was agreed to by WIPO member states in 2013 and came into effect on 30 September 2016. The Treaty came into force in 2017 when it was ratified by 33 countries, including Australia; India; numerous Latin American countries, including Chile, Mexico and Brazil; the United Arab Emirates; Israel; and Singapore. The key outcomes of this Treaty include minimum standards for exceptions and limitations at a country level, and cross-border availability and trade in accessible formats. As Wechsler (2015, 403) has observed:

> WIPO's greatest achievement is, thus, not the reduction of the book famine worldwide but the establishment of a new framework for global copyright protection. It breaks the dominance of both bilateralism and of international content industries in global copyright debates by introducing a multilateral positive obligation on member states to take all appropriate measures to ensure that persons with disabilities [can enjoy] access to cultural materials in accessible formats. In conclusion, the Treaty is to be applauded as carefully, yet successfully addressing very specific humanitarian purposes within unique circumstances.

In other words, not all UN Summits and/or treaties on information and communications result in an equitable impact. As against the experience of the WSIS, this focused multistakeholder negotiation has led to practical outcomes that have made a difference in the access rights of the visually impaired to books.

A Critique of ICTs in Development

The Limits of ICT4D Theory

It is clear that the accent on projects has been to the detriment of theory. On reading Dorothea Kleine and Tim Unwin's (2009, 1060) article on ICT4D (information and communication technologies for development) in the *Third World Quarterly*, I was struck by the fact that practice has outstripped theory, and that the lessons learned from their comparative study are no different from the lessons reiterated in the area of communication for social change:

> First, sustainability issues must be built into any ICT4D initiative from the very beginning. Second, if activities are to be developed from which poor people are intended to derive benefit, it is crucial that they are implemented at costs that these people can afford. At present it seems likely that the most cost-effective and widespread mechanisms for so doing will revolve around mobile telephony. Third, new and innovative business models need to be developed to deliver services to the very large numbers of people who can afford little, rather than the few who can afford much.

One of the key areas in ICT4D is the need for robust, inter-disciplinary theorisation that goes beyond the diffusion of technology theory that is often openly technological determinist and is supportive of technology transfers in development and social change. In this way of thinking, the globalisation of information, knowledge and network societies can be engineered through the right infusions of technology—from mobile phones to telecentres within a conducive environment supportive of market-based competitive growth. This model has been favoured by lending bodies such as the World Bank and inter-governmental agencies such as the UN, and private firms such as Microsoft, resulting in multi-billion dollar investments in a range of ICT4D projects. In many of these projects, an acknowledgement of contextual contingencies has almost always has been an outcome of evaluation. In other words, the need to factor in context is often one of the findings post the evaluation of the project. The tendency to reify technology is commonplace, and as the eminent Indian historian Romila Thapar

(2017, 66) has argued, in order to understand historical, epochal change, 'we have to go beyond technology in assessing how a culture understood and used it'.

In contrast to this theoretical approach, which undergirds the dominant model related to ICT4D, there is, as Chrisanthi Avgerou (2010, 4) describes it, a theory that explores the social embeddedness of technologies and people in dynamic and contingent local contexts.

> The socially embedded innovation research approach finds the assumption of the transfer and diffusion perspective about the nature of information systems to be overly simplified and misleading. It has developed more elaborate ontologies of IS innovation as socially constructed entities. The focal point of such research is the process of innovation in situ…. They are theoretically grounded in social theory, such as actor network theory (ANT), structuration theory, and organisational institutionalism, which provides insights and vocabularies to address conceptual relationships, such as technology/society, agency/structure, and technical reasoning/institutional dynamics. The main objective of such studies has been the development of theoretical capacity for addressing questions concerning the way specific categories of technologies and social actors clusters are formed, shape each other, and lead to particular socioeconomic outcomes.

While this approach validates context, it also rather significantly accounts for institutional dynamics, and takes an open approach to understanding the mutual shapings of technologies, users and networks.

The context of ICT4D includes institutions—inter-governmental institutions, state, private sector, NGOs and other organisations—that have invested in the diffusion of technology paradigm and who are involved in extending policy frameworks supportive of such interventions. The structural analysis of these key players and an understanding of their motivations need to be a focus for research precisely because they play a structuring role in the ICT4D arena. 'Who benefits from such interventions?' ought to be a key question for research, given that it is not always the case that the projected beneficiaries are actually

in a position to take advantage of these technologies, considering the access-related issues that stem from caste, class, gender and other hierarchies. The Microsofts of this world have a major interest in investing in ICT4D, given the returns from software sales and the extensions of their market. When governments and major companies collude in investments in software parks and the like in a country like India, there is always the potential for collateral damage, of people being forcibly being removed from their lands, as was the case in the IT corridor close to Bengaluru.

Structural analysis needs to be complemented with more innovative approaches to understand the tryst with technologies at local levels in which people and technologies are involved in a mutual shaping. Actor Network Theory (ANT), for example, enables one to go beyond technological and social determinism. The mobile phone does shape behaviours, even if one were to argue that that shaping is bounded by the technology itself, and in this sense and in the context of an ICT4D project, it is useful to understand how the technology and its users mutually shape each other. It can be used to understand how technologies are adapted in local contexts, made sense of and used, and the negotiations involved in such adaptations. Andrade and Urquhart (2010, 358) explain why ANT is superior to the theory of the diffusion of innovations.

> Diffusion of innovations is largely focused on the innovation itself—i.e. technology—and does not challenge its implementation; it accepts the innovation as it is and relies on certain individuals—for example, early adopters and opinion leaders, among others—for its diffusion. ANT's sociology of translation affords the reconstruction of the mobilisation of a complex network of players…ANT is focussed on the arrangement of and the negotiation between both humans and non-humans…around the proposed innovation to adapt it in a specific context….

While there are issues with the operationalisation of ANT, it offers researchers an opportunity to explore complexity and get out of the straitjacket of dominant theorising related to ICT4D.

So while we would all agree that ICTs can be used in development, the question that we need to ask is whether the mixture of

ICTs currently used in development is sustainable, whether there has been a careful study of its use and its benefits to marginalised communities—for example women and children—whether its use is based on an understanding of ICTs as a tool or as an all-sufficient substitute (technological determinism), whether ICTs are being used in parallel to support other changes in structures—for example gender equality, land ownership and human rights—whether the potential of ICTs is used in the content of creating realistic options, whether there is sufficient infrastructural support for ICTs, whether there is a commitment to long-term use of ICTs, whether ICTs are being used in conjunction with other appropriate technologies such as radio, whether people are involved in making production, whether ICTs are closely tied into the rhythms of local life, complementing life, whether there is a strong commitment to local capacity building, whether there is real empowerment as opposed to incremental change, and whether ICTs are being used in the renewal of culture and feeding into social change. The other major issue with ICT projects is their replicability. Studies have shown that many of the world's favourite ICTs in rural development projects are basically showcases—there has been little or no replicability, given costs and infrastructural issues. So while these projects may look good for World Bank and UNDP propaganda, these projects have existed in isolation and have not influenced the mainstream of development.

It would seem to me that, given the larger political economy of ICT4D, and the involvement of hardware and software vendors, aid and funding agencies, inter-governmental agencies, NGOs and governments, the accent is squarely on connectivity and access issues, and bridging the digital divide—thus the strong project orientation in this area. However, there are a number of areas that can become the focus for research from within political economy and cultural studies trajectories, and that could become the basis for theorising:

1. Policy Studies—issues related to how, why and who make ICT for development policy, and how international, regional and national policy processes are deliberated and framed. Policy provides the necessary explanations as to how resources are allocated, why they are allocated—for example through capacity-building

workshops—and why certain pathways are preferred to others. A key issue that can be explored in the context of ICT policy is governance, for example in the context of e-governance policy. There are bound to be variations in the involvement of civil society actors in e-governance. ICT policy can be studied at a variety of levels—for example, hardware and software policy, regulatory policy, mainstream versus grassroots policy, contents policy, language policy and format policy. ICT for development is not a silo operation; in fact, it connects to subjects explored in a variety of chapters in this volume, including e-governance, PSS, and free and open source software (FOSS). There is a need to explore governance and regulation issues in this new economy, and the organisations, instruments and regimes of IP that protect digital property.

2. There is also the need to generate theory from a political economy perspective, for instance, the political economy of ICTs for development. There is a need to study the structures of ICT for development, and the role of the state, the private sector and civil society in ICTs for development projects and initiatives. Of particular interest is the role played by private firms—both global organisations such as Microsoft and local firms such as Infosys—in setting the agendas for ICT for development, via trade lobbies and also through sponsorship, capacity building, and partnerships with the government and civil society. There is a critical need for studies that explore the leveraging of power that result in preferential deals for ICT vendors sourcing hardware and software, to understand the beneficiaries of ICTs in development. Who invests, sponsors and why? Who gains from connectivity? What are the primary motivations that lead to connectivity? What are the conditions for access and use?
3. There is also the need to theorise information from the perspective of inter-sectoral convergences and the universality of information applications across all productive sectors including the manufacture, trade, and ownership of genetic and biological information, including 'human biological information' (1996). James Boyle refers to this as the 'homologisation of information' (n.d., 3)—the fact that it makes little sense today to distinguish between genetic

and electronic information because both types of information have begun to overlap and face the same problems of regulation. When culture and nature are translated and commodified into digital information, the commercial exploitation and ownership of this information does have the potential to become a source of extraordinary power.

4. There is a need to understand and engage with some of the key public issues arising from the interfaces between technological convergences and society, including the new dynamics of exclusion that Scott Lash (2002, 24) refers to as the 'new type(s) of stratification, in which social class depends on relations to intellectual property and rights of access to the lifted-out spaces of technological forms of life'. These new forms of exclusion, the basis for what is referred to as the digital divide, are a result of the extension of property values to every conceivable aspect of culture and nature, animate and inanimate, critical to the growth of global capital.
5. There is also the need to theorise the principles and practices of 'participation' in ICT for development projects. Far too often, participation, along with other buzzwords such as interactivity, are viewed as a given. There is a need to interrogate the actual practices and levels of participation in the context of project planning and design, implementation and evaluation.
6. There is a need to theorise the access and use of ICT for development technologies—from computers to mobile phones and other technologies—using ANT theory as described earlier in this chapter. To reiterate, there is a need of studies that explore the relationships and negotiations between people and technologies. A useful way of theorising this relationship is to use Bruno Latour's concept of 'quasi objects', itself borrowed from Michel Serres, to describe the ways in which technologies 'become' and are shaped by human use. In Harris' (2005, 172) words,

> [T]his quasi-object is what determines humanity through the long history of exchanges between objects and subjects. Its role is not only historical but extant: our social relations continually revolve around quasi-objects. The description, exchange, creation and consumption of objects define our individual actions

> and collective transactions. Given this we can never grant sovereignty to either the subject or the object, what is important is the transaction or swapping, the role that the quasi-object plays in constructing and maintaining relations. Thus the quasi-object is to be seen as a generator of inter-subjectivity constructing the 'we' and 'I', the collective and the individual, which both emerge as the result of its exchange or 'passing'.

In other words, computer use in a telecentre or one of Negroponte's OLPC (One Laptop per Child) computers at school involves a social construction of use, a continuous transaction and mutual shaping between subject and object. The use of this concept to understand this mutual shaping is bound to generate insights into the myriad ways in which ICTs and human beings are enmeshed in a continuous, mutual shaping that affects experiences and behaviours. Hamid Ekbia (2009, 2565), in a study of digital artefacts as quasi objects, highlights what needs to be done: 'By shifting the question of "What is a digital artefact?" to "How is an artefact collectively qualified?", this line of enquiry provides the possibility for us to tell "stories" about what these artefacts can do'.

7. There is a need to theorise the many different varieties of ICT-based interventions in urban and rural contexts, especially those that are enabling new cultures of use, and that are based on new delivery and circulation structures. In other words, there is a need to theorise urban and rural technological interventions, inclusive of cultural piracy and localised interventions. There is also a need to learn from and explore the possibilities for 'translation'. Galperin and Bar's (2006) work on microtelcos in Latin America reveal that new cooperative telecom schemes are, for example, being explored at local levels between communities and municipalities in countries throughout that region. What such studies show is that in contexts where access is limited, there are now opportunities for options based on affordable access. Galperin and Bar (2006, 77) highlight the factors that contribute to low-cost applications:

> A number of technological innovations are…eroding the economic advantages hitherto enjoyed by large telecom operators,

> enabling microtelcos to extend ICT services further out into areas unattractive to conventional operators. These technologies, share a number of advantages, among them lower costs, modularity based on open standards, less regulatory overhead, simple configuration and maintenance, scalability, and support for multiple applications.

8. The 'circuit of culture' model can be used to understand the ICT4D as a process that includes both production and consumption. Gerald Goggin (2006), for example, has used this model to understand the cell phone in terms of five aspects: production, consumption, regulation, representation and identity.

Theory and CSC: The Need for Replenishment

I have, in my own contributions to CSC theory, made a case for the need for political-economy-inspired approaches, and the chapters in this volume continue in this vein (see Thomas 2012, 2014, 2015). Theory in CSC has always benefited from borrowings from different areas of the social sciences. The diffusion of innovations theory that remains the lynchpin of much theorising within the 'dominant paradigm' of CSC theory stems from rural sociology, while the theoretical tradition associated with education-entertainment is based on Albert Bandura's social cognitive theory. This eclecticism arguably has contributed to an understanding of the many factors that need to be considered in any understandings of communications interventions in social change, be it at the level of individual behaviour, collective mobilisation or cultural interventions in social change. Just as modernisation theory can be viewed from numerous disciplinary vantage points, so can CSC theory, and I believe that this variety adds to understanding the many complexities—from human behaviour to institutional responses that typically clad the frameworks for CSC interventions. I make a case for factoring in 'infrastructure' studies (Chapter 3), given that both visible and invisible communication infrastructures, such as satellites and undersea cables that facilitate data flows, have an impact

on development. The Satellite Instructional Television Experiment (SITE) in India (1975–77) arguably contributed to the scaling up of communication for social change, and its offshoot—the Kheda project—contributed in some measure to thinking through transformative local change. One can also add aspects of political economy of infrastructure to this list, including its governance, its objectives, whether it is in the public or private interest, its resourcing, the befuddling and invisibility of power concentrations, and economic and social interests, its control over all manner of data flows, its exclusions and so on. In other words, it is important that we include in our definition of infrastructure both the relative invisibility of its architecture, and the ways in which political and economic decisions and interests enable and shape the consumption of such infrastructure through a multiplicity of everyday practices. In the words of Graham and Simon (2001, 11), 'Infrastructure networks are…involved in sustaining what we might call "sociotechnical geometries of power"'. The provisionings of information and communication infrastructures, and media and digital development, are important aspects of contemporary CSC interventions. Undergirding such investments is the belief that the provisionings of infrastructure will result in universal benefits, resulting in people becoming a part of and investing in the grand narratives of progress. I have also in my recent writings made a case for factoring in social movement theory. An article in the *Journal of Communication* (Thomas 2017a) argues the case for CSC theory to factor in 'contentious actions', the repertoires of contention used in social movements that are fundamental to organising, education and social change. Using the RTI movement in India as a case study, I argue the case for the specificity of contentious actions that are grounded in locality and that enhance empowerment, and for CSC theory to factor such actions into its theorising of social change, actions and processes. I also think that it is necessary to expand the universe of thinkers who have contributed to our understandings of participation and empowerment, often from within entirely different traditions in communications and cultural scholarship. Another article in the *European Journal of Communications* (Thomas 2017b) has made a case for factoring in the extraordinary contributions by the cultural and literary theorist and activist Raymond Williams and the activist-historian E. P. Thompson

to CSC theory. Williams' working class roots and commitment to adult education offer insights into participation and empowerment, while Thompson's forensic examinations of the contributions made by the working classes in Britain to democracy and rights offer important insights into understanding the moral ground for working class actions and appreciating how they have shaped the democratic public sphere in Britain. Arguably, there are numerous activists and scholars in different contexts around the world who have contributed to our understandings of communications in social change, and I think it is an imperative in CSC that we highlight their very specific, context-based contributions and add them to the list that includes names such as Paulo Freire, Fals Borda, Luis Beltran and Jesus Martin Barbero, among others. Jacobson and Storey's (2004) article on the German philosopher Jurgen Habermas' theory of Communicative Action along with Jacobson's (2016) article on the Nobel Prize winning economist Amartya Sen's 'capabilities approach' and their applications to CSC theory are examples of a very intentional approach to expanding the universe of key scholars whose insights are significant to our own appreciation of CSC as theory, method and process.

The affordances of community-owned technological alternatives such as telecommunication cooperatives in indigenous communities in Mexico (see Chapter 7), and the value of open source solutions in e-government exemplified by open data projects in the UK and PSS in India (Chapter 7) point to the possibilities for community access to and ownership of the terms of digital interventions. There have been some theoretical innovation in CSC, exemplified by Dutta's culture-based approach (2011), Wilkins and Enghel (2013) and Thomas's political-economy approaches, Waisbord's (2008) institutional critique, theorising on the visual in CSC, and Lenni and Tacchi's (2013) work on evaluation methods—although their writings have not as yet become the basis for a widespread re-evaluation of what ought to be the focus for a field that is yet to also take seriously a range of theoretical inputs from social movement theory to social and cultural anthropology, new media studies, technology studies and political economy. Tufte's book on the need to learn from social movements is certainly a step in the right direction since social movements today arguably act as key laboratories for social change. Two relatively new theories of CSC—Sen's

capabilities approach and Latour and Calhoun's ANT—exemplify how theorising from the outside, as it were, could illumine and provide frameworks for contemporary approaches to CSC as theory and practice. The intent of the series Palgrave Studies on CSC, edited by Thomas and de Fliert, and in which more than 17 books have been published to date, was to intentionally expand the field through insights from cultural nationalism, queer studies, journalism and new approaches to studying methods in CSC. This book provides an entry point to an understanding of why it is necessary to rethink approaches to CSC theory and practice in changing environments, what some of the new approaches have foregrounded, and how the relationship between theory and practice can be best illustrated by highlighting case studies. The intent here is not to throw the baby out with the bathwater, as it were, but to foreground the continuing validity of communications that can make a difference in people's lives and the relevance of participatory approaches, and to also put forward the case for a more robust approach to CSC theory in which political economy, as much as cultural analysis, and an understanding of the materiality and shaping possibilities of the many technological interventions are factored in to an understanding of CSC theory.

Behavioural Change Communications in the Era of Collective Behaviours of Sharing

A cursory glance at the reigning texts in the field used in UG and PG programmes (Manyozo 2012; McAnany 2012; Melkote and Steeves 2015) certainly suggests that theory has been left behind in an ever-expanding universe of practice. CSC theory seems to have a lot to say about BCC that remains a perpetual priority and a favourite for developmentalists involved in short-term change, while remaining more or less silent on the need for approaches that are focused on the long-term and on inter-sectoral change. Silo approaches such as BCC are problematic, not because there isn't a need for communications focused approaches but because such approaches often focus exclusively on information, messages and effective transmission at the expense of understanding both the vagaries and the realities of circumscribed contexts and situations that are undergirded by social

and cultural mores as much as by political economy, which together contribute to the effectiveness of behavioural change. Exhorting target groups to eat three vegetables and two fruits each day is all well and good, although it does not account for the context or for the many extra-behavioural factors that contribute to healthy eating. Such approaches are by no means uncommon. Neo-colonial frameworks for development interventions perpetuate systemic violence, as is the case with Aboriginal communities in Australia, as have privatised and corporatised approaches to development supported by the World Bank and numerous intermediary organisations, contractors, sub-contractors and development brokers. While the scale and logistics of expansive development require partners and partnerships, silo approaches multiplied across innumerable sectors have contributed to development becoming a major industry. The industrialisation of development has been accompanied by over investments in the rhetoric of development, participation and empowerment, and to technological determinism, at the expense of people-led development that is cognisant of local realities and requirements. Moreover, the individual orientation that is a hallmark of BCC ignores the fact that behavioural change can also be seen in terms of how change affects collective behaviours, and how this in turn can help in the development of strong communities based on the ethic of sharing, mutuality and reciprocity—an ethos that is perhaps best expressed in contemporary manifestations of 'free labour' online. While the specific characteristics of labour online have been the focus for debates from the perspective of political economy, there is certainly a case to be made for CSC theory to learn from the many expressions of online sharing towards understanding how collectives cooperate in the sharing of knowledge, practice, resources and time in the era of the digital. Traditional knowledge related to health is often freely shared among indigenous communities, and the growing movements related to food and seed sovereignty are deeply invested in collectives as the basis for social change. I am reminded of the collection and sharings of traditional knowledge on grain such as millet and on traditional medicine by Dalit women involved in the Deccan Development Society, Pastapur, India. Such sharings seem to remain at askance with neoliberal approaches to development that are consumer and individual led. However, here again I think that it is

important that we do not fall into the trap of valourising 'free labour' as 'the' answer, given that that ethos too can be institutionalised within a neoliberal economic framework.

One of the intriguing aspects of digital information as a commodity is that it cannot, by its very nature, be completely commodified, unlike the vast majority of physical goods. As an immaterial good and service, its status as property remains elusive and is difficult to map onto the existing system of IP. While not denying the fact that information as a material commodity and as immaterial flows and generate massive amounts of global capital, the disruptive potential of the digital continues to unsettle both governments and corporates. The worldwide FOSS movement offers compelling evidence of shifts in the production of value. As Daniel Ross (2011, 145) succinctly puts it,

> What we find when we are considering FOSS is that it is in fact a highly conflicted entity within the capitalist apparatus of accumulation: simultaneously capable of being commodified, yet acting as reactant of decommodification: consuming commodified wage labour, yet existing as the product of volunteerism.

This ambivalent nature of information, in particular its differential valuations at the moment of exchange, reflects, as Murdock has suggested, the beginnings of an emerging 'gift economy', and as such is indicative of the deep fault lines that run within the core of the contemporary informational mode of production. Projects such as Wikipedia and the worldwide success of FOSS as a movement suggest that the meaning of participation can be redeemed online via cooperative endeavours that involve collaboration, sharing and volunteerism that have also been described case as a case of 'digital gifting'. Murdock (2011, 25) in an essay that argues the case for moral economies supportive of 'public cultural commons' describes digital gifting as follows:

> Digital gifting outside the price system operates at three basic levels. Firstly, there is sharing where individuals circulate self-produced or found material using their own website or web space…. At the next stage up there is co-operation, where individuals contribute to making a shared domain more useful…. Finally, there is

> collaborative activity designed to create a new cultural product or resource that can be freely shared.

Perhaps Murdock is over-optimistic about digital gifting, although one cannot deny the fact that such forms of collaboration continue to provide the basis for inspired alternatives. The very same ethos of sharing is also found in social movements—again a rich repository of global experience in sharing knowledge, common resources, and the shaping of collective imaginaries towards more just and equitable social change.

One of the characteristic features of CSC theory today is the lack of any sustained institutional critique resulting in theory for the most part focusing on ideational 'frameworks' for CSC approaches and interventions. As always there are exceptions, and I would like to specifically commend writings by Silvio Waisbord, Karen Wilkins, Florencia Enghel and Thomas Tufte. While the first three scholars have explicitly critiqued the complicities of large, resource-rich organisations in CSC, Tufte's assessment of UNICEF's work in CSC captures the complexities, possibilities and ambivalences of a large inter-governmental organisation's involvement in CSC interventions across the world (see Chapter 7 in Tufte 2017). While both hard and soft critiques are necessary, I think that it is necessary to focus on the 'shaping powers' that some of these institutions have on the terrain, priorities and approaches to CSC in any given context, and the political economy of their partnerships with the state and civil society institutions and their consequences, against the continuing lack of any definite evidence of the long-term worth of specific interventions in areas such as Mobile (M) Health. Let me focus on a specific case, that of the MAMA, to highlight some of these concerns.

The Political Economy of MHealth: Mobile Alliance for Maternal Action

Without a doubt, investments in MHealth have consistently accounted for the lion's share of CSC funding over the last decade. It is not, therefore, surprising that there has been a spike in primary and

secondary research on the impact of MHealth. Given the global ubiquity of mobile phones and the enhanced opportunities for connectivity, conversation and consumerism, there have been major investments in 'access to information' on a variety of issues inclusive of e-government, consumer and marketing, and development and health information. The medical apps market alone is worth several billions of dollars, while MHealth was worth US$26 billion in 2017.[1] There literally are thousands of studies on the efficacies of MHealth in journals such as the *Journal of Medical Internet Research*, *Telemedicine Journal and EHealth*, *Health Communication* and *Journal of Health Communication*; databases such as PubMed, Cochrane Library and Global Health Database; and numerous systematic reviews of the literature including Hall, Cole-Lewis and Bernhardt (2015), Brinkel et al. (2014) and Ali, Chew and Yap (2015).

The allure of the mobile phone in development is that it is, for the most part, a personal consumer device that is owned and operated by individuals. In other words, the autonomy that mobile phones enhance is its strength, given that it facilitates private information access; hence the investments in a range of health apps for the middle class, health text SMSs for women in the developing world on reproductive and maternal health, nutrition, newborn and child health, and provision of health calendars, reminders, medical regime management, etc. In other words, mobile phones reinforce the value and legitimises the benefits of 'information' as the missing link in development and social change, be it the provisioning of information from the government or regular health information to individuals. However, information flows do not occur in a vacuum, and there is an ecology as well as a political economy that determines information access and its effective use. Let me illustrate this with a rather innocuous description of the MAMA that was a time-bound (2011–15) PPP between the US Agency for International Development (USAID) and a variety of organisations including MNCs such as Johnson & Johnson (J&J), J&J's pregnancy and parenting advocacy initiative BabyCentre, the UN Foundation, the MHealth Alliance supported by Johns Hopkins and funded by

[1] See Statista, https://www.statista.com/statistics/295771/mhealth-global-market-size/, accessed 9 July 2018.

USAID, along with institutions in South Africa, Nigeria, India and Bangladesh.

> A great example of a successful PPP in international development is the Mobile Alliance for Maternal Action (MAMA) initiative. This is a PPP between USAID, Johnson & Johnson, the mHealth Alliance, the United Nations Foundation, and BabyCenter. It seeks to deliver vital health messages to new and expectant mothers in developing countries through their mobile phones. One of the great successes of the partnership was with private companies; resources were more readily available and the partnership had the ability to rely on private sector expertise to move particular elements of the project forward. Relying on Johnson & Johnson's experience reaching consumers has helped make this project successful in Bangladesh and prompted a launch in South Africa on its second anniversary. (Shore 2013)

A closer look at this description of MAMA reveals that there is a lot more to this partnership than has been revealed in the description of MAMA. Partnerships between USAID and US corporations and philanthropic bodies such as Coca-Cola, Disney, and the Bill and Melinda Gates Foundation are legion. While on the one hand, such partnerships facilitate the leveraging of deeper financial resources, on the other hand, the partnerships are not based on altruism but on investments that generate profitable returns and the expansion of economic, social and political capital. In the case of J&J, access to and use of mobile devices is absolutely key to the global expansion of their pregnancy, pharma, medical, and baby products and devices, and their firm BabyCentre (now known as Mission Motherhood) is focused on expanding their mobile footprint both generally via mobile users and also through specific partnerships such as with Facebook's Free Basics. A farewell letter from MAMA's executive leader Kisten Gagnaire (2015) reveals that key to the MAMA initiative was a partnership with Facebook's Free Basics programme. The Free Basics programme is an attempt by Facebook to corner the global search and sociality market by teaming up with local telecom vendors. The objective is to provide limited access to the Internet to low-income consumers, although it is also an opportunity to tap

into a consumer market and coral captive audiences across the world. While the project has begun in a number of countries, it was closed down in India because of protests by civil society, pro-net neutrality activists, who made the case for full rather than limited access to the Internet. Facebook's intent was to both partner with the mobile phone company Reliance Jio, a firm that belongs to the largest conglomerate in India, and also shape Internet use and consumption patterns. The Free Basics app in Mexico features Virgin, while in Kenya, Airtel. In a study of the Free Basics app in six nations, West and Biddle (2017) found that BabyCentre featured as a preferred app, and that its larger purpose was to enable J&J to collect as much information as possible on potential consumer search behaviours and habits.

> While the BabyCenter app offers users practical health information, it also provides the company with profitable data on users' search behaviours and the interests and habits of potential customers—something that could compromise the scope or even the accuracy of the information provided.

In a 2014 interview, J&J global strategy manager Christina Hoff told *AdWeek* magazine that with BabyCenter, the company 'can tell what a mom is going to do before she does [it] based on what she is searching for'. She explained how BabyCenter data had helped the company market pharmaceuticals to parents, and boasted that data from the app is more valuable than what the company learns from parents' activities on Facebook and Twitter.

Another partner in the MAMA initiative is the UN Foundation. The UN Foundation brokers partnerships to help fulfil the UN's Millennium Development Goals (MDG), and among the long list of its corporate partners is J&J, described thus:

> Johnson & Johnson is the world's most comprehensive and broadly based manufacturer of health care products, as well as a provider of related services, for the consumer, pharmaceutical and medical devices and diagnostics markets. The more than 200 Johnson & Johnson operating companies employ approximately 122,000 men and women and sell products throughout the world.

The MHealth Network (now called the Digital Health Network), based in the USA at Johns Hopkins University and supported by USAID, brings together health groups involved in expanding MHealth initiatives throughout the world.

In the USA, such partnerships are celebrated because they suggest worthy expenditures of the taxpayer's money through USAID and partnership with the mother friendly corporation, J&J. A blog post in the *Huffington Post* by Kate Otto (2011) celebrated this partnership:

> This Mother's Day, paying your taxes never felt so great.
>
> As Americans gather on Sunday to honor our mamas, we should also be celebrating 'MAMA', a new global health initiative launched by the US Agency for International Development (USAID). MAMA, the Mobile Alliance for Maternal Action, is an innovative partnership co-founded by USAID—who invests your tax dollars in foreign assistance programs—and mom-friendly corporate collaborator Johnson & Johnson.

However, it is important to also see such partnerships as an aspect of foreign policy that is essential to the US government's geopolitical economic strategy. Birn and Fee (2013, 1618–19), in an article in *The Lancet* on the Rockefeller Foundation's role in global health, highlight its geopolitical role that went beyond health, 'stimulating investment, development, and economic growth; stabilising colonies and emerging nation-states by helping them meet their social demands of their populations; improving diplomatic relations; expanding consumer markets; and encouraging the transfer and internationalisation of scientific and cultural values'. They go on to add that the Gates Foundation has emulated Rockefeller, although the Rockefellers today are invested heavily in private sector financing of health, 'impact investing', involving venture capitalists who address social and environmental issues 'while also turning a profit' (ibid., 1619). While the involvement of USAID offers new economic opportunities to corporates such as J&J, the UN Foundation helps shape the image of corporate social responsibility (CSR), public interest and the wholesome, mother-friendly, large heartedness of organisations such as J&J. This relationship between the US government and US corporates is

by no means straightforward. J&J, like other US-based corporates, has been embroiled in both public and private legal cases related to its pharma and other products. For example, an article in the *Huffington Post* written by Steven Brill (n.d.), entitled 'America's Most Admired Law Breaker', is an investigation of the ways in which J&J violated US Food and Drug Administration (FDA) rules related to the marketing of the anti-psychotic drug Risperdal to both the elderly and children with ADHD, despite evidence of links between its use and increased risk of strokes and growth abnormalities in children.[2] J&J faces more than 5,000 lawsuits brought by women affected by the carcinogenic effects of talc in Johnson's Baby Powder, one of the world's most widely used mother and baby talc powers, and many thousands of lawsuits against its blood thinner Xarelto that has caused bleeding, and from women suffering complications arising from the use of the vaginal/pelvic mesh throughout the world (Hsu 2017). However, and despite this track record, J&J as one of the largest health providers in the USA is a company that the US government cannot ignore precisely because it is a powerful MNC with both national and global economic interests. So it is not surprising that they are involved in lobbying for preferential treatment and policies supportive of their interest.

> Following is a list of our highest current priorities for US Government Affairs activities:
>
> Support for:
>
> - Health care reform that expands access to health care, improves the long-term sustainability of the US health care system while maintaining and building on the best aspects of our system, including incentives for medical innovation.
> - Policies to protect the safety and integrity of our product supply chains
> - Comprehensive corporate tax reform
> - Civil justice reform
> - Enactment of FDA user fee reauthorisation legislation
> - Open markets and enforcement of international obligations

[2] See https://www.fda.gov/ICECI/CriminalInvestigations/ucm375816.htm, accessed 9 July 2018.

- Protection of intellectual property
- Payment system reforms that improve patient care, help improve overall system efficiency and encourage medical innovations
- Protecting patient access to drugs in Medicare Part D
- Policies to improve patient access to copay assistance
- Policies to ensure continued appropriate access to consumer health products such as pseudoephedrine
- Policies to prohibit minors from accessing dextromethorphan-containing products

Opposition to:

- Proposals to change market-based elements of the Medicare Part D programme
- Implementation of Patient Protection and Affordable Care Act provisions related to the Independent Payment Advisory Board
- Policies allowing for importation of pharmaceutical products.[3]

With donations given to senators and congressmen throughout the USA,[4] J&J does have the support it needs to have preferential policies in place, and to oppose moves that might affect its competitive strength globally and its ability to profit. USAID is closely involved in the globalisation of Bedaquiline, a drug for multidrug-resistant tuberculosis manufactured by Janssen Pharmaceuticals owned by J&J. This is a new class of antibiotics, and the company has donated 30,000 six-month courses worth the value of US$30 million and signed memorandums of understanding (MOUs) with USAID to make further investments through USAID to countries throughout Central Asia, South and Southeast Asia, and Africa. In fact, between 2001 and 2015, USAID has been involved in more than 1,400 PPP with US corporates worth US$16.5 billion. A report from the Brookings Institute (Ingram, Johnson and Moser 2016) on this relationship deals with the added value that corporates gain from this relationship with USAID inclusive

[3] See http://www.investor.jnj.com/_document?id=00000159-faf7-d862-ab5f-fbff604b0000, accessed 9 July 2018.

[4] See http://www.investor.jnj.com/_document/political-contributions-midyear-update-2017?id=0000015d-9ddb-d986-ad7d-9fff47250000, accessed 9 July 2018.

of additional funding, government relationships and power to leverage, and concludes that more often than not, this foothold is translated into a mainly commercial operation.

> Many corporations began their relationship with USAID from a philanthropic perspective and have transitioned into relationships focused more on commercial interests, largely through the perceived failure of philanthropic PPPs to produce lasting results. Others started and have remained solely focused on PPPs that support their commercial interests alongside social goals. Fewer corporations remain involved principally through philanthropic approaches. (ibid., 13)

Acknowledging Some Truths Related to the State, Development and CSC

There are a number of truths about the nature of development today that require reiteration.

1. While the state continues to be a major player in extensive development, in areas such as CSC, the private sector, foundations and civil society have begun to play a key role in funding a diverse range of initiatives from health campaigns (the Bill and Melinda Gates Foundation) and media development (Open Society Foundation) to ICT initiatives such as telecentres (Microsoft). While many of their projects have contributed to a strengthening of local capacities and behavioural change, there is a lack of independent information on the sustainability of such initiatives and empowerment-based social change. CSR (see Sogge 2016) is driving many of these global initiatives, although there is a lack of evidence on the public benefits of CSR. The largest ever project on CSR by the EU (the IMPACT Project or 'Impact Measurement and Performance Analysis of CSR') has been shelved for lack of any clear indication of benefits, while in countries such as India, CSR has become a legally mandated requirement for all companies over a certain size. So the lack of evidence from the field does suggest that CSC projects tend to be discrete and short term, and in

which the increased accent on scientific monitoring and evaluation (M&E) is not backed by evidence of real changes over time. The explosion in auditing development is donor-driven and is often not based on meaningful inclusion of stakeholders (see Emmanuel 2015).

2. PPPs are increasingly playing a large part in development projects today in areas such as e-governance and national digital initiatives.
3. In the context of neoliberal development, the state has become a facilitator and enabler of private investments through using public money for infrastructure projects, brokering land deals for Special Economic Zones (SEZs) and IT corridors (Bates 2008).
4. There is a strong, unexamined belief in technological determinism in the public sector, and this has led to major investments in digital solutions at the expense of investments in social policy and its implementation. An accent on leapfrogging development through digital interventions is widespread. The Government of India's (GOI) efforts to demonetise the economy in 2016 was partly driven by the desire to create a cashless, plastic society and help leapfrog Indian citizens into becoming digital consumers, although it is unclear as to whether this move factored in the daily wage earners in informal economies who survive because of the availability of cash.
5. There clearly has been an accentuation towards a segmented approach to development in which discrete areas such as health and agriculture are not connected to larger livelihood issues. This has led to market-specific solutions that are a logical consequence of neoliberal development in which the individual has become the site for a number of discrete, separate interventions.
6. The reality of uneven development that was theorised by David Harvey and others has been forgotten and replaced by a growth at all costs attitude inspired by the Washington Consensus. However, and in the light of the turn away from unfettered globalisation and the global rhetoric of protectionism particularly in some parts of the developed world, there has been a recognition of the consequences of uneven development even in the world's premier economy, the USA, where rust belt workers voted for Trump, and in the UK, where the unemployed and under-employed voted for Brexit.

7. There is a realisation that 'context' has been under-theorised in the context of CSC initiatives. Arguably an understanding of the complexities and dynamics of context that consists of structures, institutions, practices, and cultural and social normative orders is required precisely because this framework affects individuals as members of a class, clan or caste grouping differentially. It affects any given community's relationship with the state, given that in typical hierarchical societies, access to resources as well as compensation for the loss of access to resources, as for instance state expropriation of land for SEZs and smart cities, are over-determined by power, a consideration of status, and the nature of social, economic, political and cultural capital enjoyed by that community. In other words, social relations are constitutive of all development processes, and these need to be factored into any understanding of development. Status matters; it structures and gives meaning to uneven development. An understanding of context is therefore critical to understanding the distribution of development and the equities and inequities associated with such distribution (see Campling, Miyamura, Pattebden and Selwyn 2016). While behaviour change communication is not meant to ruffle or change context in any dramatic way, given its emphasis on individual change at attitudinal and behavioural levels, communications for empowerment simply has to deal with the complexities and intricacies of context in order to shape enabling environments within which empowerment can be realised. Process-centred alternatives such as participatory action research (PAR) is an excellent tool for empowerment and M&E, provided that it is accompanied by enabling environments that facilitate an operationalisation of action-oriented knowledge that is based on flexibility, and that is focused on the various components and levels at which intervention works. Guijt (2010, 1033) in an article on the operationalisation of PAR in Minas Gerais, Brazil, makes the point that there is a need for rethinking M&E in the context of complex and messy partnerships.

> We assumed that monitoring had to be developed as a single system, organised around indicators and an objective hierarchy, following a key unspoken assumption that permeates

> mainstream M&E thinking. Experience showed, however, that it was important to differentiate between technical and organisational monitoring, on the one hand, and monitoring the social processes underlying the partnership, on the other. Our final analysis treated each development activity as unique, determined by its own organisational mechanisms and dynamics, its own planning and evaluation cycle, and the participants involved. We identified three distinct types of activity, each requiring its own monitoring approach: technical innovation, innovation dissemination, and organisational themes. Thus, the notion of approaching all monitoring through one type of data process (indicator based) and one version of partnership was acknowledged as a crude and inappropriate way to view information needs. In institutional transformation through messy partnerships, each activity is characterised by its different social organisation, links to the group(s) driving the monitoring work, maturity, degrees of actor engagement, the ability or inability of indicators to represent the issues at hand, and degrees of organisational embeddedness.

While PAR is based on a synthesis between local and self-knowledge and expert knowledge, the originator of PAR, the Colombian scholar Orlando Fals Borda, believed that the ultimate objective was to strive towards the autonomy of local knowledge. Arguably, this is not the case with most exercises of PAR in the world today, given that 'experts' are continuously involved in project cycles that have limited scope to operationalise PAR in any meaningful way (see Mata 2004).

8. While, for the most part, societies, in order to survive, need to strive towards the creation of harmony, harmony is often imposed through written and unwritten rules and practices, as is the case in societies where caste is not only primary consciousness but also intersects with the material, and frames opportunities for economic advancement. The materiality of caste suggests that class too needs to be factored into understanding social dynamics at a local level. Given this reality, it is dishonest to claim that infusion of technology, or for that matter the social shapings of technology, will result in greater appreciations of the other or voluntary change supportive

of the interests of others. Again, results of the 2016 elections in the USA do suggest that initiatives such as Black Lives Matter and LGBT liberation remain secondary to majoritarian concerns even within a knowledge economy. In other words, difference exemplified by race and gender may have traction in a knowledge society, but strictly up to a point when the persistent privileges of class and status assert their dominance. Zizek (1997) has rather provocatively argued that the project of multiculturalism and the celebration of 'difference' is to the advantage of capitalism since every discrete struggle facilitates a disunity and takes away the need to fight larger, more universal struggles against capitalism. To him, this is a Eurocentric and partial project that disallows an engagement with the larger ways in which the structures of capitalism operate in contemporary society. While this position can be considered incendiary, the fact that it highlights the many-fractured nature of contemporary struggles and its consequences needs to be heeded. We simply have to reckon with the fact that social and economic cleavages, and the reasons for reinforcing such cleavages have remained consistent, and have persisted, reshaped and been reinforced in successive epochs including our own. The institution of caste in India, for example, has been reshaped in the context of India's tryst with globalisation, financialisation, privatisation and majoritarian nationalism. There simply is no escaping the larger political economy of capitalism.

9. There is a strong critique of international financial institutions (IFIs) and other multilateral development institutions that have invested in solutions without at first dealing with the root causes of inequality. John Harriss' (2001, 13) critique of the World Bank and social capital makes the point that Robert Putnam's (the social capital evangelist) accent on civic organisational networks making a difference in development pays scant attention to the deep structural problems that resist any easy voluntarism. 'It systematically evades issues of context and power. The mystification serves the political purposes therefore of depoliticising the problems of poverty and social justice; and in elevating the importance of "voluntary association" in civic engagement, of painting out the

need for political action'. This accent on voluntary action at the expense of the state's investment in poverty reduction and redistribution of wealth is an important facet of the neoliberal agenda for development.

10. The neoliberal agenda in the context of CSC has certainly resulted in what one can call the 'celebritisation' of development. UNICEF's adoption of celebrity brand ambassadors such as Angelina Jolie, and Bono's involvement in the Product RED campaign need to be viewed in relation to their championing of attitudinal and behavioural change in the context of discrete areas such as health and the benefits of 'causumerism'. Tackling child poverty requires an engagement with structures, institutions, redistribution mechanisms, and norms and habits—that organisations like UNICEF simply avoid. Empowerment requires enabling mechanisms, and for any given community to be able to take advantage of opportunities for empowerment. Ponte and Richey (2014, 82) in an article on brands, celebrities and development highlight the development through a cause-integrated consumption model, whereby buying a product such as American Express or Levi's, via cause-related marketing (CRM)—what they call Brand Aid—results in a share of profits being put into a worthy cause such as child poverty in Africa or the girl child in Asia. As Ponte and Richey (2014) point out,

> A fundamental problem with Brand Aid initiatives is that they are teaching people how to give from a narrowly individualistic and consumption-oriented perspective…. Brand Aid provides an easy solution to current crisis by linking the global economy to international development—a development that enables corporations to brand themselves as caring without substantially changing their normal business practices, while consumers engage in low-cost heroism without meaningfully increasing their awareness of the struggles of people they are supposed to be helping.

The larger context of such forms of interventions includes the withdrawal of state support for development, and increasing

reliance on private money in development. However, the private sector normally does not invest in development for purely altruistic reasons. Neither do celebrities who are often brand ambassadors for both products and causes.

Conclusion

This rather lengthy introduction on the need for CSC theory to look beyond BCC, and to factor in the interests and play of power involved in PPP such as MAMA highlights the fact of the steady corporatisation of CSC initiatives, especially in the area of health and health communications. While one has to acknowledge the large amount of funding that private philanthropic organisations contribute to global health, there is a sense in which the provision of welfare is being privatised and large MNCs and organisations are given access to potentially large markets for their products. Surely as theorists committed to social change, there is a need for us to both explore and highlight the contradictions in the very nature of these global foundations. Richey and Ponte's study of the role of MNCs and celebrities in the RED, anti-AIDS initiative for funding the availability of anti-retroviral drugs in Africa, highlights the relationship between causumerism, developmentalism and neoliberalism. A study on global health philanthropy and conflicts of interests in the *PLOS*/medicine journal highlights the fact that, for example, close to half of the stock belonging to the Bill and Melinda Gates Foundation is invested in the conglomerate Berkshire Hathaway, a company whose largest investment is in Coca-Cola, an MNC whose products are directly linked to the global obesity crisis. The Foundation has established partnerships with Coca-Cola and has publicly stated that public health practitioners can learn from Coca-Cola! Berkshire Hathaway also has investments in GlaxoSmithKline, J&J, Procter & Gamble and others. Stuckler, Basu and McKee (2011, 2) make the point that precisely because of their financial holdings and power, such organisations escape critical scrutiny although they should '[i]n the interests of public health, and particularly because poor communities affected by the foundation's actions do not automatically have a

feedback mechanism to influence the decision of private funders…' be subject to 'the same scrutiny received by public institutions'. It is quite telling that despite many years of PPPs in health and in other areas, there is as yet very little evidence in favour of the claims made by these initiatives related to 'their contribution to reducing poverty and inequalities' (Gideon and Unterhalter 2017, 137) and the efficacies of mobile communication. While one can certainly make a case for using mobile phones as a central device for health messaging, there is very little evidence that it is being used effectively by consumers, given the variations in access to smartphones, the domestication of the mobile phone in some contexts, and variations in how information is accessed and used on mobile devices, and lack of access to pharma products and to regular health services. In the absence of such studies, we tend to rely on project claims, anecdotal evidence, and the celebratory accounts of technologies and consumer devices creating social change. In Chapter 1 of the *Handbook of Global Health Communication* (2012), the editors, Silvio Waisbord and Rafael Obregon, offer a historical perspective on theorising in health communication that mirrors the history of theorising in CSC. While they put forward the case for nuanced explanations of impact such as in entertainment-education (EE), since there is a diversity of ownership, processes and enabling environments supportive of EE health communication, arguably, in terms of scale and reach, the majority of initiatives in health communication are funded through PPP initiatives involving large inter-government, aid, corporate and philanthropic bodies. While community-based initiatives that are participatory and community-led do contribute to sustainability, these are by their very nature small scale and local, and typically not used for theory building. Waisbord and Obregon (2012) point out that 'theory-testing' is not a priority for donor-fund health programmes precisely because they are interested in short-term impact (Obregon and Waisbord 2012, 25). If that is indeed the case, then there is a need to build theory on the basis of such local experiences precisely because the impacts over time are demonstrable, and social change at the level of communities palpable. While there is still space for grand theory in CSC, locality offers us opportunities to learn about how and why communities prioritise communications

interventions that will be helpful for refining our own understandings of the place and space for theory in CSC. This theory cannot be cut from the same cloth as it were, given the diversity of factors that affect the operationalisation of theory and practice in contexts around the world. At best, CSC theory offers a scaffolding and a framework to guide research. Grand theory in CSC can never substitute or account for the frameworks that guide popular experiences that are grounded in local ecologies of best practice. As critical scholars, I believe that there is a need for us to explore bottom-up theorising, persistently critique the 'biomedical model of health' (Waisbord and Obregon 2012, 20), and highlight questions of power in health communication and CSC in general.

References

Ali, E. E., L. Chew and K. Y. Yap. 2016. 'Evolution and Current Status of MHealth Research: A Systematic Review', (1–8), (http://dx.doi.org/10.1136/bmjinnov-2015-000096).

Andrade, A. D., and C. Urquhart. 2010. 'The Affordances of Actor Network Theory in ICT for Development'. *Information Technology and People*, 23 (4), 352–74.

Avgerou, C. 2010. 'Discourses on ICT and Development'. *Information Technologies and International Development*, 6 (3), 1–18.

Bates, R. H. 2008. 'The Role of the State in Development'. In *The Oxford Handbook of Political Economy*, edited by Donald A. Wittman and Barry R. Weingast, 1–20. Oxford: Oxford University Press.

Birn, A.-E., and E. Fee. 2013, May 11. 'The Art of Medicine: The Rockefeller Foundation and the International Health Agenda'. *The Lancet*, 381 (9878, May), 1618–19.

Brill, S. n.d. 'America's Most Admired Lawbreaker'. *The Huffington Post*, The Miracle Industry Series. Available at: http://highline.huffingtonpost.com/miracleindustry/americas-most-admired-lawbreaker/ (Accessed 12 May 2017).

Brinkel, J., A. Kramer, R. Krumkamp, J. May and J. Fobil. 2014. 'Mobile Phone based MHealth Approaches for Public Health Surveillance'. *Sub-Saharan Africa: A Systematic Review*,

International Journal of Environmental Research and Public Health, 11 (11), 11559–82.

Boyle, J. n.d. *A Politics of Intellectual Property: Environmentalism for the Net*, 1–23. Available at: http://www.wcl.american.edu/pub/faculty/boyle (Accessed 5 June 2007).

Campling, L., S. Miyamura, J. Pattenden and B. Selwyn. 2016. 'Class Dynamics of Development: A Methodological Note'. *Third World Quarterly*, 37 (10), 1745–67.

Cherian, R. 2012a. Ring-side View: Update on WIPO Negotiations on the Treaty for the Visually Impaired. 13 August, Centre for Internet and Society. Available at: http://cis-india.org/accessibility/ring-side-view (Accessed 10 February 2013).

———. 2012b. Linking Commercial Availability and Exceptions in the Treaty for Visually Impaired/Persons with Disabilities. 23 January, The Centre for Internet and Society. Available at: http://cis-india.org/accessibility/blog/linking-commercial-availability-and-exceptions-in-tvi (Accessed 10 February 2013).

Couldry, N. 2010. *Making Voice Matter*. London: SAGE.

Dutta, J. M. 2011. *Communicating Social Change: Structure, Culture & Agency*. New York, NY/London: Routledge.

Ekbia, H. R. 2009. 'Digital Artifacts as Quasi-objects: Qualification, Mediation, and Materiality'. *Journal of the American Society for Information Science and Technology*, 60 (12), 2554–66.

Emmanuel, Z. N. Y. 2015, 10 May. The State of Monitoring and Evaluation of NGO's Projects in Africa. Available at: https://www.linkedin.com/pulse/state-monitoring-evaluation-ngos-projects-africa-yannick-emmanuel (Accessed 12 January 2018).

Freire, P. 1972. *Pedagogy of the Oppressed*. Harmondsworth: Penguin.

Gagnaire, K. 2015. 'Goodbye from MAMA'. UN Foundation. Available at: http://unfoundationblog.org/goodbye-from-mama/ (Accessed 14 February 2018).

Galperin, H., and F. Bar. 2006. 'The Microtelco Opportunity: Evidence from Latin America'. *Information Technologies and International Development*, 3 (2), 73–86.

Gideon, J., and E. Unterhalter. 2017. 'Exploring Public Private Partnerships in Health and Education: A Critique'. *Journal of International and Comparative Social Policy*, 33 (2), 136–41.

GOI. 2012. *The Draft Rights of People with Disabilities Bill, 2012 (1–86)*. GOI, Ministry of Social Justice and Empowerment, Department of Disability Affairs. Available at: http://socialjustice.nic.in/pdf/draftpwd12.pdf (Accessed 10 February 2013).

Goggin, G. 2006. *Cell Phone Culture: Mobile Technology in Everyday Life*. New York, NY: Routledge.

Guijt, I. 2010. 'Rethinking Monitoring in a Complex Messy Partnership in Brazil'. *Development in Practice*, 20 (8), 1027–44.

Hall, A. K., H. Cole-Lewis and J. M. Bernhardt. 2015. 'Mobile Text Messaging for Health: A Systematic Review of Reviews', *Annual Review of Public Health*, 36, 393–415.

Harriss, J. 2001. *Depoliticising Development: The World Bank and Social Capital*. New Delhi: LeftWord Books.

———. 2005. 'The Ordering of Things: Organisation in Bruno Latour'. *The Sociological Review*, 53 (1): 163–77.

Harvey, D. 2003. *The New Imperialism*. Oxford: Oxford University Press.

———. 2016. *The Ways of the World*. London: Profile Books Ltd.

Hsu, T. 2017. 'Risk on All Sides as Women Sue Over Johnson's Baby Powder and Cancer'. The *New York Times*, 28 September. Available at: https://www.nytimes.com/2017/09/28/business/johnson-and-johnson-baby-talcum-powder-lawsuits.html (Accessed 12 November 2017).

Ingram, G. M., A. E. Johnson and H. Moser. 2016. 'USAID's Public-Private Partnerships: A Data Picture and Review of Business Engagement, Global Economy and Development', Working Paper 94, February. The Brookings Institution, Washington DC.

Jacobson, T. 2016. 'Amartya Sen's Capabilities Approach and Communication for Development and Social Change'. *Journal of Communication*, 66 (5), 789–810.

Jacobson, T., and D. Storey. 2004. 'Development Communication and Participation: Applying Habermas to a Case Study of Population Programs in Nepal'. *Communication Theory*, 14 (2), 99–121.

Kleine, D. and T. Unwin. 2009. 'Technological Revolution, Evolution and New Dependencies'. *Third World Quarterly*, 30 (5): 1045–67.

Lash, S. 2002. *Critique of Information*. London/Thousand Oaks, CA/New Delhi: SAGE.

Lennie, J., and J. Tacchi. 2013. *Evaluating Communication for Development: A Framework for Social Change*. Oxon: Routledge.

Lerner, D. 1958. *The Passing of Traditional Society: Modernising the Middle East*. New York, NY: The Free Press.

List of J&J's 2017 Issue Priorities for U.S. Government Affairs & Policy Activities. Available at: http://www.investor.jnj.com/_document?id=00000159-faf7-d862-ab5f-fbff604b0000 (Accessed 12 February 2018).

List of J&J's Political Donations in 2017. Available at: http://www.investor.jnj.com/_document/political-contributions-midyear-update-2017?id=0000015d-9ddb-d986-ad7d-9fff47250000 (Accessed 20 January 2018).

MacBride, S., ed. 1980. *Many Voices, One World: Communication and Society Today and Tomorrow: Towards a New More Just and More Efficient World Information and Communication Order*. Paris/London: UNESCO/Kogan Page.

Manyozo, L. 2012. *Media, Communication and Development: Three Approaches*. New Delhi: SAGE.

Mata, D. 2004. 'Communication for Social Change in Latin America: Contexts, Theories and Experiences'. *Development in Practice*, 14 (5), 673–80.

McAnany, E. 2012. *Saving the World: A Brief History of Communication for Development and Social Change*. Urbana–Champaigne, IL: University of Illinois Press.

McClanahan, P. 2012. 'US and EU Blocking Treaty to Give Blind People Access to Books'. *The Guardian*, 30 July. Available at: http://www.guardian.co.uk/global-development/2012/jul/30/us-eu-blocking-treaty-blind-books (Accessed 10 February 2013).

Melkote, S. R. and L. H. Steeves. 2015. *Communication for Development: Theory and Practice for Empowerment and Social Justice.* New Delhi, Thousand Oaks, London, Singapore: SAGE.

Morozov, E. 2011. *The Net Delusion: The Dark Side of Internet Freedom*. New York, NY: Public Affairs.

Murdock, G. 2011. 'Political Economies as Moral Economies: Commodities, Gifts and Public Goods'. In *Handbook of Political Economy of Communications*, edited by J. Wasko, H. Sousa and G. Murdock, 13–40. Hoboken, NJ: Wiley-Blackwell.

Obregon. R., and S. Waisbord. 2012. *The Handbook of Global Health Communication*. Hoboken, NJ: Wiley Blackwell.

O'Siochru, S. 2004. 'Civil Society Participation in the WSIS Process: Promises and Reality'. *Continuum: Journal of Media and Society*, 18 (3), 330–44.

Otto, Kate. 2011. 'Mama Knows Best'. HuffPost, 5 August. Available at: https://www.huffingtonpost.com/kate-otto/mama-knows-best_b_858645.html (Accessed 17 May 2017).

Padovani, C. 2004. 'The World Summit on the Information Society: Setting the Communications Agenda for the 21st Century? An Ongoing Exercise'. *Gazette: The International Journal for Communication Studies*, 66 (3–4), 187–91.

Ponte, S., and L. A. Richey. 2014. 'Buying into Development: Brand Aid Forms of Cause-related Marketing'. *Third World Quarterly*, 35 (1), 65–87.

Prakash, P. 2012, 23 May. *Analysis of the Copyright (Amendment) Bill, 2012*. Centre for Internet and Society. Available at: http://cis-india.org/a2k/blog/analysis-copyright-amendment-bill-2012/ (Accessed 10 February 2013).

Raboy, M. 2004. 'The World Summit on the Information Society and its Legacy for Global Governance'. *Gazette: The International Journal for Communication Studies*, 66 (3–4), 225–32.

Richey, L. A., and S. Ponte. 2008. 'Better (Red)TM than Dead? Celebrities, Consumption and International Aid'. *Third World Quarterly*, 29 (4) 711–29.

———. 2011. *Brand Aid: Shopping Well to Save the World*. Minneapolis, MN: University of Minnesota Press.

Rodriguez, C. 2001. *Fissures in the Mediascape: An International Study of Citizen's Media.* NJ: Hampton Press, Cresskill.

Rogers, E. 2003. *The Diffusion of Innovations*. New York, NY: Schuster & Schuster.

Ross, D. 2011. *The Political Economy of Free and Open Source Software*. PhD Thesis: York University, Toronto.

Schramm, W. 1964. *Mass Media and National Development: The Role of Information in the Developing Countries*. Stanford, CA: Stanford University Press.

Saikia, N. 2010. *Disability and the Indian Copyright (Amendment) Act, 2010*, Social Science Research Network. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1600621 (Accessed 10 February 2013).

Servaes, J. and T. Oyedemi. eds. 2016. *Social Inequalities, Media and Communication: Theory and Roots.* New York, London: Lexington Books, Lanham, Boulder.

Servaes, J. and T. Oyedemi. eds. 2016. *The Praxis of Social Inequality in Media: A Global Perspective.* New York, London: Lexington Books, Lanham, Boulder.

Shore, R. 2013. 'Intermediaries and Public Private Partnerships a Foundation for Success'. K4Helath Blog, 29 May. Available at: https://www.k4health.org/blog/post/intermediaries-and-public-private-partnerships-foundation-success (Accessed 12 January 2016).

Sogge, D. 2016. 'The Corporate "Wax Nose"'. *Open Democracy*, 16 November. Available at: https://www.opendemocracy.net/transformation/david-sogge/corporate-wax-nose (Accessed 9 July 2017).

United Nations Foundation. *What We Do: Our Corporate Partners*. Available at: http://www.unfoundation.org/what-we-do/partners/corporations/index.jsp?page=2 (Accessed 10 January 2018).

Stuckler, D., S. Basu and M. McKee. 2011. 'Global Health Philanthropy and Institutional Relationships: How Should Conflicts of Interest Be Addressed?' *PLOS/Medicine*, 12 April, 1012. Available at: https://doi.org/10.1371/journal.pmed.1001020 (Accessed 10 January 2015).

Thapar, R. 2017. *Indian Cultures as Heritage: Contemporary Pasts*. New Delhi: Aleph Book Company.

Thomas, P. N. 2012. 'Beyond the Status Quo? Observations on Theorising Development, the Digital & Social Change in India'. In *Development Communication in Directed Social Change: A Reappraisal of Theory and Practice*, edited by Srinivas Melkote, 218–30. Bowling Green: AMIC.

———. 2014. 'Development Communication & Social Change in Historical Context'. In *Handbook on Development Communication &*

Social Change, edited by Karin Wilkins, Thomas Tufte and Raphael Obregon, 7–19. Blackwell Wiley.

Thomas, P. N. 2015. 'Communication for Social Change: Making Theory Count'. In *Beyond the Impasse: Exploring New Thinking in Communication for Social Change*, edited by P. N. Thomas, 71–78. Special issue of the *Nordicom Review*, 36.

———. 2017a. 'Contentious Actions and Communications for Social Change: The Public Hearing (*Jan Sunwai*) as Process'. *Journal of Communication*, 67 (5), 719–32.

———. 2017b. 'The Contributions of Raymond Williams and E. P. Thompson to Communications for Social Change Theory and Practice'. *European Journal of Communication*, 32 (5), 405–18.

Tufte, T. 2017. *Communication and Social Change: A Citizen's Perspective*. Cambridge and Malden: Polity Press.

USAID. *USAID's Bedaquiline Donation Program in Partnership with Johnson and Johnson*. Available at: https://www.usaid.gov/what-we-do/global-health/tuberculosis/technical-areas/bedaquiline-donation-program (Accessed 11 January 2017).

US Food and Drug Administration Office of Criminal Investigations. 2013, 4 November. *Johnson & Johnson to Pay More Than $2.2 Billion to Resolve Criminal and Civil Investigations*. Available at: https://www.fda.gov/ICECI/CriminalInvestigations/ucm375816.htm (Accessed 12 January 2017).

Waisbord, S. 2008. 'The Institutional Challenges of Participatory Communication in International Aid'. *Social Identities*, 14 (4), 505–22.

———. 2015. 'Three Challenges for Communication and Global Social Change'. *Communication Theory*, 25 (2), 144–65.

———. 2015. 'WIPO's Global Copyright Policy Priorities: The Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled'. *European Yearbook of International Economic Law*, 391–403.

West, S., and E. R. Biddle. 2017. 'Facebook's Free Basics Doesn't Connect You to the Global Internet—But it Does Collect Your Data'. Global Voices, 27 July. Available at: https://globalvoices.

org/2017/07/27/facebooks-free-basics-doesn't-connect-you-to-the-global-internet-but-it-does-collect-your-data/ (Accessed 21 November 2017).

Wilkins, K., and F. Enghel. 2013. 'The Privatization of Development Through Global Communication Industries'. *Media, Culture & Society*, 35 (2), 165–81.

World Health Organisation, Blindness and Visual Impairment. Available at http://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment (Accessed 9 September 2018).

Zizek, S. 1997. 'Multiculturalism, or, the Cultural Logic of Multinational Capitalism'. *New Left Review*, 1 (225), 28–51.

———. 2009. *First as Tragedy, Then as Farce*. London/New York: Verso.

Section 1

Dealing with Context

The two chapters in this section, namely Chapters 2 and 3, explore the need for CSC theory to factor in 'context'. Understanding context is an imperative, given that contexts for CSC interventions differ, and that understanding contexts enables one to shape interventions that are based on an understanding of local circumstances, cultures, institutions, hierarchies, power flows, and possibilities and opportunities for communication to make a difference in the lives of communities. It highlights the context of a marginalised indigenous community, the Irulas, who live precarious lives on the edges of globalising Chennai, India. Chapter 3 highlights Maoist destruction of telecom infrastructure as an act of defiance against the state's attempt to impose development without any prior attempts to understand context or local needs. The imposition of development and modernity has been of benefit to some people although its consequences—as for example the expropriation of indigenous land and resources—has had an adverse impact on the futures of the local communities.

CHAPTER 2

Accounting for Context in Communication for Social Change*

While carrying out doctoral study related fieldwork in 1985 in rural Tamil Nadu, India, among fisherfolk, landless labourers and small- and medium-sized farmers, it became clear to me that the audiences/beneficiaries of communication and social change projects are varied in terms of their caste, class compositions, their socio-economic status, and the cultural and social capital that they possess. In other words, communication for social change audiences are not cut from the same cloth. Since their circumstances and conditions differed, the opportunities that they had to translate the benefits of communication into everyday practice also differed, and were based on their specific circumstances and abilities to leverage information and communication in their development and empowerment. Their contexts, in other words, varied, and their abilities to translate information/communication into sustainable, long-term initiatives also varied because of their differential access to the means of translation. The economist Amartya Sen (1999: 5) has suggested that authentic development is based on people

*I would like to acknowledge Dr Beena Thomas' role in introducing me to the Irula communities in and around Chennai.

enjoying a range of '*functions*'—such as cultural and social well-being that are fundamental to the choices that people make, and *capabilities* that enhance *freedom* and *agency*. Understanding local conditions or the context is especially important, given that it plays an absolutely critical role in how inputs are translated into viable, sustainable outputs. Shanmugavel (2013), in a study of the uses and affordances of mobile phone use among low caste communities in rural Tamil Nadu, India, has observed that mere 'access' to mobile telephones does not provide any guarantees for their being used to communicate to higher castes. A Dalit labourer cannot use his phone to speak to his high caste landlord precisely because the dictates of caste condition the etiquette of mobile phone use. In another study by Jeffrey and Doron (2013) of mobile phone use among boat communities in Benares, North India, it was found that mothers-in-law control the phones and phone habits of their daughters-in-law, thus severely circumscribing their possibilities for empowerment. In contrast, indigenous communities with the help of the NGO Rhizomatica in Mexico (see Chapter 6) now own and operate their own telecom cooperative because of an enabling environment that includes supportive policy, the presence of an enabling NGO with capacities and knowledge, and the mediation and remediation of technical and other skills among local community members within an enabling context.

This very basic observation, however, is often ignored by CSC theorists who tend to not differentiate between the many audiences who are net recipients of CSC inputs—be it technology, knowledge, skills or information—who possess different functions and capabilities, and who therefore have vastly different opportunities for translation. Just as audiences differ, conditions differ, and both are two sides of the same coin. As Enghel (2015, 13) has observed in an article on the relationship between political economy and communications for development: 'In line with an orientation towards outcomes and a disregard of processes, minimal attention has been directed towards the contextual and institutional conditions that come into play in the concrete practice of intervention'. Older approaches such as the diffusion model and the contemporary participation/empowerment model do not differentiate adequately between audiences or take note of their

conditions—and, arguably, this is a failing precisely because both adoption and empowerment are conditioned by a range of factors. A gender-based health strategy targeted at middle class women will have to be different from a gender-based strategy aimed at landless women labourers who will not share the same opportunities to translate health benefits into everyday practice. Participation and empowerment will differ if the enabling environments are seriously compromised or if the ability for agency is severely circumscribed. The affordances of citizenship vary, and it is therefore extremely important that CSC theory engages with theories that shed light on context, conditions, opportunities, power and capabilities.

One of the requirements when dealing with projects and initiatives related to communication and social change is the need for what we can broadly term the 'sociological imagination', a concept popularised by the American sociologist C. Wright Mills to describe the awareness between the personal and the wider society, between personal experience and the wider society—one can use this understanding to make a case to understand any given project in its social context. In other words, locate planning for any given project within an understanding of the larger social processes, institutional frameworks and specific circumstances that impinge on the ways in which a given community that is the focus for a project gets on with life, and is able to respond to opportunities. Inevitably, there is a need to factor in the nature of power and power dynamics.

The theory of social change typically is accompanied by two broad approaches. The first approach basically takes the view that individuals have the choice to rise above their circumstances, that indeed this is an evolutionary given and that the responsibility to do so is an individual imperative. Both community media and community informatics (CI) offer possibilities for awareness and knowledge that can result in a bettering of one's life. If this is a positive approach, a more pessimistic one is broadly Marxian, best illustrated by Marx's (1852) famous words in the 18th Brumaire of Louis Bonaparte, that

> Men make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under

> circumstances existing already, given and transmitted from the past. The tradition of all dead generations weighs like a nightmare on the brains of the living.

Taking social context seriously is about understanding those circumstances with a view to changing them through effective interventions. How one engages with circumstances will differ from context to context. In countries characterised by democracy, freedom and equality, there are more opportunities for rising above one's circumstances although, even in such contexts, there are ways in which class and privilege impact life opportunities. In most parts of the world though, Marx's insight still holds, given that culture and tradition, and political, economic and social exigencies continue to shape and limit opportunities for the development of self and community. One of the most engaging and informative texts on context from a CSC perspective is a chapter by Lisa Parks (2016) 'Water, Energy, Access: Materialising the Internet in Rural Zambia' in the volume *Signal Traffic* edited by Lisa Parks and Nicole Starosielski. Parks makes an attempt to materialise the Internet in a rural community of Macha, Zambia, by linking its affordances and non-affordances with the community's access to basic, life affirming resources—water that is the basis for electricity generation, whose erratic availability conditions access to the Internet, and the use of mobile phones. It is not surprising that she finds that women are only tangentially, if ever, interested in the Internet, given that their focus is on the basics of daily survival, collecting water and looking after the household.

In this chapter, the focus is specifically on context, and the need to understand context in CSC theory and practice. It is clear that while context is fulsomely acknowledged in the social sciences, there are very few sociological explorations of context or in-depth understandings of the ways in which context plays a fundamental role in determining the nature of social change. There are of course in-depth studies of context in social and cultural anthropological studies, although most of them are critical scholarship in anthropology that has dealt with issues related to the determination of context. Clifford Geertz's plea for 'thick descriptions' highlights the need to account for the many

levels and depths in the cultural ways of interpreting and accounting, and the webs of reasonings that emerge from the understandings of the interactions between context and behaviour that are often beyond the grasp of researchers who often miss out on the subtleties in cultural reasoning precisely because it is language, culture and context specific. So it is not surprising that even in cultural and social anthropology, thick descriptions are a rarity, and that anthropologists are prone to describing the involuntary twitch of the eye rather than the winks that are coded and whose significance is often lost on those who do not share in a given ontology and its classificatory schemas. It is interesting that there are explorations of context in social psychology, particularly as it relates to individuals who are prone to traumatic actions such as suicide. How individual context contributes to such actions has been studied. An understanding of context-informing theory has rarely been demonstrated by social and cultural theorists, although one can perhaps make a case for some French theorists such as Bourdieu whose work *Distinction* is based on an understanding of the class context of cultural production, reproduction and consumption in France, while historical context is also framed in a number of the studies by Foucault. In his classic *Discipline and Punish* (1977, 11), for example, the description of the minutiae of a rather grisly execution that took place in 1757, and the politics and involved roles of its perpetrators is followed by an analysis of the changes from the public spectacles of punishment in Western societies to the 'higher aims' of punishment in the contemporary West that is based on the suspension of rights, and the shaping of docile bodies and minds at a distance. Modern executions are however as complex.

> As a result of this new restraint, a while body army of technicians took over from the executioner, the immediate anatomist of pain: warders, doctors, chaplains, psychiatrists, psychologists, educationalists; by their very presence near the prisoner, they sing the praises that the law needs: they reassure it that the body and pain are not the ultimate objects of its punitive action.

Foucault's attention to detail and contextual analysis need to be seen against his probing, searing indictments of the 'humanist'

transformations of punishment and the turn towards contemporary privations of incarceration that are now hidden from the public. By doing this, Foucault makes a case for understanding contexts in which there are endearing links between the cognitive ways of doing things that are reflected in the institutions, networks and associations that give meaning to, and in a sense determine, the ways lives are lived—a fundamentally important insight for social change theorists and practitioners who need to be concerned with the affordances of lived life, given that an understanding of this is critical to understanding sustainable development and social change. Bourdieu (1984, 468) offers a succinct description of this relationship: 'The cognitive structures which social agents implement in their practical knowledge of the social world are internalised, "embodied" social structures'. What makes Foucault's theoretical analysis of context interesting for social change scholars is his commitment to making bare the hidden, invisible, cloistered lives of prisoners, and the instrumentalities and mechanics of their incarceration in modern-day France through his involvement in the activisms of the Prison Information Group. Their manifesto released at a press conference on 8 February 1971 explains their rationale:

> We plan to make known what the prison is: who goes there, how and why they go there, what happens, what life is like for the prisoners and, equally, for the supervisory staff, what the buildings, diet, and hygiene are like, how internal regulation, medical supervision, and the work-shops function; how one gets out and what it is, in our society, to be one of those who has gotten out. (quoted in Zurn and Dilts 2016, 1; also see O'Farell 2005)

More striking in their commitment to context and the social were the British theorists E. P. Thompson and Raymond Williams who founded their theorisations on a close and deep understanding of the relationship between historical and contemporary contexts. E. P. Thompson's meticulous excavations of the context of working class cultures in 18th- and 19th-century Britain remains an example for CSC theorists of how archival and historical contexts can provide textured information on contexts. The works of Williams in particular offer a fascinating account of the vitality of context and its absolute

centrality to social change. The son of a signal-man who worked in the Welsh railways, Williams valued his working class roots and contexts that were best reflected in novels such as *Border Country*.

The cultural theorist Lawrence Grossberg (2013, 35), in a chapter of an edited volume on Doreen Massey's contributions, has observed that context is rarely, if ever, theorised, and that its spatial and relational aspects are rarely explored. Grossberg puts forward the view that '[there are] at least three ways of constituting contexts, three modalities of contextuality, three logics of contextualisation: milieu (or location), territory (or place) and region (or ontological epoch)'. While the first two are relatively straight forward, the 'region as an ontological construction' refers to the fact that '[a] region is not a material location in space-time nor a lived place but the forms of existence—ways of being in space-time—that are possible and that constitute the contingent conditions of possibility of milieus, and territories, locations and places' (2013, 38). In other words, lived life is always within an ontological context, bounded by multiple determinations that are inclusive of the flows of power, class, class, gender and other markers of identity and the affordances of translation that a given individual has recourse to. In other words, understanding context in CSC is about understanding relationships between milieu, territory, ontology, and the opportunities that individuals have to translate opportunities and capabilities into freedoms.

This chapter is founded on the assumption that one of the grey areas in CSC theory continues to be an insufficient understanding of context, particularly in complex societies such as India where a range of factors—globalisation, the market economy, an upsurge in nationalism and populist politics—have resulted in large sections of the population becoming disempowered and dependent on either the state or civil society for their survival. It is clear that accompanying the growth of a consumer-led middle class has been a growing disjuncture between the rich and the poor. While the many welfare schemes in India have certainly contributed to a limited form of redistribution, it has also facilitated myriad opportunities for multiple forms of corruption. While India's poor are wholly dependent on the numerous related rights and entitlements—from the Public Distribution System (PDS)

that guarantees subsidised purchase of grains and essential cooking oils to the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) that guarantees three months of employment in public works—these are supplemented in some states by access to free goods and services, especially during elections. While there is no denying the extraordinarily important role that welfare schemes play in helping people survive the vicissitudes of weather, the vagaries of temporal employment and the fate of social birth into a lower caste grouping, the disbursement of welfare is responsible for a massive bureaucracy and corruption that is part of the story of developing India. All these elements—neoliberal development, welfare and freebies—are aspects of a story of uneven development. I paid a short visit to an indigenous community, the Irulas, in Chinglepet and Kancheepuram districts of Tamil Nadu, during April 2016. The villages that they inhabited in Kancheepuram district were located in the vicinity of Thirukalukondrum, a well-known temple town. I will use Harvey's concept of 'accumulation by dispossession' to illustrate the nature of development in Irula communities and their affordances and opportunities in context.

Some Rudimentary Observations on the Irulas

The Irulas are a scheduled tribe who live in parts of South India, with their strongest concentrations in parts of the southern Indian state of Tamil Nadu. They presently number around 22,000 households. The total Irula population in Tamil Nadu is around 156,000, and they typically live in scattered communities. They were traditionally hunter-gatherers; with the GOI banning the export of snake skins in 1976 under the Wildlife (Protection) Act, 1972, the Irulas lost a major source of their income. Today, most of them are part of the unskilled labour market involved in seasonal agricultural work. In terms of academic writings on the Irulas, the major focus has been on their ethnobotanical knowledge (see Newmaster et al. 2007; Raghupathy and Newmaster 2009) and the prevalence of specific diseases among Irula populations (Pitchappan et al. 1997), while there are few, if any, well-documented studies on Irulas from a socio-anthropological

or political-economy perspectives. Edgar Thurston's colonial (1897) study of various tribes in India, including the Irulas, remains a standard reference. The incidence of 'bonded labour' is high among Irula communities, and there have been attempts by NGOs and the state to rescue and rehabilitate such labourers from their indebtedness to rice mills, brick kilns and agricultural farms. One characteristic of the Irulas is their extensive ethnobotanical knowledge of medicinal plants—knowledge that is gradually becoming recognised (see Raghupathy and Newmaster 2009). Within the Irula communities living in and around Chinglepet and Kancheepuram districts, there are still 300+ licensed snake catchers, a traditional occupation that is now in decline. A herpetologist, Romulus Whitaker, founded an Irula cooperative in the late 1970s, specifically for the production of anti-venin, and this has given Irulas a new lease of life. They are licensed to catch any of the four venomous snakes for nine months in a year. These snakes are milked for their venom and then released into the wild or close to cultivated land where these reptiles are normally found. Most Irulas however remain poor and on the margins; in the case of Chennai, the capital city of Tamil Nadu, Irulas are found on the city's edges. While some communities and households have land deeds (*patta*) that is proof of ownership of land that their often-thatched house is built on, most do not have access to such deeds and live on government *poromboke* (common) land. They also have varying access to 'community' and other certificates that are necessary for them to avail of government entitlements, access government schools, etc. This lack of access has been accentuated by their relative powerlessness, their habitations that are spread out in pockets in Tamil Nadu and their low spending power. These people are part of the precariat in India, given that they can be evicted from their land for infrastructure projects including roads, IT corridors, and SEZs. There are differences in terms of access to facilities by the Irulas who live in the hills to those who live in the plains, and it is generally the case that those who live in the hills along with other so-called hill tribes have been the focus for various government projects and schemes. This is not the case with the Irulas who live on the plains in typically isolated settlements. They have poor health and development opportunities, and limited access to regular information on their rights and entitlements, and are prone to be manipulated by

a variety of political parties. While they have access to some general projects and tribal-specific projects, access is episodic. Some communities live off the beaten track, and public services such as transport, health and education are long distances away. Electricity supplies are not constant, and they vary from community to community. In terms of access to communication, while many families own at least one mobile phone, the distribution of television and access to laptops varies. Access to communication technologies is to a large extent the result of government largesse, in this case, populist politics. In the areas that I visited, there were no development projects with a specific communications component.

David Harvey's 'Accumulation by Dispossession'

David Harvey's (2003) volume *The New Imperialism* was written at the cusp of the second war in Iraq and is an account of Pax Americana. It is an account of the USA's global oil strategy, of the manner in which it has used its hegemonic power to expand a new imperialism via both the market and, when that was not possible, through the means of war. As David Harvey explains, accumulation by dispossession occurs through extra-economic means and is one in which the state plays a primary role in creating the conditions for accumulation. Engaging with both Rosa Luxembourg's view of capital accumulation's 'dual character', accumulation as a purely economic process, and accumulation as a result of relations between capitalism and non-capitalist modes of production (2003, 137), and Marx's views on 'primitive accumulation' that 'the commodification and privatization of land and the forceful expulsion of peasant populations; the conversion of various forms of property rights (common, collective, state, etc.) into exclusive private property; the suppression of rights to the commons…' (2003, 145), Harvey deals with the presence and persistence of these earlier forms of accumulation in the contemporary era. He refers to the over-accumulation of capital and its investments in state-sponsored, devalued assets such as lands that, in turn, are bought back by private companies for much less than the original market price. However, this process of accumulation is not just about the possession of land

as an asset, but entails the destruction of ways of life and its cultural and social sources. What makes accumulation by dispossession deeply destructive is that, apart from often paltry compensation packages and access to degraded land, it offers very little means for the cultural and social regeneration of affected communities. It is also a process that is 'both contingent and haphazard' (2003, 149), meaning that a number of factors outside of any normative framework are germane to accumulation by dispossession. 'The original sin of simple robbery', a phrase used by Hannah Arendt to describe the basis for original capitalist accumulation, has, as Harvey has observed, been multiplied many times as capitalism has expanded its foot print and has commodified hitherto un-commodified sectors.

Harvey's analysis of accumulation outside of the formal accumulation of capital is especially useful to our understandings of development and underdevelopment in countries such as India. The embrace of the neoliberal economy by the Indian state has resulted in the dispossession of many millions of the precariat, many of them communities like the Irulas who typically live on what is called 'poromboke' (common land) that can be taken over by the state for development purposes—typically for the creation of smart cities, SEZs and IT corridors—or for special status companies such as those in the IT sector who often pay below market value prices for such land. In the 2014–15 budget, the Indian government had allocated US$1 billion to its smart cities project, although its real cost is in the region of US$1 trillion. The private sector is expected to mobilise resources, know-how and technology for the creation of 22 smart cities by the year 2022. This project has already attracted foreign and Indian companies, and some of the PPPs including the following: the CISCO and ILF Technologies Ltd US$90 billion infrastructure development project that includes an ICT master plan for four cities; the Bloomberg Philanthropies and Indian Ministry of Urban Development initiative aimed at citizen engagement in the building of these smart cities; and the International Enterprise Singapore and the Infrastructure Corporation of the Andhra Pradesh government master plan for the 7,325 sq. km new capital of Andhra Pradesh (Schenkel 2015). The new capital of Andhra Pradesh project is the technocrat chief minister Chandra Babu Naidu's latest project that involves the large-scale displacement

of farmers. The project will involve the acquisition of 30,000 acres of arable land, some by enforcing eminent domain. This extensive multi-billion project is a part of a much larger smart cities plan to develop such cities throughout the state of Andhra Pradesh. 'While two towns in East Godavari district—Kakinada and Rajahmundry—would be developed as Smart Cities, the other towns include Srikakulam, Vizianagaram, Guntur, Nellore, Prakasam, Anantapur and Kurnool. Also, Kadapa town would be developed into Industrial Smart City' (Mallikarjun 2014). Central to the concept of smart cities and their development is the role of major construction and other companies in the privatisation and the creation of 'safe' cities that are managed through wall-to-wall, 24-hour dataveillance. The 'command and control' centres that will monitor the functioning of public utilities such as the sewer system, traffic and people are key to these cities.

None of these developments are for the poor. In fact, communities like the Irulas will at best be involved in menial, day labour at some of the MNC factories that require cheap labour—a reality that I had witnessed myself while visiting Irula communities who lived on lands that were adjacent to SEZs and who constantly faced the threat of eviction. The Irulas, like many other indigenous communities in India, are part of the precariat, dependent on the largesse of the state and victims of hyper-development pursued by both markets and the state. CSC theorists as a rule tend to be self-referential in who they use for constructing their theoretical frameworks and they typically gravitate towards other CSC theorists. While there is no harm in such applications of theory from within, I think it makes infinite sense to understand and borrow from those outside our comfort zones as it were, and from scholars such as David Harvey, Raymond Williams, E. P. Thompson, and no doubt many local and global social and cultural theorists who have contributed to our understanding context. In my way of thinking, and in the context of CSC interventions among indigenous communities in India, it is absolutely impossible to not use Harvey's concept of 'accumulation by dispossession' simply because this is a reality faced by most if not all indigenous communities in India. Their lands, resources, livelihoods and cultures are steadily being encroached upon, and the example of the Maoists in Chapter

3, who are involved in waging struggles against the imposed contexts that they find themselves in, highlights the fact that independence and autonomy are achievable only when people's contexts are valued, respected and understood. Similarly, CSC interventions among Dalit communities in India, the so-called 'untouchables', simply have to be based on deep understandings of caste as a framework that determines both ritual and material affordances and opportunities. The apparent immutability of the caste system is a reality in 21st-century India. There is absolutely no way that digital interventions such as MHealth can bypass the exigencies of caste, or for that matter make a difference in the lives of Dalit communities, if caste is not factored into the framework for such projects.

References

Bourdieu, P. 1984. *Distinction: A Social Critique of the Judgement of Taste*. Translated by Richard Nice. Cambridge, MA: Harvard University Press.

Enghel, F. 2015. 'Towards a Political Economy of Communication in Development'. *Nordicom Review*, 36 (Special Issue), 11–24.

Foucault, M. 1977. *Discipline and Punish: The Birth of a Prison*. Translated from French by Alan Sheridan. New York, NY: Pantheon Books.

Grossberg, L. 2013. 'Theorising Context'. In *Spatial Politics: Essays for Doreen Massey*, edited by David Featherstone and Joe Painter, 32–43. Malden, Oxford, Chichester: John Wiley & Sons, Ltd.

Harvey, D. 2003. *The New Imperialism*. Oxford: Oxford University Press.

Jal, M. 2014. 'Strangers in the Dark: Neo-liberalism and Maoism in India', *Critique: Journal of Social Theory*, 42 (4), 607–29.

Jeffrey, R. and A. Doron. 2013. *Cell Phone Nation*. Gurgaon: Hachette India.

Mallikarjun, Y. 2014. 'Plan to Develop Fourteen Smart Cities'. *The Hindu Online*, 5 September. Available at: http://www.thehindu.com/news/national/andhra-pradesh/plan-to-develop-14-smart-cities/article6380448.ece (Accessed 17 May 2015).

Marx, K. 1852. *The Eighteenth Brumaire of Louis Bonaparte*. Available at: https://www.marxists.org/archive/marx/works/1852/18th-brumaire/ch01.htm (Accessed 10 February 2018).

Newmaster, S. G., R. Subramanyam, N. C. Balasubramaniam and R. F. Ivanoff. 2007. 'The Multi-mechanistic Taxonomy of the Irulas in South India'. *Journal of Ethnobiology*, 27 (2), 233–55.

O'Farrell, C. 2005. *Michel Foucault: Two Cultural Contexts*. Thousand Oaks, CA: SAGE.

Parks, L. 2016. 'Water, Energy, Access: Materialising the Internet in Rural Zambia'. In *Signal Traffic*, edited by Lisa Parks and Nicole Starosielski. Urbana, IL/Chicago, IL/Springfield, IL: University of Illinois Press.

Pitchappan, R. M., K. Balakrishnan, V. Sudarsen, V. Brahmajothi, V. Mahendran, S. Amalraj, R. Santhakumari, K. Vijayakumar, P. Sivalingam and S. Ramasamy. 1997. 'Sociobiology and HLA Genetic Polymorphism in Hill Tribes, the Irula of the Nilgiri Hills and the Malayali of the Shevroy Hills, South India'. *Human Biology*, 69 (1), 59–74.

Raghupathy, Subramanyam, and S. G. Newmaster. 2009. 'Valorizing the "Irulas" Traditional Knowledge of Medicinal Plants in the Kodiakkarai Reserve Forest, India'. *Journal of Ethnobiology and Ethnomedicine*, 5 (10), 1–13.

Schenkel, S. 2015. 'Financing India's Smart Cities: The Case for Public-Private Partnerships'. CogitASIA, Centre for Strategic 7 International Studies, 12 May. Available at: http://cogitasia.com/financing-indias-smart-cities-the-case-for-public-private-partnerships/ (Accessed 10 May 2017).

Sen, A. 1999. *Development as Freedom*. Oxford: Oxford University Press.

Shanmugavel, M. 2013. 'Looking beyond Neo-liberal Communication', *Media Development*, 3, 7–10.

Star, S. L. 1999. 'The Ethnography of Infrastructure', *American Behavioral Scientist*, 43 (3), 377–91.

Zurn, P., and A. Dilts. 2016. 'Active Intolerance: An Introduction'. In *Active Intolerance: Michael Foucault, the Prisons Information Group and the Future of Abolition*, edited by Perry Zurn and Andrew Dilts, 1–19. Basingstoke: Palgrave Macmillan.

CHAPTER 3

Anti-context: Infrastructure Struggles in India

Between Maoism and the State

The control of communications in the context of conflicts between and within nations, manifested through espionage, cultivation of informers, disruption of enemy communications, decryption of enemy messages and investments in communications that are undetectable to the enemy, has been an aspect of military strategy from time immemorial (see Agubor, Chukwudebe and Nosiri 2015). The disabling of infrastructure has been a key objective of wars, and the processes, means and technologies of espionage have been used to detect infrastructure and enemy vulnerabilities, with a special emphasis given to communications. An example of the direct disablement of communications is that of the British Navy and their cable ships that were involved in cutting oceanic cables that belonged to the Germans during the First World War. However, the disabling of the infrastructures of modernisation by Maoist groups in India suggests that such infrastructures are a two-edged sword that can bring prosperity and growth to some sectors of society but can also become the means for curbing, controlling and domesticating marginalised

populations, such as indigenous people in India whose lands and livelihoods are threatened by both the state and corporate expropriations of their lands. There is, in other words, a lack of understanding of the specific contexts of indigenous communities, be it in India, Australia or elsewhere, and development policies that are based on local needs and that are sensitive to local culture. Development solutions are often imposed, and this is especially the case for indigenous communities. There has been a relentless marginalisation of indigenous communities and their cultures throughout the world, although it is seldom that they have opted for armed struggle against the state as is the case in India. This is a largely unreported conflict that is reported only when there are spectacular attacks that result in large casualties on both sides. This chapter deals specifically with the Maoist destruction of infrastructure, in particular of mobile towers. It highlights the need for CSC theorists to factor in the contexts of power and inequality, the conflicted nature of the digital that can be used for communications but also to control communities, and the consequences (that are admittedly extreme in this case) of not understanding context.

Post-Independent India has witnessed a variety of high- and low-intensity conflicts over territory with Pakistan (Kashmir) and China (Arunachal Pradesh), along with a variety of secessionist movements (Nagaland and Mizoram), and struggles over identity and self-representation (Manipur), ethnicity (Assam–Bodoland), and livelihoods and resources (Maoist conflicts in east and central Indian states). All these conflicts have been characterised by periods of high- and low-intensity armed struggles that have led to large losses of lives and to the destruction of infrastructure including communications, and to the extension of censorship. The resurgence of conflict in Kashmir in early 2017 led to the government banning key social media including Facebook, Twitter, WhatsApp, QQ, WeChat, Ozone, Tumblr, Google+, Baidu, Skype, Viber, Line, Snapchat, Pinterest, Telegram and Reditt, although there have been attempts to counter this censorship, such as the website application Kashbook, launched by a 16-year-old Kashmiri, Zeyan Shafiq (TOI 2017).

Contested Infrastructure

Infrastructure was and is a key plank of development policy in India, for decades, as a core aspect of a planned (dirigiste) economy and, since liberalisation, a central feature of PPPs within a neoliberal model of growth. The extension of basic services to people living in a vast country with many millions under the poverty line, including education, health, welfare, food security, water, employment along with electricity, roads, dams, etc., has continued to consume successive governments although there is a complementary shift towards enrolling all Indians into the knowledge economy via initiatives such as Digital India and the Unique Identity (Aadhaar) project. The provisioning of infrastructure in India has always been ideologically driven and in the early post-Independent years characterised by socialist experimentation, was recognised as the basis for the freedoms and rights of all citizens living in a secular, democratic country. Arguably though, infrastructure did stitch the country together, even the parts that did not want to belong to the idea of India as a diverse, multi-faceted nation state. Mammoth infrastructure projects such as dams, mining and real estate initiatives such as the creation of a new capital city, Amravati, in the state of Andhra Pradesh have involved massive displacements of people, whose resettlements have led to a less-than-optimum access to basic development services such as health and education. This has especially affected India's many millions of indigenous (tribal) groups whose lands and resources have steadily been encroached on and taken over by state–corporate entities involved in mining and the exploitation of natural resources—processes that have hastened accumulation by dispossession (see Jal 2014). While the colonial era Land Acquisitions Act (1894) has been abolished and replaced with a supposedly fairer Act—the Right to Fair Compensation and Transparency in Land Acquisition, Resettlement and Rehabilitation Act (2013)—there is a continuing opacity with which the GOI deals with land claims, especially those made by India's many tribal (indigenous) groups. While on the one hand, infrastructure has been a key to the modernisation of India, on the other hand, it also has reflected the writ of the state, and its attempts to discipline and control a vast country and its peoples, a project that continues today through initiatives such as the Central

Monitoring System (CMS) that will help streamline surveillance, extend discipline and expand control. Even the carving up of dedicated states for tribal groups, such as Jharkhand and Chhattisgarh, has not stemmed the exploitation of tribal lands and resources (see Gupta 2017 on changes to land acts in Jharkhand and its consequences for tribals).

Maoism

It is this context of tribal dispossession that has helped the growth of Maoist movements that have existed from the 1960s onwards but that have emerged in the tribal heartlands of east and central states of India in response to the state–private sector exploitation of natural resources and the dispossession of tribal communities. A well-known example of tribal–corporate struggle is that of the resistance by the Gonds in Odisha to the Vedanta mining group. While mainstream media echoes the views of the GOI on Maoism as a law and order problem, there occasionally are contrarian perspectives on the roots of Maoism (also known as Naxalism) such as that articulated by the ex-Minister of State of the Ministry of Environment and Forests in India, Jairam Ramesh (2001):

> [O]ver 50 million people in central and eastern India have been displaced over the past five decades due to developmental projects. R&R for very large numbers of people has yet to be completed. Worse, there are large numbers of tribals who have been subjected to repeated displacements. It is not the Naxals who have created the ground conditions ripe for the acceptance of their ideology—it is the singular failure of successive governments both in States and the Centre, to protect the dignity and constitutional rights of the poor and disadvantaged that has created a fertile breeding ground for violence…

However, Jairam Ramesh's views are not widely shared in government circles, who have opted for a 'growth at all costs' approach that has led to underdevelopment in the east and central states of India.

The relationship between Maoists and the tribal groups that they are fighting on behalf of is characterised by a variety of affiliations

and political positions. While some tribal groups are sympathetic to, support and are actively involved in Maoist activities, others caught between security and paramilitary forces, on the one hand, and Maoists, on the other, often become the victims of violence committed by both sides. Informers are not spared by both Maoists and the security forces. There also are tribals aligned with government interests along with those who have been co-opted by paramilitary groups and mining interests. Many non-tribal, urban revolutionaries are also involved in Maoist struggles, adding to the complexity of these struggles. Maoism has the reputation of being among the most fractured and fractious political movements in India, although there have been attempts to consolidate it as a movement.

I would like to, in this chapter, explore the battles over infrastructure and communications by the government, who have used the cover of infrastructure and communications ubiquity as a means of contesting the grip of Maoist movements that are involved in contesting the infrastructures and development model adopted by successive governments in India that are based on the exploitation of the land, resources and livelihoods—the natural infrastructures of India's many 'tribal' (Adivasi) groups.

Theorising Infrastructure

Following Tung-Hui (2015), Parks (2013), Starosielski (2015) and others, I take the position that infrastructures are always layered—the 'cloud', as Tung-Hui (XII) has observed, 'grew out of older networks, such as railroad tracks, sewer lines and television circuits', and as Starosielski notes, 'cables as rural and aquatic infrastructure' were 'layered on top of earlier telegraph and telephone cables, power systems, lines of cultural migration, and trade routes' (2015, 2). Attempts by governments to discipline and control citizens through infrastructural means are not always possible precisely because of the existence of residual and emerging infrastructures, and—in the specific case of India—the lack of infrastructure highlighted by the fact that the developmental model is unevenly accessed and experienced by its citizenry. This unevenness is made visible in pockets of extreme poverty

populated by those whose core concerns related to land, livelihood and resources have not been adequately addressed by a government that is keen to usher India into a knowledge economy through projects such as Digital India that are based on ubiquitous computing, while discounting or working around the need to address structural and social inequalities such as caste that also functions as a type of social infrastructure. To state the obvious, the grandiose vision of Digital India based on ubiquitous computing is removed from the lives led by the poor in India. Despite the fact that its writ is legally restricted, caste continues to both formally and informally regulate endogamy, commensality, mobility and employability. In such contexts, modern infrastructures are often seen as the problem because these many initiatives are not integrated into the cultural imaginary or needs of tribal communities. Infrastructures bind, but they also divide and represent the power to control and hide real interests (see Graham and Simon 2001). There is, in other words, the need to think through the contested nature of infrastructures by engaging with a political economy of infrastructures.

The Developmental State

The section on left wing extremism (LWE) on the GOI Ministry of Home Affairs' (n.d.) website provides standard descriptions of violent Maoists and their deluded urban sympathisers, and their inability to appreciate government investments in bettering the lives of tribal populations. In fact, the previous PM of India, Manmohan Singh, described Maoists as the single biggest internal security threat to India in 2006 (*The Economist* 2006). Maoists are seen as anti-national forces committed to the underdevelopment of parts of remote India, while the GOI's development initiatives through the extension of various infrastructure projects are seen as key to the development of these remote communities and regions. Predictably, there is no mention of the fact that these conflicts often have their roots in state/corporate exploitation of the lands, livelihoods and resources of these communities. The information 'Special Infrastructure Scheme' is directed towards strengthening the logistical and armed capabilities of the

forces, while the Integrated Action Plan (IAP) and Additional Central Assistance (ACA) is aimed at

> [investments related] to construction of School building/School furniture, Anganwadi (child-care) centers, drinking water facilities, construction of rural roads, Panchayat Bhawans/Community halls, Godowns/PDS shops, livelihood activities, skill development/training, minor irrigation works, electric lighting, health centres/facilities, Ashram schools, construction of toilets, multi-purpose chabutaras, passenger waiting halls, special coaching classes for students, ANM development centers, and development of play grounds etc.[1]

Infrastructure from the perspective of the GOI is the means to combat resistance to the enclosure of mineral-rich tribal lands by the state/corporate sectors from Maoists and their sympathisers (see Hoelscher, Miklian and Vadlamannati n.d.).

Arguably, the introduced infrastructures of modernity and development in contexts in which their sustainability is not guaranteed because of a lack of enabling environments and capacities suggest that infrastructure can become a proxy for the inability of the government to guarantee basic, existential rights. It is useful to understand infrastructure as a relational concept, and Susan Leigh Star (1999, 381–82) has highlighted some of the properties of infrastructure defined by its *embeddedness, transparency, reach/scope, learning as part of membership, links with conventions of practice, embodiment of standards, building on an installed base, becoming visible on its breakdown and fixing in modular increments.* Star's conceptualisation of infrastructure is important because it suggests that relationships with infrastructures are always learned, although it can only be loosely applied to contexts in Maoist-controlled/contested areas precisely because people's relationship with infrastructure is contested and episodic, and their infrastructural practices are constrained by the reality of conflict. These infrastructures have not been sufficiently embedded into everyday practices

[1] See http://mha.nic.in/naxal_new, accessed 8 January 2018.

precisely because these infrastructures are seen as the means to exert control over the lives of tribal communities. There is little attempt to design infrastructure that is suitable for tribal livelihoods, and there is an economy of thinking on grounded approaches to infrastructural planning with the participation of local people in projects that factor in the centrality of ecology and public space. In other words, attempts to think through infrastructure beyond efficiencies, targets and growth are just not available in the context of sector-specific approaches to development that, more often than not, are not based on any input from these communities. There are different understandings of the value and worth of infrastructure, and the government and media narrative that is based on the belief that more infrastructure is the solution is part of the dominant discourse. The counter narrative is as follows. If more roads enable quicker access to tribal hamlets and hasten trade, transportation and communication, it can also be used by the armed forces to neuter the threat of Maoism and aid the exploitation of natural resources in these areas—hence the targeting of road construction projects in Chhattisgarh and other regions by Maoists, such as in Sukma, where 25 Central Reserve Police Force (CRPF) soldiers were killed in an encounter with Maoists in April 2017. If more mobile towers are established, this will result in the interception of and access to Maoist communications—hence the Maoist efforts to blow up such facilities. Devices such as mobile phones are used not only to connect, mobilise and plan strategic actions, but also to trigger landmines (mobile phones are connected to detonators that explode on receiving call; see Siva 2017).

Maoism, Communications and Contested Infrastructures

News reports highlight the fact that Maoists are avid users of new media and platforms such as WhatsApp. In a report on their presence online, Khanra and Guptal (2013) comment on their use of new communication platforms:

> 'Naxalite community', 'Naxal', 'Naxalbari Hamiz' are some of the online forums that the Maoists are using to propagate their ideology

> and activities. According to intelligence reports, the terror groups are taking advantage of communication channels which have become more sophisticated over a period of time. From mobile phones, terrorists have moved on to the use of satellite phones, spoofed IDs and coded transactions over e-mail and chat sessions. Voice over Internet Protocol is also being extensively used to communicate across the border.

Given the nature of the struggle, the media have been extremely critical of this movement, although very few journalists have bothered to understand the complexities of Maoist struggles. More often than not, reporting is about killings, the capture of Maoists and equipment by security forces, and Maoist excesses (see Thomas 2013). Given the close relationship between mining and the vernacular press in particular, it is likely that these institutions do play a role in setting the media agenda. Khetan (2012, 38), writing on mining and patronage in Chhattisgarh, has observed that

> The involvement of many media conglomerates in purely commercial activities, particularly mining and allied business that require political patronage, has eroded journalistic independence and objectivity. The promoters of *Dainik Bhaskar*, the state's and country's largest circulating daily, have a mining lease for 91.6 million tonnes of coal reserves in Raigarh district…while the paper is almost never critical of the state government or its policies, it has been carrying on a vilification campaign against the villagers who have been agitating against the Dainik Bhaskar Group's proposed land acquisition for the purpose of coal mining.

Incidentally, the *Dainik Bhaskar*, with its 36 daily editions and 159 sub-editions in 13 states in India, and a daily circulation of 19.5 million, is one of the largest circulating daily newspapers in the world. However, given the pros and cons of using new technologies and platforms in a war situation, communications is both friend and foe, strategic tools that nevertheless can be subverted, hacked into and become the basis for counter-surveillance. In such circumstances, it is unsurprising that Maoists have been in the forefront of tactical uses of the media, inclusive of popular theatre and cultural actions

along with information warfare. S. V. Srinivas's (2015) study of the relationship between Maoism and the struggle for statehood for Telangana highlights the key roles played by cultural actors such as Vimala and Gaddar, the re-mediations of Maoism through regional films and, in the more recent past via new media platforms, provides an extraordinary glimpse into Maoist cultural advocacy and influence in one region in India.

While there has been extraordinary growth in communication and information structures in India over two decades, access to a variety of media and information devices including mobile phones and Internet access in remote areas such as Chhattisgarh is still limited, with statistics revealing that only 28.47 per cent households owned mobile devices, below the 68.35 per cent average across India (*TOI* 2015). For such a small state, there is presence of a number of mobile vendors including Aircel, Bharti Airtel, BSNL, Etisalat DB Telecom, Idea, Loop Mobile, Reliance Telecom, Videocon and Vodafone that have close to 500 retail outlets in this state. However, it is more than likely that 3G and smartphone services cater preponderantly to residents in the capital city Raipur and other smaller cities in this state. As Holt (2014) has highlighted, Maoists across central and eastern India have consistently targeted mobile towers.

> In Ranchi, India, a spate of Maoist attacks on telecom towers in recent years have forced mobile service providers to avoid setting up new ones in remote areas, plunging most parts of Bihar state and neighbouring areas into a 'zero-network'. In order to protect against this and future threats the Cellular Operators Association of India (COAI),[2] has proposed a programme to install telecom towers on safer government-owned land across vulnerable Maoist-affected areas in the states of Bihar, Odisha, Chhattisgarh and West Bengal.

In 2008, Maoists targeted 220 KVA high tension towers in Bastar, Chhattisgarh, effectively resulting in a black out in this district, with major losses to mining operations, another example of Maoist targeting of infrastructure including railways and roads. A report on

[2] See https://coai.com/

infrastructure development in Maoist India compiled by Enyde et al. (2015) describes the nature and reach of state-sponsored infrastructure projects, including support for the development of telecommunications infrastructure under the Universal Service Obligations Fund's (USOF) Shared Mobile Infrastructure Scheme (SMIS). The report mentions that more than 7,000 telecom towers were built by the end of 2011 and that an additional 11,000 towers were to be set up. The establishment of towers does help the security forces, although it also helps Maoist communications. It seems the Maoist are selective in the telecom towers that they target for destruction—those that are monitored by the security forces or that can potentially be monitored by the nationwide CMS are targeted. The report by Enyde et al. (2015, 5) highlights the fact that 'Naxalites attacked 38 towers in 2008, 66 in 2009, 70 in 2010, and 71 in 2011', blew up towers, snapped telecom cables, destroyed the battery/generator rooms, 'damaged control rooms and threatened villagers not to give their land for construction of towers…'.

The politics of infrastructure within a neoliberal economic environment remains a problem, given that there are substantive lags between the provisioning of state resources and the actual building of infrastructure, a consequence not only of turf wars between different government departments but also of the nature of public–private sector involvement. While the Department of Telecommunications favours private sector involvement in the provisioning of telecommunications infrastructure, the Home Ministry has insisted that telecommunications projects in Maoist areas 'must be awarded to a state-run telco on national security grounds' (Insightvas n.d.). The lack of consensus and delays, including a four-year lag in the provisioning of telecommunications in parts of Chhattisgarh, have helped Maoists plan and execute major strikes in Dantewada where 76 CPRF soldiers along with politicians were killed in 2010, and in Sukma in April 2017 where 26 CPRF soldiers were killed (see *Firstpost* 2014; *Indian Express* 2017). Private sector companies are unwilling to roll out infrastructure, given the low returns in what are considered tribal areas, leaving state providers such as the BSNL to roll out such infrastructure. BSNL remains a reluctant player and has on occasion inflated its budgets for the roll out of connectivity projects in Maoist areas. The failure of the BSNL network,

the only network offering connectivity in Sukma, enabled Maoists to ambush CRPF forces in April 2017. BSNL has suffered from major maintenance issues of its network, and its repairs take time. Given the fact that BSNL is the sole provider of network connectivity in the most affected regions, it has on occasion demanded a 100 per cent subsidy from the USOF. However, the USOF is unwilling to outlay subsidies 'in densely forested and lightly-populated zones' (TeleGeography 2011) and the Home Ministry has shelved capital-intensive options such as satellite-based surveillance proposed by the Department of Telecommunications. While the Government of Chhattisgarh has invested in the establishment of 'Bastar-net' to strengthen connectivity, its services have been unreliable.

Infrastructures, in other words, mean different things to different people. One person's infrastructure can be another's obstacle or tool used to dominate specific populations. Even in the 21st century, everyday infrastructures of transport and mobility remain for the most part an obstacle to their navigation by the visually disabled who are, in this sense, structurally excluded from a society in which infrastructure is often taken for granted by the visually abled. The ubiquity, reliability and invisibility of infrastructures work to the advantage of communities, but also to their disadvantage. And therefore infrastructure, seen in terms of learned behaviour by the members who use it, is also contested, given that as in this example of the Maoists, a major emphasis is on learned behaviours that are employed to disrupt dominant infrastructures including electricity grids and communication networks. So if infrastructures are contested, one could, following Dourish and Bell (2011, 96), define 'infrastructures as crystallisations of institutional relations' that 'reflect and embody historical concentrations of power and control, and are instruments through which access is managed'. In a country of the size of India, the provisioning of infrastructure has been a priority for successive post-Independent governments, although rather typically, it has been accompanied by corruption, bureaucracy and top-down processes that have been rolled out in remote, rural areas such as in Maoist central and eastern India, in buffer areas such as North East India and disputed areas such as Kashmir with less urgency than in other parts of urban and rural India. People's access to communication in these regions is

limited because the government sees communications as a security issue. When the state invests in communications infrastructures, it is primarily for reasons of national security and only secondarily for use by local communities. Taken in this sense, Maoists are involved in limiting the tribal experience of infrastructure given the potential of the state to further exploit these communities via their access and use of infrastructure that could hasten their alienation from their lands and livelihoods.

The Limits of Infrastructure Alternatives

So far we have discussed the struggles of Maoists that are mainly fought on behalf of marginalised indigenous communities in the context of real survival issues that they have faced from both the state and the corporate sector. However, and notwithstanding the palpable nature of poverty and exploitation faced by many indigenous communities, it is necessary that we do not romanticise Maoists, given that many indigenous communities simply get caught up in the crossfire between the security forces and paramilitary outfits on the one hand and the Maoists on the other. Maoists have also been accused of violence against tribal 'informers' and communities who have not sympathised with Maoist struggles. So the question related to the totalising nature of modernisation and the infrastructures of modernity, although valid, still begs the question: How else should a country such as India with its planned and now privatised approach to development approach the development of marginalised communities? While it is relatively easy to point to the need for participatory, community-led growth, this is not easy to implement, given that such approaches have not typically been embraced by the government. There are states in India such as Kerala where such models have worked because of that state's continuing engagement with socialist politics. However, this is not the norm in the rest of India, where a statist, top-down model of development prevails. There is a sense in which Maoist struggles can result in an increase in the gaps between the rich and poor in India. Maoists may argue that they have nothing to lose because the gaps are already massive, and that armed struggle against a recalcitrant state is the only solution. Whatever the 'truth',

those who stand to lose the most from these struggles are indigenous communities themselves.

There are initiatives such as the CGNet Swara service that is specifically focused on enhancing tribal voices through a mobile-phone-based platform that allows callers to both record messages and listen to messages, and that, to some extent, has enabled infrastructure to be appropriated and used by tribal communities in Chhattisgarh. However, existing studies on this initiative (see Marathe, O'Neill, Pain and Theis 2015; Mudliar, Donner and Theis 2013) suggest that the main users of these services are settler communities in these regions, NGO workers and the like. While local grievances have been aired and settled through the access and use of this service, arguably, the key issue is the alienation from land and ownership of land. Ganguly and Oetken's (2013, 120) critical analysis of Maoism in the Bastar region in Chhattisgarh highlights the politics of Maoism and the dissatisfaction of some tribals with Maoist struggles along with the government's land acquisition strategies that remain the most potent reason for Maoist recruitment and mobilisation (see also Dalvi and Bokil 2000; Kazmin 2010).

> While the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act was passed in 2006, to grant legal rights of adivasis to their homes and lands in India's forest areas, and protect them from abuse, exploitation, and harassment, thus far, the Chhattisgarh government has coercively implemented the act, as opposed to working with local villages, and has made it exceedingly difficult for people and communities to establish their land claims. (Ganguly and Oetken 2013)

While we typically see infrastructure in terms of technology that enables specific types of cultural practices, the natural infrastructure of land has of course sustained indigenous communities, and has been at the core of their spiritualities, socialities and ways of life. This relationship remains central to their survival as a people, and alienation from land has been the single factor responsible for the destruction of tribal communities throughout the world. In India, many tribal communities have faced this alienation and have been reduced to subalternity,

barely surviving as wage labourers living at the edges of big cities. While digital infrastructural applications such as GPS technologies have been used to map tribal lands and establish ownership in different parts of the world, such applications have not been successfully used to claim ownership of land by tribal groups in India, except in cases where there have been enabling state institutions supportive of such claims as, for example, Community Forest Resource (CFR) Rights in Kerala. A report by the Western Ghats Hornbill Foundation highlights the efforts to establish the CFR of tribal groups including the Kadar, whose status is that of a particularly vulnerable tribal group (PVTG). As Bachen (2015, 20) notes,

> When titles are distributed to the remaining 43 settlements, then Trissur district will become the first district in Kerala where CFR titles have been conferred to all settlements in the district listed as eligible by the government. The 52 CFR titles would cover nine Kadars (PVTGs), 38 Malayar, three Muthuvan and one Ulladar hamlets or villages.

While there have been other attempts to map CFR for tribal groups in India, namely in the states of Gujarat and Odisha, there are no indications that such mappings have been recognised by state governments. Given the collusions between the state and the private sector, and emphasis on the exploitation of natural resources, claims to tribal land are bound to remain contested.

Conclusion

The Indian government's recognition of CFRs will arguably help in the cessation of Maoist conflict, given that tribal alienation from land is the core issue underlying this conflict. Lisa Parks (2013, 303), in an article entitled 'Earth Observation and Signal Territories', makes a case for *infrastructure resocialisation*, for people to practice and become critical infrastructure literates. There is certainly a need for such literacies among tribal communities in India who are caught in the middle of the infrastructure wars being fought between the Maoists and the GOI. With the help of enabling institutions, as is the case in Kerala,

the recognition of the land rights of India's many-million-strong tribal population will lessen the need and opportunities for conflict, Maoist or otherwise.

This chapter and the preceding one have highlighted the need for CSC theory to take context seriously. Typically, those involved in development opt for one-size-fits-all solutions, and quite often, this can result in fractured development that hastens the development of underdevelopment. There are no substitutions for an understanding of context that is based on dialogue, participation and fulfilment of real, local needs.

References

Agubor, C. K., G. A. Chukwudebe and O. C. Nosiri. 2015. 'Security Challenges to Telecommunications Networks: An Overview of Threats and Preventive Strategies'. Paper presented at the International Conference on Cyberspace Governance, 4–7 November, Abuja, pp. 125–29. Available at: https://www.researchgate.net/profile/Onyebuchi_Nosiri2/publication/308843196_Security_challenges_to_telecommunication_networks_An_overview_of_threats_and_preventive_strategies/links/58e7b317aca2729d8cd0b6af/Security-challenges-to-telecommunication-networks-An-overview-of-threats-and-preventive-strategies.pdf (Accessed 18 May 2017).

Bachen, K. H. A. 2015. *CFR Mapping in Kerala—The Central Kerala (Including Kadar PVTG) Experience*. Western Ghats Hornbill Foundation. Research report submitted to SC Development Department, Government of Kerala, February, Thrissur, pp. 1–21. Available at: http://www.cepf.net/SiteCollectionDocuments/western_ghats/FinalReport-CED-CFR-Appendix5.pdf (Accessed 17 May 2017).

Dalvi, S., and M. Bokil. 2000. 'In Search of Justice: Tribal Communities and Land Rights in Coastal Maharashtra'. *Economic & Political Weekly*, 35 (32), 2843–50.

Dourish, P., and G. Bell. 2011. *Divining a Digital Future: Mess and Mythology in Ubiquitous Computing*. Cambridge, MA/London: The MIT Press.

Eynde, O. V., J. Hansen-Lewis, A. L. Wright and J. N. Shapiro. 2015. 'Connecting the Red Corridor: Infrastructure Development in Conflict Zones'. International Growth Centre, Working Paper No. 1–25. London: London School of Economic and Political Science.

Firstpost. 2014. 'Dantewade Maoist Attack: Did Bad Mobile Connectivity Costs 16 Lives'. *Firstpost*, 11 March. Available at: http://www.firstpost.com/india/lack-of-mobile-connectivity-proving-costly-in-naxal-hit-states-1429459.html (Accessed 10 May 2015).

Ganguly, S., and J. Oetken. 2013. 'Tribal Participation in India's Maoist Insurgency: Examining the Role of Economic Development Policies'. In *Development Strategies, Identities, and Conflict in Asia*, edited by William Aschler and Natalia Mirovitskaya, 99–123. New York, NY: Palgrave.

Graham, S., and M. Simon, M. *Splintering Urbanism: Networked Infrastructures Technological Mobilities and the Urban Condition*. Abingdon/New York, NY: Routledge.

Gupta, A. 2017. 'Tribal Communities Protest Changes in Jharkhand Land Laws'. *The Wire,* 5 April. Available at: https://thewire.in/121247/local-tribes-protest-changes-jharkhand-land-laws/ (Accessed 10 December 2017).

Hoelscher, K., J. Miklian and K. C. Vadlamannati. n.d. *Hearts and Mines: A District Level Analysis of the Maoist Conflict in India,* 1–30. Available at: http://www.uni-heidelberg.de/md/awi/professuren/intwipol/india.pdf (Accessed 8 January 2018).

Holt, T. 2014. 'Threats to Telecommunications Operators in Fragile and Conflict Landscapes'. *Willis Towers Watson Wire*, 13 July. Available at: http://blog.willis.com/2014/10/threats-to-telecommunications-operators-in-fragile-and-conflict-landscapes/ (Accessed 10 May 2017).

Indian Express. 2017. 'BSNL Network Failure Left CRPF Jawan's with No Way to Reach Informers'. *The New Indian Express*, 25 April. Available at: http://www.newindianexpress.com/nation/2017/apr/25/bsnl-network-failure-left-crpf-jawans-with-no-way-to-reach-informers-1597689.html (Accessed 10 December 2017).

InsightVAS. n.d. 'Home Ministry Dismisses DoT Proposal of Tracking Maoists'. *Insightvas*, 10 June. Available at: http://insightvas.com/

home-ministry-dismisses-dot-proposal-of-tracking-maoists/ (Accessed 17 May 2017).

Kazmin, A. 2010. 'India's Tribes in Land Fights with Business'. *Financial Times*, 10 March. Available at: https://www.ft.com/content/5279512c-2ba5-11df-a5c7-00144feabdc0?mhq5j=e2 (Accessed 12 May 2015).

Khanra, Sujal, and Saibal Gupta. 2013. 'Maoists Use Social Media to Reach Urban Areas'. *Times of India Online*, 21 June. Available at: http://timesofindia.indiatimes.com/india/Maoists-use-social-media-to-reach-urban-areas/articleshow/20691072.cms (Accessed 12 May 2017).

Khetan, A. 2012. 'The Plunder Under His Watch'. *Tehelka*, 29 September, 36–43.

Marathe, M., J. O'Neill, P. Pain and W. Thies. 2015. 'Revisiting CGNet Swara and Its Impact in Rural India'. Paper presented at ICTD15, 15–18 May, Singapore.

Ministry of Home Affairs. n.d. *Left Wing Extremism Division*. Available at: http://mha.nic.in/naxal_new (Accessed 8 January 2018).

Mudliar, P., J. Donner and W. Thies. 2013. 'Emergent Practices Around CGNet Swara: A Voice Forum for Citizen Journalism in India'. *Information Technologies and International Development*, 9 (2), 65–79.

Murtaza, J. 2014. 'Strangers in the Dark: Maoism and Neoliberalism in India'. *Critique: Journal of Socialist Theory*, 42 (4), 607–29.

Parks, L. 2013. 'Earth Observations and Signal Territories: Studying U.S. Broadcast Infrastructure Through Historical Network Maps, Google Earth, and Fieldwork'. *Canadian Journal of Communication*, 38 (3), 285–307.

Ramesh, J. 2001. 'From Tirupati to Pashupati: Some Reflections on the Maoist Issue'. *Mainstream Weekly*, 27 December, L(1). Available at: https://www.mainstreamweekly.net/article3222.html (Accessed 11 January 2018).

Siva, G. 2017. 'Maoists Using Mobiles to Trigger Landmines'. *The Times of India Online*, 10 May. Available at: http://timesofindia.indiatimes.com/city/visakhapatnam/maoists-using-mobiles-to-

trigger-landmines/articleshow/58582020.cms (Accessed 14 May 2017).

Srinivas, S. V. 2015. 'Maoism to Mass Culture: Notes on Telangana's Cultural Turn'. *Bioscope*, 6 (2), 185–205.

Starosielski, N. 2015. *The Undersea Network*. Durham, NC: Duke University Press.

Telegeography. 2011. 'DoT to Invite Cellcos to Bid to Roll Out Wireless Infrastructure in Maoist Areas'. TeleGeography, 5 September. Available at: https://www.telegeography.com/products/commsupdate/articles/2011/09/05/dot-to-invite-cellcos-to-bid-to-rollout-wireless-infrastructure-in-maoist-areas/ (Accessed 10 May 2015).

The Economist. 2006. 'India's Deadly Maoists'. *The Economist*, 26 July. Available at: http://www.economist.com/node/7215431 (Accessed 10 May 2014).

Thomas, P. N. 2014. 'The Red Surge: Media Framing of Maoist Struggles in India'. *International Communications Gazette*, 76 (6), 485–504.

Tung-Hui, H. 2015. *A Prehistory of the Cloud.* Cambridge, MA: MIT Press.

TOI (*Times of India*). 2015. 'UP Tops States with Highest Mobile Penetration'. *The Times of India Online*, 13 July. Available at: http://timesofindia.indiatimes.com/good-governance/uttar-pradesh/UP-tops-list-of-states-with-highest-mobile-penetration/articleshow/47926636.cms (Accessed 12 May 2017).

———. 2017. 'Social Media Ban in Kashmir: Sixteen-year-old Develops "Kashbook"'. *The Times of India Online*, 16 May. Available at: http://timesofindia.indiatimes.com/india/social-media-ban-in-kashmir-16-year-old-develops-kashbook/articleshow/58704858.cms (Accessed 11 January 2018).

Section 2

What Can CSC Theory Learn from Social Movements

While Chapter 4 provides an introduction to social movement theory, some of the theorists who have contributed to an understanding of the theory and contemporary networked movements such as Anonymous, Chapter 5 on the RTI movement in India specifically highlights the ways in which empowering communication was operationalised within this movement through novel methods such as the 'public hearing' that enabled people's voices to be heard. This chapter introduces readers to the concept of 'voice', and to indigenous contentious actions such as the 'public hearing' that have played an important role in informing, educating and empowering local communities. Social movements throughout the world have experimented with democratic formations and participatory decision-making inspired by local resources, the strength of collective will and commitment to more sustainable, people-led futures. The chapter argues that CSC theory can learn from communicative actions in social movements.

CHAPTER 4

Social Movements, Communications and Social Change

An Introduction

It would be arrogant to claim that social movements are an outgrowth of modernity, or that they reflect a relatively new human desire to bring about change in the different spheres of human activity—in the economic, cultural and social spheres in the arrangement of politics. If one were to look back at the history of social change in societies around the world, it will become immediately apparent that social movements appeared and disappeared, were tolerated or crushed, became popular or remained in the margins, and influenced society in the long run or merely effected temporary change. The human desire for freedom and betterment has been a constant theme in all civilisations. It is difficult to get an accurate understanding of the impact of social movements on a global scale, for social movements, by their very nature, were and often are anti-establishment—they challenge weaknesses in society, the divides in society, the disbursement of rewards, excessive use of power, religious intolerance, elite politics and the like. More often than not, their actions were either not recorded or were represented as a revolt by disaffected people against the lawful rule of a benevolent

king or religious order. The official history of any given country is most often based on recorded history, and given the fact that records were made, managed and controlled by scribes and educated people employed in the service of authority, it is that version of history that persists, is represented in the national imaginary and becomes the official record of the history of the nation. The histories of nations are often the exploits of kings and queens, and of noble men and women; the social history of the lives of ordinary people never figured in these stories of origins, except perhaps as a footnote. Elite history was reinforced in contexts where the dominant religious traditions were themselves based on the myths and legends of wars between gods and goddesses. Elite traditions of authority were legitimised by such continuities. Divine rule has been justified in all religious traditions. And social movements in a real sense are involved in contesting this version of history through representing the lives of ordinary people, their identities and their biographies.

E. P. Thomson's (1978) *History of the English Working Classes* was one of the first attempts to deal with history from the bottom-up as it were.

> Thompson's heroes and occasionally heroines were frequently marginal figures, oppressed by the values and norms of the culture in which they lived, but whose struggle to transcend marginality resulted in an enhanced moral independence and bolstered sense of self. Through his historical reconstruction of their struggles, Thompson explored how the emergence of a strong sense of self-hood for both individuals and groups, laid the foundations for robust and independent citizens—the precondition, he believed, for meaningful democratic advance. (Kenny 1999, 322)

Thompson fundamentally contributed to the making of a historiography based on the valuation of a variety of submerged experiences and 'voices'. In that process, he transformed working people into communities, conscientised as a class, who were aware of the contexts of class and privilege, and who articulated, however incipiently, the idea of equality as a structuring pillar of democracy. Today, there is a thriving tradition in history devoted to recording the history of the invisible peoples of the world. Often the only materials that they

have had to work from are secondary resources, fragments of text and oral histories. The subaltern history tradition and some post-colonial writings have attempted to recover this forgotten history of peoples and submerged social movements. There is a many-volumed subaltern history series based on case studies from India, and some of these are on social movements, from movements that tried to better the working conditions of workers of indigo farms to those that were anti-British and anti-nationalist that played dominant role in the struggles for Independence. The Bhakti movement during the medieval era in India was a movement to purify religion from its excessive dependence on rituals and to privilege instead a devotee's direct relationship to God, unmediated by middlemen such as priests. The Suffragettes in England were arguably responsible for inaugurating the era of women's liberation, the emancipation of women through their steadfast campaigns to enfranchise women. Social movements are essentially about collective action.

What Are Some of the Reasons for the Rise of Social Movements in Our World Today?

1. Historically, the emergence of social movements has been tied to the countering of a decree, piece of legislation, official edict, way of life, and social, economic and political institutions that legitimised difference and the marginalisation of communities. Some of the earliest movements emerged among peasant communities around the world who worked as bonded labourers, tenants or serfs, people who really had nothing but their labour, who sometimes lived in situations where their entire families, from generation to generation, were owned by a landlord. Many peasant movements have been recorded against unjust tax regimes during the era of imperialism. During the 19th and 20th centuries, many anti-feudal movements were supported by Communist parties in many newly post-Independent contexts in the Global South. Their objective was to claim land, get better working conditions and wages, and better life chances for them and for their families. To some extent, these were classic class struggles. In many cases, these movements

included the use of violence, particularly against the state and the land-owning classes who routinised and legitimised their use of violence against those who were in revolt. The issue of violence and non-violence remains a contentious issue in the theorisation of social comments.

2. The rise in social movements in the recent past—from the 1960s onwards—is a consequence of a number of issues—economic, political and social. The dominant development models, which were based on 'capitalist modernisation' and 'socialist planning', were in their own ways highly fundamentalist projects. These extensive development projects were basically imposed on people who often had no involvement or say in the matter of their own development. They were both authoritarian models of development that were conceived by foreign experts and ideologues. In this model of development, the end was progress; either a catching up with the West or hard work, poor pay and personal sacrifices for the good of the nation became the end rather than the good of the people. Tradition was seen as an obstacle to change. People were often blamed for their underdevelopment. They were blamed for not being motivated enough, and not having the right aspirations and ambitions. They were told that the right dose of products—seeds, pesticides and fertilisers—would lead to high yields, more savings and greater prosperity. *The failure of development was and continues to remain a key reason for the rise of social movements in the South.*
3. *In the West, where primary needs had been taken care of, the rise of new social movements (NSMs) is associated with the need for a recognition of new identities that were hidden, submerged and unrecognised, and the need to deal with the problems of over-development*. New identities include the recognition of the full worth of women and their complete equality with men in terms of lifestyles, employment, education and recognition; the recognition of emerging sexualities, identities that were suppressed by the establishment (this continues to be the case even in the USA where gays/lesbians are being made redundant from the armed services); and the civil rights movement in the USA that gathered steam in the late 1960s and led to the recognition of Afro-American identities as a full part

of the American nation. The peace movement, the environmental movement, the animal rights movements, and the pro- and anti-abortion movements, each relate to problems that are a by-product of development or over-development—the arms race, the destruction of the environment, the excesses of the beauty industry, the commercialisation and some would say manipulation of the body. The anti-fast-foods movement and the organic foods movement arise from the excesses of scientific farming and food processing.

4. External conditionalities for aid and loans imposed by the World Bank, the IMF and other lending institutions, and the pressure from some of the major economic powers denied many countries the option for another development. Of late, the power of the World Trade Organization (WTO) to establish the terms for global development and penalties for non-compliant nations has led to lopsided development and has created further opportunities for social movements. The establishment of agricultural universities with funds from US-based foundations and aid agencies in the 1950s and the 1960s, and the structural adjustment regime that accompanied the provision of aid in the 1980s, each led to the closure of autonomous space for development. While the diffusion of the innovation model helped larger farmers, structural adjustment policies (SAP) directly helped privatisation and placed restrictions on the nature of development that could be undertaken by the state. The state was pushed to consider supporting the building of telecommunications infrastructure rather than roads, dams, houses and the subsidisation of employment in rural areas. With the retreat of the state from its public development commitments, many communities were left to fend for themselves. In India, for example, the advent of economic liberalisation led to major shortfalls in the annual government layout for development in areas such as health and agriculture. Furthermore, given the nature of the state in the developing world, and their allies, there was little effort to bring about distributive justice, and to democratise access and use of key primary resources. Despite land laws, land continued to be owned by rich landlords. The commercialisation of agriculture led to the inability of small farmers to tend their fields. They joined the increasing migration to urban areas and to the big cities, fuelling

what has been called the urban crisis. Social movements sprang up in the context of such conditions throughout the world.

5. The accent on modernisation was accompanied by a general neglect of tradition and culture, and all the social webs that kept societies and peoples together. Tradition gave people certainty in an uncertain world. The accent of modernisation was to create rational individuals, people who would depend on reason rather than on God or fate or metaphysics. The breakdown of traditional structures certainly had a positive side to it—patriarchal authority, the caste system, religiously sanctioned mores and rules, all these came under scrutiny. However, the breakdown of the old system did not lead to the establishment of new social systems. Tradition remained persistent, while modernisation did not spread like wild fire throughout communities. Such transitional societies, poised between the old and the new, went through tremendous upheaval and pressure. Some like Iran countered modernisation with a home-grown Islamic revolution, the repercussions of which are still being felt in our world today. In the South, social movements generally tried to create support systems that were vacated or neglected by the state in the context of their turn towards economic liberalisation. Some also began to deal with issues related to culture, the validation of indigenous culture, and support for local cultural systems, languages and the like.
6. Another key reason for the rise of social movements came out of the global experience of disasters—environmental disaster in one country caused by acid rain from another; forest fires in Indonesia that led to smog in Kuala Lumpur; global warming; the melt-down in Chernobyl; the disaster in Bhopal, India; wars over economic resources supported by multiple countries that in turn led to the creation of refugees and to migration from one region to another and from one country to another; the threat of nuclear warfare; and the depletion of marine and forest resources. Such disasters and potential for disasters led people to the realisation that the world really is made up of interdependent units, and that the health of the world is as important or more important as the health of the nation. In other words, the enduring connections and relationships between the global and the local. Today, in the context

of globalisation and a networked world, we take the connection between the global and the local for granted, and yet the realisation of this complex unity between the global and the local first dawned on people during major man-made crises from the 1960s onwards.

7. Social movements deal with old challenges as well as new ones. For example, the consumer movement is committed to creating active consumers, establishing the rights of consumers in a context in which economic corporations have increased their productive power and become huge monopolies. Since many products, from a fridge to a computer, have become essential household items, there is a need to ensure that the products are of a high quality, that service care is adequate, and that consumers are made aware of the benefits and the downsides of some of these products. This is a relatively new challenge for people in the South. Social movements deal with the gaps and blind-spots that traditional institutions like political parties do not have the energy to deal with. The notion of democracy as a political concept is related to a vote for each citizen and elections every few years. Social movements ask questions about substantive democracy as opposed to nominal democracy. How can people be involved in creating democratic institutions, how can governments be made accountable to people not every five years but on a daily basis, how can people be involved in local democracy and making democracy work and how can people be involved in actions that will have a beneficial impact not in their lives but also on their future generations? Similarly, social movements are involved in limiting the power of corporations, many of whose annual budgets are larger than the GDPs of countries in the South. In an era of multi-lateral trade and economic liberalisation, corporations have become enormously powerful. They have the right to locate and relocate their factories, hire and fire on a global scale, and deplete resources. Increasingly regulatory frameworks are being redrawn to make life easier for corporations, for cross-border trade and cross-industry ownership. The anti-consumer movement typified by Naomi Klein's book *No Logo* and the movement to protect labour rights in these new industries are globally powerful and have led to the drafting of numerous codes of ethics for corporations. Social movements also can be the reason for and

> the consequence of political and economic crisis. Such has been the case in the Middle East—the so-called Arab Spring—and the Occupy Wall Street protest.

What we need to keep in mind is that social movements throughout the ages have contributed to contesting the order of things. Some of their actions led to change, if not at least contributed to the rhetoric of change—that change is possible. We also need to keep in mind that social movements do not always have to have a 'progressive' agenda. Social movements are committed to both progressive social change and to those committed to maintain the status quo, resisting change, reinforcing tradition. The rise of chauvinist nationalist movements and of course the many varieties of religious fundamentalists movements illustrate the fact that social movements are by no means the domain of progressive forces. Intra-movement politics, the jockeying for positions within movements and even fratricidal wars are a part of the history of social movements. The current divisions within the environmental movement—between those who believe in the complete protection of natural habitats, those who believe that conservation must include people, those who believe that to progress one must be involved in some form of sustainable logging and those who advocate a return to simple living as the basis for the environmentalism, among many more positions—illustrate the great variety of commitments, processes, actions and beliefs that exist within any given movement, including communication. There are always a multiplicity of positions and meanings on any given issue, and social movements really are at the cutting edge of creating and communicating meanings. In other words the global justice movement is not a unitary project. It consists of a variety of collective actions on a variety of subjects, from child labour to the rights of marginalised people, to women's rights to anti-globalisation movements and to fair trade.

Contestations within movements are a real fact of life. The existence of such differing forces within movements reminds us that human interests on any given issue are multiple and can be as diverse as the human community. This remains a challenge for social movements.

Some Characteristics of Social Movements

1. Social movements are collective enterprises involved in collective actions that are outside of formal institutional channels. It consists of people who come together to deal with an issue or cause that needs to be recognised and legitimised through actions—be it of a political kind, for example, banning cigarette advertisements from public places, getting the local council to provide day care facilities, lobbying religious authorities to include women in ritual and political decision-making structures, or bringing about large-scale, extensive awareness among a population of the benefits of safe sex. Social movements rally around any given social issue—and so there literally are any number of social movements at any given time. In general, social movements are committed to social change, a better society, freedom, equality and community. So rather inevitably, social movements are involved in 'conflict' with those who have a different interpretation of the world, of rewards, of the meaning of life and of human progress, and with those who have claim the same stake although from a different perspective. Conflict over 'public' goods often pits movements against conservative politics. Having said that there are also many movements who opt for 'consensual' solutions, for change within the system. In other words movements who are involved in pushing for a non-negotiable solutions and others that are prepared to take a consensual approach.
2. Social movements generally have a specific identity—members collectively believe in a common cause. There is connectedness and investments are made in the making of connectedness. They normally also identify an adversary—the institutions, beliefs and peoples that are counter to their cause or who stand in the way of progress—and they have a societal goal—a vision of the good society. Social movements are a form of collective behaviour although they are different from crowds, mobs and even interest groups. Interest groups tend to be function within the boundaries of dominant politics and typically are involved in formal political processes such as lobbying. Social movements are also involved in such processes, but they also

rely on a range of non-institutional means (sit-ins, protest actions, fasting, boycotts, etc.) to bring about change.

3. Any given social movement is an expression of the actions and beliefs of multiple organisations, groups and individuals. In other words, the term social movement is a metaphor used to describe the many collectives and individuals who rally around specific banners, identities and interests. Social movements linked to communications involves thousands of different groups and individuals working in local, national, regional and international settings. It is a generic term used to describe people involved in a social impetus for change in society that is to some extent publically recognised by the media, politics and other institutions.
4. Social movements are based on the ethic of solidarity. They are in this regard very like trade unions, although unions typically bring together people belonging to the same trade or profession—those who are card-carrying members. They are unlike trade unions in that their membership is often heterogeneous; it does not always have a monetary basis. Social movements are also unlike traditional forms of class struggles because it is often the case social movement solidarities cut across the class divide. Rich and poor, young and old, the farmer and businessperson, gay and heterosexual, Muslim and Hindu, black and white, Israeli and Palestinian, the literate and the non-literate—all are included in any given movement. A good example of this coming together of people is the anti-Narmada Valley Dam Movement in West and Central India that brought together indigenous people, urban activists, professionals, grandmothers and children, journalists, school and college students and lawyers among very many other people in India and from outside the country. Another characteristic of social movements is that the individual autonomy of members is recognised and respected. The pressure to privilege a class/caste/group identity over and above that of the individual is generally not an issue in the context of social movements.
5. Social movements are participatory and value the play of opinion. Their decision-making structures are more transparent and less opaque. While the preceding two statements can be applied to

certain social movements, when movements grow, they do loose some of their informality and do become formal and institutionalised. Social movements, at least during their early years tend to be vibrant laboratories for experimenting with democracy and power sharing. At gatherings like the World Social Forum, one can visibly feel this vibrancy, energies, and transnational collaborations and commitment to global social change.

6. Social movements give rise to new values and identities. Social movements are often the first to 'out' an issue, to expose it, to start a debate in society on its rights and wrongs, and to explore solutions. The value of protecting the environment really became global after all the efforts of the environmental movement. Issues around the girl child really got prominence after the work done by the women's movement. By dealing with persistent, hidden, unresolved issues, social movements have the opportunity to explore new values that respect the rights of the girl child, and democratise these values. Similarly, NSMs, by championing the rights of new identities—for instance the gay and lesbian movement—help bring about a national consensus on the rights of communities who are different from the mainstream or whose rights have never been recognised—such as Dalits in India.
7. While membership of social movements can be flexible and there always are people moving in and out, movement types are those who continue to practice and hold on to movement ideals even when they are not involved in the movement. So a women committed to the women's movement also tries to inculcate a respect for gender in her home and work environments. In other words, one of the characteristics of movement types is the connection between their biography and movement ideals, and one of the characteristics of movements is the connection between different people who share the same ideals. The French sociologist Pierre Bourdieu used the term 'habitus' to describe the dispositions of individuals to act in certain ways, their social practices that is influenced by their social location, the social world that they belong to, and their up-bringing and life chances. Movement ideals suffuse their habitus. Human practice is the product of individual history and

biography. But individual biography is but one strand of collective histories. So the question of why people belong to movements, the difference between an individual and collective habitus, and how different individuals belonging to movements make sense of their world are fascinating questions that can be raised in the context of studying the 'social' in social movements. Social movements can be characterised by dense informal networks.

8. Social movements can be temporary manifestations, or they can be more or less permanent. Social movements can coalesce around a given issue, but when that issue is resolved, the movement can be dissolved. In other words, the specific action against uranium mining in Bundaberg might be dissolved following a satisfactory resolution to that particular crisis/issue, but similar actions will continue in Australia and elsewhere where the issue remains unresolved. While specific actions within a movement may be resolved, the fact remains that in the world that we live in, amidst multiple contestations, movements tend to take on a semi-permanent character because global problems can never ever be fully resolved.
9. Social movements tend to grow organically, although arguably social movements can also be engineered into being. While the Occupy movement is an example of an organic social movement, the Arab Spring was to some extent orchestrated by pro-democracy organisations in the West, mainly in the USA. Jack Bratich (2011, 627), in an article entitled 'User-generated Discontent', highlights the example of the Alliance of Youth Movements (AYM), organised under the aegis of the State Department in the USA, in partnership with youth organisations, media corporations, social networking groups and NGOs from around the world. Established in 2008, its major aim is to arm pro-democracy movements with the social networking tools necessary to create ferment—to seed these movements with training manuals such as 'How to Circumvent an Internet Proxy'. Bratich refers to this alliance as an example of a 'Genetically Modified Grassroots Movement. Neither wholly emerging from below (grassroots) nor purely invested by external forces (the astroturfing done by public relations groups), emergent groups are *seeded* (and their genetic code altered) to control the vector of the movement'.

10. Social movements are in a real sense adapted to and made for life in the age of networks. Social movements have been able to forge global solidarity, campaign, lobby and pressure for change. They have used the Internet for campaigns, and to globalise a variety of issues. There are even some well-documented cases of the Internet being used intentionally by radical social political movements such as the Zapatistas in Chiapas, Mexico, to alert the world to the general condition of indigenous people in that region. Today, and especially after the Arab Spring, the relationship between social media and social movements has attracted a lot of attention. While we do recognise that ICTs have become critical to movements mobilisations, as a site for the expression of dissent and strategising actions, we also need to recognise the fact that the uses of social media are contested, and that governments, the commercial sector and civil society have different agendas when it comes to the use of social media. Marc Lynch (2011, 304) points out,

> [F]our distinct ways by which the new media can be seen as challenging the power of Arab states: (1) promoting contentious collective action; (2) limiting or enhancing the mechanisms of state repression; (3) affecting international support for the regime; and (4) affecting the overall control of the public sphere.

While there is a tendency to romanticise social movements, we need to remember that social movements, as part of civil society, are made up of resources, peoples, institutions, interests and networks—in other words, that at an institutional level, these movements exhibit the characteristics and experience the same pulls and pressures like other institution in society. Many movements have their headquarters, networks and related institutions. Today, specific social movements are part of a global industry. They employ many thousands of people across the globe, and are involved in the use of major human, material and financial resources. Many movements have adapted well to the consumer society and compete with mainstream products by offering ethical products, ethical investment opportunities, green products and the like. Some movements do have enduring links with the corporate world. As the corporate world increasingly

wants to be seen as 'clean' and as people and nature friendly, they connect to specific movements. Some like Shell support their own green initiatives—while continuing to be at the receiving end of groups like Greenpeace. The environmental movement, the human rights movement, the women's movement and the communications movement are all transnational. In other words, the people involved in social movements make up their structures. What distinguishes social movements from other movements is their ethic and commitment to social change.

What Are Some of the Major Challenges Facing Social Movements?

1. Social movements are part of a global industry. They include service organisations like Oxfam and Greenpeace whose budgets run into the millions of dollars, and grassroots groups in Zambia and Guatemala who depend on external aid for their survival. Economic dependency is a major problem facing social movements. To make matters worse, the headquarters of social movements are typically based in the West, while the real work done by thousands of grassroots organisations is carried out in local contexts around the world. This asymmetry unfortunately reflects a neo-colonial reality. Global fashions and flavours of the month often affect the work at local levels. Organisations are forced to change their priorities in order to become beneficiaries of aid. While some countries like India have begun to tap their middle classes, local support is yet to become reality in many parts of the world.
2. Some key players related to social movements, at both the supply and demand sides, have been co-opted by governments, are recipients of government development money and are thus accountable to their governments. Government aid is normally not given for altruistic reasons, and funders can often be in the vanguard of pushing government policy. This creates a lot of complications, in the least, a growing cynicism related to the work of social movements.

The Achievements of Social Movements

It is clear from the earlier examples that social movements consist of a range of enabling, facilitating and supporting institutions in society. However, these movements cannot be seen as passive players but are actively involved in democratising ideas and society in general. While all social movements may not bring about legislative changes, what they do effectively is to change attitudes and lifestyles, mobilise people to act on issues, and get people to think of relationships between the local and the global, of their own behaviour as consumers, thus contributing to the building of an ethic of consumption and global solidarity. They are primarily experiments in democracy, educating us on human freedom, and are involved in extending our often limited horizons to new ways of thinking, behaving and doing. In doing so, social movements enlarge and extend democratic spaces in society, the public sphere and the development of common humanity.

Like other institutions in society, social movements do grow, decay, die and at times are re-born. The attrition rate within social movements is quite high, as access to money and resources are needed to keep such services afloat. Despite real challenges facing social movements, it would be impossible for the world to live without social movements.

Theorising Social Movements and Social Change

Generally speaking, there are two dominant traditions in social movement theorising: (a) a tradition that deals with structures, institutions, political processes, political opportunities, mobilisations organisations and networks—what is termed a structural approach—and (b) a constructionist/cultural approach that focuses on identities, meanings, frames, lifestyles and emotions. In the second approach, there is a tendency to believe that culture is all-pervasive, that it even subsumes structures.

The breakdown of traditional society in the context of rapid industrialisation, economic instability, political change, the demise

of religion and the rise of individualism led to a number of early sociologists, from Emile Durkheim to Max Weber and others, to explore the breakdown of old bonds (*gemeinschaft*—community) and the emergence of new, industrial society based on new bonds (*gesellschaft*—modern society). Mass society was generally seen as an instance of the values of the mass prevailing over the values of tradition—of the canons of good taste, understandings, culture and the order of things. English poets from Mathew Arnold to T. S. Eliot lamented the passing of the old order. Social unrest, especially crowd behaviour and collective forms of unrest, began to be studied, mainly because the establishment wanted to maintain social order. After the experience of Nazism and Stalinist Russia, the mass was feared because it was felt that it could easily be led into destructive ways by a strong leader. One of the key theorists who contributed to the study of collective behaviour was N. J. Smelser (1962; see his *Theory of Collective Behaviour*). Using a structural-functionalist framework, Smelser studied how collective action led to reform and changes to existing institutions. In his view, society was essentially harmonious—the different parts fitted together most of the time. Crowd behaviour reflected strains in society. Such behaviour was essentially disruptive—but it could be tamed. Such behaviour had a short life span as social control could be used to create order and wholeness in society. Another theorist in the same tradition was Herbert Blumer (1951). He studied how social movements were formed. According to him there are five ways to movement formation: (a) there has to be a motivator, a facilitator, a person who transforms an issue or sense of injustice into a reason for struggle; (b) the development of a culture, what Blumer called an Esprit de corps, an in-group, a feeling of belongingness that was strengthened through ceremonial and common actions, and the development of symbols of identification; (c) the development of a narrative that helped the process of identification for members—the narrative was the common thread that stitched the members into a common identity, the basis for a collective 'we'; (d) the development of a group ideology with clear understandings of the problem and of how it can be resolved, and the communication of the ideology in the making of new recruits; and (e) the development of tactics that may vary from context to context. Blumer's analysis was at the level

of social psychology with very little emphasis on an understanding of the context or the structural reasons for unrest.

Another tradition that dealt with popular collective action relates to the work of Charles Tilley (1978, 2010) who based much of his study on the worker's movement in France (political action in the Burgundy province over a 300-year period). He was interested in the tactics and strategies of social movements. He was of the opinion that in every historical epoch, the strategies and tactics used in struggle varied, and were influenced by what people collectively knew, learned or invented. The tradition of non-violent struggle involved a repertoire, a set of routines that Gandhi put into practice and which were adopted in the civil rights struggles in the USA as well in the anti-apartheid movement. Today the repertoires of contention are also influenced by technology. For instance computer-mediated communications—the Internet—has led to the emergence of new traditions of protest—cyberprotests, electronic disturbances, hacking, peer–to-peer file sharing and the like. This tradition is historically contingent in that it could not have happened at any other time. Technology, the specific state of society, the reality of democratic deficits, the existence of specific computing capacities among youth, their understandings of struggle and opportunities for struggle—in other words, cyberprotest—could not have happened in any other era. Tactics and strategies, in other words, are historically contingent. He put forward the view that in the modern world, collective action must be studied in terms of interactions between a variety of groups and stakeholders, and not just between the working class and capitalists.

In the context of post-industrial societies, two of the most important Social Movement (SM) theories are that of Resource Mobilisation and NSM. Resource Mobilisation Theory (RMT) is concerned with the 'how' of SMs and not with its 'why'. Its focus is on how the allocation of scarce goods and resources affect the development and sustainability of movements. A tradition that developed in the USA in the 1970s is specifically associated with J. McCarthy and N. Zald, and is most commonly referred to as RMT (see McCarthy and Zald 1977). Until the 1970s, social movements

were dealt with in terms of understanding the tactics used and the reasons for their development. RMT dealt with the internal structures of social movements, their management, their leadership and in particular on the resources that movements need—if they are to be sustainable in the long term. It also explored the movement's external linkages and the ways in which authorities control or co-opt social movements. Given its development in the USA, the emphasis was also on why people join movements, what the incentives are, the career benefits and the like. RMT distinguished between SMs and social movement organisations, and showed how the two compete for the same resources. RMT's emphasis on resources reflects the tradition of pressure groups and lobbies in the USA that use their resources and political power to leverage change in the system, to change laws—for example that of the Motion Picture Association of America (MPAA). RMT showed how movements can result in not only in goal achievement but also in co-option and failure. Strong emphasis is on the leader as a rational actor involved in and competing for social capital against other Social Movement Organisations (SMOs). What is I think interesting about RMT is that it recognises SMOs as another institution in society on a par with other social institutions. There was nothing romantic about such institutions for they too were involved in power games, involved in trying to push their view across, in the business of persuading the public of the legitimacy of their actions. While one can criticise the specific and narrow emphasis on RMT, it nevertheless connects to a key contemporary issue today—the fact that SMs and SMOs are involved in competing for resources, and that without resources, SMs are doomed to failure. Also, I do think that RMT was among the first of the SM theories to anticipate the transnationalisation of SMs— a major reality today with immense implications for resourcing. Within RMT, there are two traditions. The first, 'the political interactive model', deals with the role of pre-existing networks, solidarities, political power, interests, political resources, group solidarity, etc. The second, the organisation-entrepreneurial model, deals with organisational dynamics, leadership and resource management. It explores resource competition, SM entrepreneurs,

organisations, packaging and resource differentiation. It deals with role of 'conscience constituents who contribute to SMs'.

In a sense the most prevalent, popular and widely subscribed to theory related to social movements is the NSM tradition popularised by the French theorist Alain Touraine (1981), the Italian theorist Alberto Melucci (1989) and the Spanish theorist Manuel Castells (1996).

While some theorising within the NSM tradition remains Marxian, it remains critical of Marxism's social logic of economic reductionism. Instead, it posits other social logics, in particular the role of culture in struggle and mass actions. Instead of a focus on class as the basis for struggle, NSM highlights other markers including ethnicity, race and gender. It focuses on the role of identity, individual autonomy and post-material values. It deals with contestations over the symbolic, although very few theorists have connected the symbolic to the media. NSM theory, such as that associated with Castells, focuses on the power of networks that are nevertheless contingent, fleeting and temporary.

Alain Touraine believed that since SMs are about social action, and social action leads to change, SMs need to become a central focus on sociology. He sees SMs as essentially struggling over redefining our relationship to nature, culture, ethics and knowledge. Touraine believed that people today were involved in constructing a system of both knowledge and technical tools that led to the self-production of society. He called this capacity 'historicity'. The issue for him in a post-industrial and post-material society was control over the narratives of historicity—control over knowledge, investment and ethics through technocratic management; control over information and data—the surveillance society. NSMs fight against this system. Basing his analysis on the Solidarity Movement in Poland, Touraine sees social movements as being the vanguard of change, and thus more important in the assessment of change than say traditional concepts such as class and power. He views post-industrial society as a programmed society and social movements as one of the stakeholders fighting for their definition over others. A central concept in Touraine is that

of historicity—the capacity for society to act upon itself and create cultures of choice—and SMs play an important role in creating cognitive, ethical and economic models for society. Touraine believed that movements can never be unitary, but that these are based on shifting alliances. A good example is the environmental movement, which is currently made up of a host of different organisations committed to a variety of issues. They are not by any stretch of the imagination committed to a single common goal—there is a lot of contestation within the movement. While Touraine does believe that movements are based on identity and on an identification of their opponents, in his way of thinking, the opponent is not an enemy but is a co-partner in the project of a conflictual transformation of social and cultural life. He strongly believes in the social and in the social movements involved in a shifting terrain. The Indian author V. S. Naipaul while describing life in India said that at any given time, there are a million mutinies. For Touraine, this was what brought about social change. None of these movements were permanent. Most were localised—they formed, fought the fight and disbanded—so in that sense, their horizons were limited. There is no grand theory of the class struggle or for that matter global struggle, which is why Touraine believes that in contemporary expressions such as the World Social Forum, their call for global economic justice devalues the social at the expense of larger struggles that seem to be closer to older class-based struggles.

Touraine's rejection of the class struggle as the defining struggle within capitalism, and of the revolutionary overthrow of the capitalist class as the key motor of change was a key element in theorising about NSMs. Touraine put forward the view that they were multiple conflicts in post-industrial society and not just that related to labour. It also led to rethinking struggles other than through revolution as the means to capture power. In a sense, this shift in thinking parallels the shift that occurred in the theories of communication and development—from modernisation to dependency and to multiplicity.

To Castells (2004), SMs are a specific feature of network societies. It is primarily an urban phenomenon in which a variety of movements are involved in contesting the state—its bureaucracy, its Big Brotherliness and its seeming insensitivities—and involved in

extending community, legitimising difference, and cultural identity and autonomy. Castells put forward the view that SMs are involved in legitimising three types of identities: (a) identities by movements that are generated by civil society but who use the power of the state to legitimise their identities, (b) resistance identities—excluded groups who whose identities are formed in opposition to dominant groups in society—and (c) project identities—movements that use cultural and other resources to create new identities that are the basis for changing society. For Castells, movements are based on horizontal ties and connections, characterised by the free and open circulation of information, decentralised coordination and self-directed networks. SMs can be both broadly progressive and regressive. Castells, unlike other NSM theorists, believes that some of these movements also have a strong political objective that includes the overthrow of the state, for example, al Qaeda.

The key theorist in the NSM tradition is Alberto Melucci. Following in the steps of Touraine, Melucci put forward the view that struggles over 'identity' were the key struggles in contemporary society. He believes that in post-industrial society (in the West), the concern is no longer with the production of material resources (which has already to a large extent been met) but over the production of social relationships, the symbolic, personal and collective identities. The conflicts were no longer related to the problems of distribution that had largely been resolved. It was over the codes of life, over what was legitimate and illegitimate, what was right and wrong, what was acceptable and non-acceptable. Identity struggles today—the gay and lesbian movements, anti-whaling, women's movements, euthanasia or for that matter pro- and anti-abortion campaigns—are examples of such struggles. Melucci believed that in a crisis characterised by the homelessness of identity, and the challenge for NSMs was to construct a collective identity over major issues in society.

Melucci focuses on the struggles over the creation of meaning. In other words, the struggles were over 'codes' and information. The aim is not to over throw the order but to make the order more acceptable, more democratic and more accountable through agnostic deliberations that expose the power that resides in rational, administrative

instrumentalism. Melucci believes that we are living in an era where there are no 'centres'. In this de-centred context, SMs are part of a multiplicity of networks that are autonomous and that are involved in contesting and shaping legitimacy discourses in society. In this context, the tactical and strategic mobilisations and use of information, communications and culture are critical because they are aimed at contesting, re-writing and legitimising codes necessary for life. He would say that such struggles are more definitive and have the power to 'define' rather than struggles over the allocation of material resources. He also believed that in this struggle, those on the margins had the capacity to contest communicative discourses and legitimise their own. For example, the contemporary struggles over software code or definitions of the war in Iraq. Struggles marry the personal and the political, and the individual and the collective. Melucci was interested in understanding collective identity-making that he saw as a process. He was interested in NSMs, not as political creatures but as those involved in exploring solutions to life's everyday problems, contesting the bureaucratic rationalities, offering alternatives, etc. The terrain for NSMs is the global and the local and there are many movements that are both. In other words, NSMs can be described as integrated, synergistic relational. NSMs have a decentralised organisational and decision-making structure that has significantly been strengthened through networks. Castells would say that NSMs were made for the networked society. Melucci also believes that struggles are temporary and that unlike old struggles that were based on a single goal and that only allowed a single meaning, present-day NSMs allow for multiple meanings (polysemic) reflecting its plural constituencies. In other words NSMs are more inclusive than the older social movements. Melucci also is clear that the NSM agenda and constituency is mainly the middle classes, students and housewives involved in clarifying, deepening and fighting for a new meaning of citizenship. These constituencies living in complex societies through their struggles are involved in a self-realisation projects. In other words their self-realisation is key to NSM practices. The struggles are often symbolic challenges to dominant codes. In that sense, NSM constituencies are involved in making everyday life better, more humane and more just.

Social Movements and Communications for Social Change

This lengthy introduction to social movements and social movement theorists is meant to introduce a scaffolding within which to explore issues and concerns related to communications for social change. Arguably, the most interesting initiatives related to the uses of participatory communications as process, and in terms of communication/information/media interventions in social change are instantiated within contemporary social movements. However, there is a sense in which the literature on CSC has yet to deal with the methods of contentious action in terms of communication as a process. There is a tendency to think of process typically in terms of the enabling and facilitation of formal methods such as observation, interviews, mapping and other techniques of data collection that enable diagnostic assessment, evaluation and action, as is the case with tried and trusted methods such as participatory rural assessment (PRA) and PAR. Arguably the many forms of contentious action including informal methods—from demonstrations to sit-ins, fasts, public hearings and occupations—do contribute to engagement, solidarity and empowerment. In this sense, these methods can be regarded as pedagogical devices for they do contribute to individual and collective learning. To take an example, an occupation of a public square or for that matter of a university precinct can result in opportunities for sharing, discussion and debate, and can become an environment in which solutions and actions are deliberated and planned. Taking part in an occupation can be a learning process for participants in terms of enhancing knowledge of the larger issues at stake, the techniques of political action and also the democratic worth of collective political action. It can form the basis for solidarities, and act as the trigger for other performative forms such as role play, music and theatre. It can become the basis for a crystallisation of collective agency. And it can result in both formal and informal learnings (for long-term activists), and learnings that accrue to the 'circumstantial activist'—a term that has been used to describe focused learning by those who stumble into movements in response to a shared sense of crisis (see Ollis 2011). At the same time, and arguably, there is a lot that CSC can learn from the

specifics of participation in social movements that Hunt and Bedford (2007) describe as 'micro-mobilisation' (2007, 438) and that includes 'the production of new participation, reactivation of lapsed participation, sustaining of current participation and enhancement of existing participation' (2007, 438).

The Case of Anonymous

While it is relatively uncomplicated to study and learn about the specific repertories of contention used by social movements, the task becomes complicated when studying movements that are deliberately unstructured, flat in terms of authority, and rhizomatic in terms of their projects and operations. *Anonymous* is a good example of a group that is deliberately based on self-organisation and on an extraordinarily fluid working arrangement that can be leaderless, ad hoc and open-ended. Anonymous is consciously egalitarian, and eschews hierarchy, authority and even individuality—hence their desire to remain anonymous. They prefer to be known by metaphors such as 'swarm' and 'hive', like flash mobs that can appear and disappear. Although tactically this desire may also be prompted by the need to evade surveillance for the kinds of direct action that they are involved in. However, Anonymous is very unlike a typical movement in the sense that it is not based on shared solidarities or a foundational ideology; in fact, the movement lives through many guises, takes on new identities that are issue-based, and consists of multiple actors whose key identity is as cyberactivists and hackers. Typically, Anonymous has taken on a broad range of issues, from taking on Tom Cruise and the Church of Scientology to their intent to take on Isil, especially after the Charlie Hebdo attacks in Paris. In the case of the Church of Scientology, in 2008, Gawker Media had put up a video of Tom Cruise extolling the virtues of this Church, who responded by using their right over its copyright to get Gawker to remove it. Anonymous saw this as an attack on the freedom of expression and decided to take on the Church. Kushner (2014) writing in the *New York Times* describes their actions:

> The hackers met in dedicated Internet Relay Chat channels, or I.R.C.s, to coördinate tactics. Using DDoS attacks, they caused the

> main Scientology Web site to crash intermittently for several days. Anons created a 'Google bomb', so that a search for 'dangerous cult' would yield the main Scientology site at the top of the results page. Others sent hundreds of pizzas to Scientology centers in Europe, and overwhelmed the church's Los Angeles headquarters with all-black faxes, draining the machines of ink. The Church of Scientology, an organization that reportedly has more than a billion dollars in assets, could withstand the depletion of its ink cartridges. But its leaders, who had also received death threats, contacted the F.B.I. to request an investigation into Anonymous.
>
> On March 15, 2008, several thousand Anons marched past Scientology churches in more than a hundred cities, from London to Sydney. In keeping with the theme of anonymity, the organizers decided that all the protesters should wear versions of the same mask. After considering Batman, they settled on the Guy Fawkes mask worn in V for Vendetta', a dystopian movie from 2005.

They are first and foremost cyberactivists who have used distributed denial of service (DDoS) and DoXing attacks as their main modus operandi. Anonymous has carried out numerous attacks against big business and the big state, and have brought down the websites of PayPal, Visa, the Indian Army and the Tunisian government—although they have also made mistakes and had falsely implicated a citizen in the Ferguson shootings in Missouri, USA, in 2014, thinking that he was the policeman who shot Michael Brown. Anonymous' wide range of activisms across multiple issues has been an issue, and there are many involved in cyberactivism who believe that they act irresponsibly. But they remain a group that is difficult to keep up with precisely because they are very open-ended as an organisation in terms of its membership, the issues that they take and their actions, both online and offline. Quinn Norton (2012) writing in *Wired* magazine has this to say on Anonymous:

> [T]he success of Anonymous without leaders is pretty easy to understand—if you forget everything you think you know about how organizations work. Anonymous is a classic 'do-ocracy', to use a phrase that's popular in the open source movement. As the term implies, that means rule by sheer *doing*: Individuals propose actions,

> others join in (or not), and then the Anonymous flag is flown over the result. There's no one to grant permission, no promise of praise or credit, so every action must be its own reward. What's harder to comprehend—but just as important, if you want to grasp the future of Anonymous after the arrests—is the radical political consciousness that seized this innumerable throng of Internet misfits. Anonymous became dangerous to governments and corporations not just because of its skills (lots of hackers have those) or its scale but because of the fury of its convictions.

In other words, this 21st-century leaderless movement does suggest that in the context of a digitally networked society movement dynamics are bound to be shaped by very specific 'structures of feeling' aligned to cohorts that are familiar with the digital, who are committed to the 'hacker ethic', and who have the capacities to contribute to struggles over information use and abuse. For the most part though, social movements are bound to address, at least for the foreseeable future, issues and concerns that are both persistent and everyday, and that critically affect the quality and the environments of life. There is a need for CSC theory to be informed by the communication practices, the repertoires and modes of contention used in social movements.

References

Bratich, J. 2011. 'User Generated Discontent'. *Cultural Studies*, 25 (4–5), 621–40.

Blumer, H. 1951. 'Collective Behaviour'. In *Principles of Sociology*, edited by A. Lee, 167–222. New York, NY: Barnes & Noble.

Castells, M. 2004. *The Power of Identity*, Vol. II. Malden/Oxford/Carlton: Blackwell Publishing.

Hunt, S. A., and R. D. Benford. 2007. 'Collective Identity, Solidarity and Commitment'. In *The Blackwell Companion to Social Movements*, edited by D. A. Snow, S. A. Soule and H. Kreisi, 431–57. Malden/Oxford/Carleton: Blackwell Publishing Ltd.

Kenny, Michael. 1999. 'Reputations: Edward Palmer (E. P.) Thompson'. *The Political Quarterly*, 70 (3), 319–28.

Kushner, D. 2014. 'The Masked Avengers: How Anonymous Incited Online Vigilantism from Tunisia to Ferguson', *New York Times*,

September 8. Available at: https://www.newyorker.com/magazine/2014/09/08/masked-avengers (Accessed September 8, 2018).

Lynch, M. 2011. 'After Egypt: The Limits and Promises of Online Challenges to the Authoritarian Arab States'. *Perspectives on Politics*, 9 (2), 301–10.

Melucci, A. 1989. *Nomads of the Present*. Philadelphia, PA: Temple University Press.

McCarthy, J., and N. Zald. 1977. 'Resource Mobilisation and Social Movements: A Partial Theory'. *American Journal of Sociology*, 82 (6), 1212–41.

Norton, Q. 2012. 'How Anonymous Picks Targets, Launches Attacks and Takes Powerful Organisations Down'. *Wired*, 3 March. Available at: https://www.wired.com/2012/07/ff_anonymous/ (Accessed 15 January 2016).

Ollis, T. 2011. 'Learning in Social Action: The Informal and Social Learning Dimensions of Circumstantial and Lifelong Activists', *Australian Journal of Adult Learning*, 51 (2): 248–68.

Smelser, N. 1962. *Theory of Collective Behaviour*. New York, NY: Free Press.

Tilley, C. 1978. *From Mobilisation to Revolution*. New York, NY: Random House.

———. 2010. *Regimes and Repertoires*. Chicago, IL: University of Chicago Press.

Thompson, Edward Palmer. 1980. *The Making of the English Working Class*. London: Penguin Books.

Touraine, A. 1981. *The Voice and the Eye: An Analysis of Social Movements*. Translated by Alan Duff. London: Cambridge University Press.

CHAPTER 5

Learning from a Social Movement

The Case of the Right to Information Movement

As in CSC, scholars working on societal issues in India, just as scholars in other parts of the non-Western world, have had little choice but to employ theoretical and conceptual frameworks that are Western in origin. Arguably the many buzzwords in CSC, including 'participation' and 'empowerment', can only be validated within the specificities of context that varies from culture to culture. With the benefit of hindsight, it is clear that many of these frameworks have generated knowledge on Indian realities although 'translation' by no means has been unproblematic. The inability of scholars from a Marxian persuasion to ignore caste and privilege class is just one example of the failure of theorists to adapt theories to the local and for theory itself to be informed by the local. CSC theorists too are culpable of not dealing adequately with 'context' and uncritically validating the universality of approaches related to participation and empowerment. As argued in previous chapters, CSC strategies that focused on the empowerment of Dalit communities in India simply have to be based on a prior understanding of Dalit realities, their contexts, the larger political economy, caste cultures and the nature of hierarchy. Academic conversations,

mainly in the *Economic & Political Weekly*, on the nature of 'Dalit intellection' by the Dalit scholar Guru (2013), Sarukkai (2007), Menon (2013) and others point to the limitations of theory solely informed by the project of mimesis that discounts experience, and the need for another theorising based on Dalit experience (see also Guru 2009; Guru and Geetha 2000; Gurukkal 2013). 'Humiliation studies' is one attempt to generate a 'new conceptual language' capable of capturing 'complex dimensions of social reality' that do not fall within the purview of established social and political theorising (Guru 2009, 19). Such interventions expose the fault-lines in the social sciences in India that are caught between the *doxa* (belief) of the academy and the perceived universality of received theory.

This chapter explores issues related to the RTI Movement in India, specifically in relation to social movements and the public sphere, a concept that is habitually invoked to describe spaces for deliberation and communication. However, this concept too, as much as its cognate concept of 'civil society', lends itself to very contextual interpretations that are far removed from the notion of the bourgeoisie public sphere that is ascribed to Habermas (1991), or that of the space between the economy and the state that civil society is most often described in terms of. One can argue that the issue is not merely that of 'translation', although that is an important issue—it also has to do with experience, culture, traditions, formations, and ways of seeing and knowing the world. In other words, it can be argued that 'organic' public spheres are bound to emerge from a variety of contexts as a result of a variety of communicative and cultural shapings. This is best illustrated using the example of the RTI movement in India that gave shape to very distinctive public spheres that enabled indigenous voice making through a range of contentious actions and repertoires of protest.

Scholars from India, most notably Chandhoke (2003, 2005), Rudolph and Rudolph (2003), Kaviraj (2011) and Ali (2001) among others, have highlighted the fraught nature of translation of concepts such as the public sphere and civil society. Chandhoke's assessment and critique in particular raises a number of issues specifically with respect to the public sphere, in particular the limitations of genuine dialogue when a dominant language is employed by dominant

interlocutors to set the terms for any given debate. Using the example of tribals in India negotiating with the officialdom for compensation for traditional land that has been slated to be 'dammed', she observes that customary ownership of land outside the property regime that is part of a relatively 'weak' language is not on a level playing field, given the power of the dominant discourse and language. As she observes (2005, 342), '[power] identifies and privileges the language that *constitutes* the public sphere of deliberation' and that 'power in the deliberative form has to do with *epistemic* authority inasmuch as it privileges one system of meaning over another'. It is unlikely that, with the exception of the Maoris in New Zealand, whose language, culture and political economy are robust enough to compete with the dominant discourse, there are indigenous groups in a position to negotiate from a position of strength. The power of official discourse, in other words, often is dominating and dominant precisely because it is the constitutive basis of the public sphere. Arguably, one of the defining features of the RTI in India was to use the power of oral testimonies in public hearings to prise open the gaps between the ideology of welfare and its actual workings, and in that process expose corruption, and collectively contribute to accountability and transparency, and to an indigenous public sphere. The example of the RTI in India is a strong validation of the local, especially local voices and the enabling environments supportive of such voices.

While Chandhoke's critique of the structural contradictions of the Habermasian public sphere highlights the reality of exclusive public spheres in hierarchical societies, by employing the example of the RTI, I would like to highlight counter public spheres shaped by the spaces and channels for deliberation, dissent, agonism and contentious actions such as the 'public hearing'. One can argue that there have been moments in India's post-Independence history that has been characterised by robust counter public spheres, as was the case with the non-Brahmin movements in the states of Maharashtra and Tamil Nadu in the 1940s and the 1950s, and the RTI movement that took root in the late 1990s before becoming a national movement. These movements crystallised distinct public spheres—the former around the lower castes, and their cultural and economic emancipation from the dominance of Sanskritic Brahmanism, and the latter around the

rural poor in India who used the power of 'voice' to denounce corruption and announce an ethic of governance based on transparency and accountability. This chapter specifically explores the issue of 'voice', indigenous repertories of contention such as the 'public hearing' in the making of the 'public sphere'.

The Mazdoor Kisan Shakti Sangathan

The RTI movement began in the 1990s against the background of endemic corruption in government services and in the provisioning of entitlements. This finely calibrated system of corruption is based on different levels of graft committed by entire public sector bureaucracies in the allocation and provisioning of public services that are inclusive of kickbacks at a higher level to petty corruption at lower levels. Rural India, characterised by high rates of illiteracy, small farmers and a variety of land tenures overlaid by caste hierarchies, is the focus for national development projects, and it is in this context that access to information and its actioning assumes criticality for the simple reason that for many of India's rural population, their very survival is closely connected to their regular access to an array of public entitlements. In addition, there was no obligation by the government to disclose information.

> [I]n spite of India's status as the world's most populous democratic state, there was not until recently any obligation at village, district, state or national level to disclose information to the people—information was essentially protected by the Colonial Secrets Act 1923, which makes the disclosure of official information by public servants an offence. The colonial legacy of secrecy, distance and mystification of the bureaucracy coupled with a long history of one party dominance proved to be a formidable challenge to transparency and effective government… (Rai n.d.)

An example of a public information access project is the Bhoomi Project in the state of Karnataka that is aimed at ensuring small farmer access to information on land records that were traditionally managed by often corrupt village revenue officers. About 9,000 revenue officers basically controlled access to these records in this state. Between

2000 and 2002, the government computerised 20 million land records for 6.7 million land owners in 176 sub-districts in Karnataka. Land record kiosks were created, and these farmers could now access their land records through a bio-logon—fingerprint authentication system. The project enabled 'disintermediation', making superfluous the role of the intermediary, thus enabling direct access to vital information. Although this system has by no means resolved key issues related to land records, access to information has arguably made a difference in lives of at least some small farmers.

While there had been a number of previous initiatives in India aimed at introducing a RTI legislation, as for instance a draft RTI bill that was circulated by the Press Council of India in 1996, by the Consumer Educational Research Council (CERC), the Freedom of Information Act, 2002, and the sui generis bills passed by the Tamil Nadu and Goa state governments in 1996 and 1997, the moral force and strength of the Right to Information Act (2005) can be traced back to the struggles waged by the Mazdoor Kisan Shakti Sangathan (MKSS).

The MKSS was officially formed in 1990 by activists including Aruna Roy, Nikhil Dey and Shankar Singh in Devdungri, a village in the state of Rajasthan. Initially, their advocacy focused on struggles for minimum wages, land and women's rights, mainly with landless labourers, and initiatives related to making the PDS accountable. In Aruna Roy's (2000, 22) words, 'The Right to Information therefore began with the right to earn a daily wage, to live with dignity, indeed *a right to survive*' (author's emphasis). Very early on in their work, they realised that the key obstacles to development at village level was the lack of information on a variety of entitlements to rural people, in the area of employment, and rural infrastructure such as dispensaries, clinics, schools, roads and irrigation along with information on the many government initiatives related to poverty alleviation including access to pensions and the PDS. They launched a campaign based on consultation, street-based discussions and popular theatre performances throughout the state. In 1994, and in the face of official recalcitrance and unwillingness to cooperate with people's demands, the MKSS decided to organise public hearings (*jan sunwais*), with the first hearing

held in a village Kotkirana, in Pali District. These hearings took the form of an audit of local-level development projects, especially the social audit of 'employment muster rolls' and expenses related to public works and wages paid to workers. This led to the demand for all copies of documents related to public works to be made public. However, local government officials were not, in the beginning, cooperative, and in fact launched their own counter-campaigns against the RTI movement. These hearings, however, took a life of its own. As more and people throughout the state began to hear the literally hundreds of stories of corruption, they became empowered to act on this information. In district after district, these hearings exposed the vast gaps between official expenditures on development projects and the actual expenditures. These hearings unearthed evidence of widespread corruption, and the systemic links between local officials and politicians who were also involved in a variety of scams. This evidence discussed at the public hearings led to non-violent civic actions, boycotts and sit-ins at government offices that were systematically used to wear down the opposition and elicit a response from the government.

Here, in other words, is evidence of the creation of a public sphere based on the local idiom, local means of communication and performative traditions that enabled a balance between speaking, listening and taking action. One of the often overlooked aspects of Habermas' theory of the public sphere is his critique of the take-over of the bourgeois public sphere by big media, and the resulting creation of citizens as mere consumers of mediated information within a re-feudalised public sphere. In Habermas' words (1991, 188),

> To the extent that they were commercialised and underwent economic, technological, and organisational concentration, however, they have turned during the last hundred years into complexes of societal power, so that precisely their remaining in private hands in many ways threatened the critical functions of publicist institutions.

Mediated public spheres were limited in their ability to provide spaces for agonistic deliberations precisely because of the interests and agendas that they had as profit-making cultural industries. While some media in India have played an active role in maintaining the best

traditions of democracy, it can be argued that the majority of media have been supportive of the status quo. One can argue that in the context of the RTI movement, the people created their own media, with public hearings becoming the space for public communication and public opinion that is representative of people's interests and not that of the mainstream media. This is in some ways analogous to the situation described by Julie Frederikse (1984) during the freedom struggle in Rhodesia in which the media was controlled by the apartheid government, although the freedom fighters shaped their own media such as the *chimurengas*, late night gatherings that featured local songs for the new nation and *pungwes*—spaces for political education.

In 2002, the then central government introduced the Freedom of Information Act. This was amended by the government to become the Right to Information Bill (2004). This led to the Right to Information Act (2005) that has influenced and in turn been moulded by prior RTI legislations in a number of states in India inclusive of Rajasthan, Madhya Pradesh, Maharashtra, Goa, Tamil Nadu, Karnataka, Delhi and Andhra Pradesh. The RTI Act, 2005 explains the meaning of this right as follows:

- The right to seek information from any public authority,
- The right to take certified copies of records held by public authorities,
- The right to inspect records held by public authorities and take notes,
- RTI also means the right to inspect any work being carried out by an public authority,
- The right to take certified samples of material and the right to take information in the form of tapes, floppies or in any electronic format (2(j) quoted in Pande and Singh 2008, 7).

Valourising Communication Rights: The *Jan Sunwai* as a Public Sphere

The jan sunwai is an important indigenous means and pedagogical device used by this movement to mobilise, radicalise and give voice to

marginalised people who have traditionally been expected to remain silent, even in the face of the most atrocious atrocities committed by the forward castes and the wealthy. The jan sunwai is often used by traditional organisations in India such as guilds and associations of small traders and manufacturers to make themselves accountable to their publics. As Jenkins (2007, 60) describes it,

> The MKSS's key innovation…was to develop a novel means by which information found in government records could be shared and collectively verified: the *jan sunwai* (public hearing). A jan sunwai is a publically accessible forum, often held in a large opens-sided tent pitched on a highly visible sport, at which government records are presented alongside testimony by local people with firsthand knowledge of the development projects that these records purpose to document. Key pieces of information from project documents are read aloud. Those with direct knowledge of the specific government projects under investigation are invited to testify on any apparent discrepancies between the official record and their own experiences as labourers on public-works projects or applicants for means-tested antipoverty schemes.

Public hearings played an important role in creating popular understandings of the Right to Know.

The Jan Sunwai' is, as pointed out in the *Lokniti Newsletter* (2005),

> [A]n empowering process in that, it not only does away with civil society structures that are stacked against the marginalised but also inverts power equations in favour of the marginalised, by making them the centre of the discussion. There are no experts and 'hence no chance of objectification of the victim…[and the] victim represents 'his case without any technical assistance.

In the words of the Dalit intellectual Gopal Guru (2007),

> The *sunwai* is a public hearing but it is different from legal and procedural hearings instituted by the state which by its official, legal and almost pompous nature, place the victim at an inherent disadvantage. The *sunwai* restores to a person his place in the system by allowing him to represent himself and make himself heard.

Most importantly, the Jan Sunwai is a mechanism that affirms 'voice' and strengthens self-confidence, often in contexts where caste and class collude to silence people. In the context of the RTI movement, these public hearings allowed local people to examine both the information and dis-information on local development, the collusions, the silences, the corruption and the political economy of under-development. In Mohanty's words (2006, 20),

> The term *jan sunwai* is taken literally, and it implies that the power, legitimacy and sanctity of the forum will emanate from the people, not any judge or panel; and that it is a hearing and not a court or agitational body. The decision of the assembled collective to pose certain sets of questions would determine the priorities of the hearing. It did not pass a verdict or punish the guilty. It out to shame those government officials, in connivance with suppliers and contractors, who made money illegally from the public works.

These hearings took the form of an audit of local-level development projects, especially the social audit of 'employment muster rolls' and expenses related to public works and wages paid to workers. This led to the demand for all copies of documents related to public works to be made public. However, local government officials were not, in the beginning, cooperative, and in fact launched their own counter-campaigns against the RTI movement. These hearings however, took a life of its own. As more and people throughout the state began to hear the literally hundreds of stories of corruption, they became empowered to act of this information. In district after district, these hearings exposed the vast gaps between official expenditures on development projects and the actual expenditures. These hearings unearthed evidence of widespread corruption, and the systemic links between local officials and politicians who were also involved in a variety of scams. This evidence discussed at the public hearings led to non-violent civic actions, boycotts and sit-ins at government offices that was systematically used to wear down the opposition and elicit a response from the government. These local resistances reinforced what the public already knew, the fact that there was gross misappropriation of funds—wages paid to fictitious workers, even to workers who had died years back,

recorded in local employment registers, and incomplete public works projects such as roads and buildings that that were listed as complete when these were either partially complete, abandoned, non-existent and often made from sub-standard building material.

The jan sunwai as a local public sphere stands in stark contrast to the 'rational', bourgeois and rather exclusive public sphere that Habermas had highlighted. The jan sunwai is deliberately inclusive in that its strength is drawn from local people giving an account of their experiences with development and non-development. No voice is considered unworthy of a full public hearing. This public sphere can be contrasted with other public spheres in India that are shaped by the literate, associational caste groups, and the catholic, cross-caste and religious public spheres that evolved in India as a response to colonial projects in British India. Bayly (1999) in his classic study *Empire and Information* has a chapter on the Indian Ecumene in which he attempts to describe indigenous public spheres in North India in which respectable, literate men played an important role in contesting colonial excesses and providing moral moorings, but also of 'dense networks of social communication' that brought 'butchers, flower-sellers, bazaar merchants and artisans into political debates and demonstrations' (1999, 204). Such correspondences do indicate that public spheres were inclusive, although Bayly also observes that these relational continuities were by no means seamless and that it was also characterised by discontinuities—most notably between the Brahmanic elite whose ecumenism and dialogue was bounded, and Hindu noblemen who were open to writing in Persian and Urdu, and to the challenges posed by dialogue (1999, 210). The jan sunwai is indicative of a public sphere that is grounded in the rhythms of locality that is animated by ordinary people who are the agents of a collective, shared memory that refuses to be erased or forgotten. In other words, the jan sunwai, fundamentally provides a spatial framework within which the simultaneous recognition of individual voices and that of the collectivity is highlighted and reinforced. This tradition is consonant with public sphere traditions in India that have deliberately been shaped by the idioms of locality, and that went beyond literate cultures of the 'word'. Rudolph and Rudolph

(2003) have explored the Gandhian ashram (meditation retreats) as a public sphere and the repertories of protest that were intentionally linked to making mass movements associated with civil disobedience a dynamic public sphere.

> The problem of creating a public sphere, a self-automating civil society, among non-literates propelled Gandhi and his ashram associates to enact, exemplify, amplify political goals in theatrically visible forms, and to create participatory contexts—marches, sit-ins, boycotts—which required political understanding and commitment to goals more than the word. (Rudolph and Rudolph 2003, 399)

This need for political understanding and appropriate repertories of protest is clearly illustrated in the RTI movement's support for and the enabling of 'voice'.

Theorising Voice

An important recent contribution to understanding participation is the theorising of 'voice', particular the works of Nick Couldry (2009, 2010), and others such as Charles Husband (2009) who has made a case for the right to be understood. In their way of conceptualising voice, its validation is linked to the human imperative to deepen the human tryst with freedoms, and the fulfilment of the human potential to respect, listen to and understand the other through intersubjectively defined projects. As Couldry points out, neoliberalism plays down the need for people to give an account of themselves, and instead devalues voice while privileging the voices of power. In this context, Couldry's (2010, 2) definition of voice as value and process goes beyond the traditional understanding of voice as simply the right to speak.

> [V]oice as a value…refer(s) to the act of valuing, and choosing to value, those frameworks for organising human life and resources that *themselves* value voice (as a process). Treating voice as a value means discriminating in favour of ways of organising life and resources that through their choices, put the value of voice into

> practice, by respecting the multiple interlinked processes of voice and sustaining them, not undermining or denying them…. Valuing voice then involves particular attention to the conditions under which voice as a process is effective…'voice' as used here, is a value *about* values or what philosophers sometimes call a second-order value. (author's emphasis)

However voice, in this way of thinking, is a normative ideal that needs to be resurrected 'in the process of mutually recognising our claims on each other as reflexive human agents, each with an account to give, an account of our lives that needs to be registered and heard, our stories endlessly entangled in each other's stories' (Couldry 2009, 580).

The right to speak was used powerfully to counteract the right of established voices, such as that of politicians who in the early 1990s used *rath yatras* and other means to consolidate the Hindu vote against minorities, in particular Muslims. The MKSS's empowered villagers used their voices in yatras of their own, thus demonstrating to people that 'voice' is not a privilege but a right. Aruna Roy (2004, 17) describes the 'truck yatras' that were used by the MKSS.

> Called the 'Jan Nithi' and 'Jan Adhikar Yatra', 40 to 50 volunteers travelled through several districts in Rajasthan in the back of a truck. One objective was to lampoon political yatras themselves. Street theatre, music and other forms of cultural expression were used to take the debate about democracy and participatory governance to the people. The yatras have been extremely useful in starting genuine debates, emanating from the common people's concern about their future, and the future of the country.

The RTI is an essential aspect of the Right to Know—and this knowing and being able to act on what is known, that is a consequence of one's access to information, is what is ultimately significant. The ordinary meaning of information tends to be technical and refers to data expressed through any means of communication. However, the information that people access in the context of the RTI is information that can make a difference in their lives, and in this sense, this is information that is vital to the leveraging/facilitation/knowledge of change

processes. In other words, this knowing can result in empowerment, and empowerment on a national scale can have a major impact on the project of substantive democracy and citizenship. Empowerment, even on a local scale, can be powerful, simply because submerged/marginalised 'voices' can now be heard. One of the fundamental contributions of the RTI in India was the valorisation of 'voice'. Voice needs to be seen, not simply in terms of the human capacity to create sounds but the politics of speaking in contexts in which the right to speak is a privilege associated with the structures of domination undergirded by caste, class and gender. Taken in this sense, the spoken 'voice' in the context of public hearings popularised by the RTI movement in India is an invitation to listen and dialogue. The empowerment that results from 'naming' corruption and non-accountability is an act of freedom precisely because that act connects self, and the obligations of self to the community, thus, strengthening the larger environment of a communicating public. Eric Watts (2001, 185) has argued,

> [T]hat 'voice' is a particular kind of speech phenomenon that pronounces the ethical problems and obligations incumbent in community building and arouses in persons and groups the frustrations, sufferings and joys of such commitments. Rhetorical 'voice' is not a unitary *thing* that inhabits texts or persons either singly or collectively. It is itself a *happening* that in invigorated by a public awareness of the ethical and emotional concerns of discourse. Saying that persons or groups have 'voice' does not offer it as a unidirectional, primordial and autonomous projection out of the body, nor does it become a semiotic project. Rather, speakers can be endowed with 'voice' as a function of a public acknowledgement of the ethics of speaking and emotions of others. This recognition is often intertextual and mediated. 'Voice', then, is the *sound* of specific experiential encounters in civic life. (author's emphasis)

In the context of these public hearings, there is always a public acknowledgement of this voice leading to the valourisation of agency. These public hearings demonstrate in a profound manner the ideal environments for communication rights—environments in which any given person's right to speak is no lesser than the right of others. These are also environments that are conducive to listening. Ananda

Mitra (2002, 483–84), in an article on voice on the Internet, observes that 'an examination of voice extends well beyond the intentions or motives of a speaker. Voice calls upon us to consider how a particular act of public discourse or how rhetoric in general constitutes the ways the ways in which a community sustains or reinvents itself'.

In an article in the *Journal of Communications* (2017) entitled 'Contentious Actions and Communication for Social Change: The Public Hearing (*Jan Sunwai*) as Process', I have made a case for CSC theory to study and investigate the potential for informal contentious actions to contribute to social change. From a theoretical perspective, it is clear that the investigation and analysis of the communicative forms; the organisation, spatial and temporal architectures; and the performative enactments, contingency, enabling environments, processes, mediations and re-mediations of contentious actions offers CSC opportunities to explore and understand the textured and granular nature of many informal means of extant 'voice' making that contribute to empowerment. The social movement theorist Charles Tilly had highlighted the affordances, opportunities and contingent nature of contentious actions, and it is important that research agendas in CSC explore the contextual, cultural and increasingly technology-shaped efficacies of such actions. The 'public hearing' as both the space for and form of contentious action in the context of the RTI movement in India succeeded as a tool for 'voice'-making precisely because there was a confluence of factors inclusive of enabling environments that valued voice, and validated its public articulation, vernacular knowledge of corruption and the public desire for accountability. Moreover, these public hearings were experiences in political education, given that ordinary people both shared and learned from one another. Arguably, public hearings were an important aspect of the pedagogy of the oppressed, although this pedagogy was shaped in very specific contexts. Just as oppression, as Paulo Freire argues, cannot be cut from the same cloth, so is with pedagogy. Raymond William's experiences as an adult educator in rural Oxfordshire, Paulo Freire's work as an adult educator in Brazil and Guinea Bissau, and pedagogy in the RTI movement in India were all based on different approaches and, arguably, the quality of learning and empowerment in each of

these instances differed. There is a lot of emphasis on 'process' in CSC. While the tools used in 'process' such as PRA are useful, what it offers is a tool-box that has to be shaped in context, added to and validated in locality before it is rolled out. There is nothing that is sacrosanct in CSC theory or process, and it pays to be innovative and creative in the approaches that we take in CSC interventions. Social movements often act as laboratories for social change. Their spaces, enactments and actions provide insights into the politics of possibility, and offer opportunities for CSC theorists to recognise the specificities of participation and empowerment, and the potentialities of people-led initiatives related to social change.

Conclusion

This chapter has made a case for the existence of counter public spheres in India, especially those linked to jan sunwais and the RTI movement. It has highlighted the need for CSC theory to factor in learning from social movements, given that there are those that have contributed to lasting social change. What is a significant learning from the example of the RTI in India was that access to information was articulated as an imperative from the grassroots. The movement, in other words, validated people's communication rights, and the public hearings became an important source for education, mobilisation, organisation and empowerment. While the impact of this movement is still unravelling in India, it is clear that the RTI as a legal framework now encompasses close to all state and Central government institutions. So it is not at all surprising that the RTI is contested from within and without, and that, given the stakes involved, RTI activists from across the country have been murdered for their exposures of corruption in both the public and private sectors. While this movement has, over the last two decades, also become a nation-wide middle-class movement that has fed into other movements such as the anti-corruption movement, I think that it is important that we not forget its roots in a handful of villages in Rajasthan, nor the fact that the jan sunwai played an important role in enabling 'voice' and strengthening indigenous, local counter public spheres in many parts of India.

References

Ali, A. 2001. 'Evolution of Public Sphere in India'. *Economic & Political Weekly*, 36 (26), 2419–25.

Bayly, C. A. 1999. *Empire & Information: Intelligence Gathering and Social Communication in India, 1780–1870*. New Delhi: Cambridge University Press.

Chandhoke, N. 2003. 'The "Civil" and the "Political" in Civil Society'. In *Civil Society and Democracy: A Reader*, edited by Carolyn M. Elliott, 238–61. New Delhi: Oxford University Press.

———. 2005. 'Exploring the Mythology of the Public Sphere'. In *Civil Society, Public Sphere and Citizenship: Dialogues and Perceptions*, edited by Rajeev Bhargava and Helmut Reifeld, 327–47. New Delhi: SAGE.

Couldry, N. 2009. 'Rethinking the Politics of Voice'. *Continuum*, 23 (4), 579–82.

———. 2010. *Why Voice Matters*. London: SAGE.

Frederikse, J. 1982. *None but Ourselves: Masses vs. the Media in the Making of Zimbabwe*. Johannesburg: Raven Press.

Guru, G. 2007. 'Jan Sunwai: A New Instrument of Democracy in India', *Democracy Asia.* Available at: http://www.democracy-asia.org/casestudies_studies_gopal_guru.htm (Accessed 11 February 2008).

———. ed. 2009. *Humiliation*. New Delhi: Oxford University Press.

———. 2013. 'Freedom of Expression and the Life of the Dalit Mind'. *Economic & Political Weekly*, 9 March.

Guru, G., and V. Geetha. 2000. 'New Phase of Dalit-Bahujan Intellectual Activity'. *Economic & Political Weekly*, 35, (3), 130–34.

Gurukkal, R. 2013. 'On Mirroring the Social: Can Felt Ontology Alone Inform the Theory?' *Economic & Political Weekly*, XLVIII (14), 27–31.

Habermas, J. 1991. *The Structural Transformation of the Public Sphere: An Enquiry into a Category of Bourgeois Society*. Cambridge, MA: The MIT Press.

Husband, C. 2009. 'Between Listening and Understanding'. *Continuum*, 23 (4), 441–43.

Jenkins, R. 2007. 'Civil Society Versus Corruption'. *Journal of Democracy*, 18 (2), 55–68.

Kaviraj, S. 2011. *The Enchantment of Democracy and India*. Ranikhet: Permanent Black.

Menon, D. M. 2013. 'Minding Ones Words'. *Economic & Political Weekly*, XLVIII (16), 59–58.

Lokniti Newsletter. 2005. November, #8.

Mitra, A. 2002. 'Theorising Cyberspace: The Idea of Voice Applied to the Internet Discourse'. *New Media & Society*, 4 (4), 479–98.

Mohanty, B. K. 2006. *The Growing Role of Civil Society Organisations in Contemporary India: A Case Study of the Mazdoor Kisan Shakti Sangathan*. Centre for Studies in Social Sciences, Research Training Program 2005–06, 1–31. Kolkatta: Centre for Studies in Social Sciences.

Pande, S., and S. Singh. 2008. *Right to Information Act 2005: A Primer*. New Delhi: National Book Trust.

Rai, S. n.d. *Transparency and Accountability in Governance and Right to Information in India*, 1–14. Available at: http://rti.img.kerala.gov.in/RTI/elearn/GovernanceandRTIinIndiaSHEILA_RAI.pdf (Accessed 11 May 2010).

Roy, A. 2004. *Fostering Informed Choices: Ethical Challenges for the Fourth Estate*, 1–24. Convocation Address, 3 May, Asian College of Journalism, ASJ, Chennai.

Rudolph, S. H., and L. I. Rudolph. 2003. 'The Coffee House and the Ashram: Gandhi, Civil Society and Public Spheres'. In *Civil Society and Democracy: A Reader*, edited by Carolyn M. Elliott, 377–404. New Delhi: Oxford University Press.

Sarukkai, S. 2007. 'Dalit Experience and Theory'. *Economic & Political Weekly*, 42 (40), 4043–48.

Watts, E. 2001. 'Voice and Voicelessness in Rhetorical Studies'. *Quarterly Journal of Speech*, 87 (1), 179–216.

Section 3

Digital Interventions in Social Change

Opportunities and Challenges

While Chapters 6, 7 and 8 in this section highlight contemporary digital affordances, Chapter 9 deals with the obverse of digital plenty—electronic waste (e-waste). Chapter 6 highlights issues to do with digital humanitarianism, specifically the role played by Big Data in the context of human-made and natural disasters. While access to mobile phones potentially enables people to contribute to the alleviation of 'distant suffering', how to sieve good data from bad remains an issue in the context of its uses within digital humanitarianism. Chapter 7 explores community telecoms, in particular *Telecomunicaciones Indigenas Communitarias* (TIC) in Mexico that is based on a partnership between a local community and an NGO that has led to local access and connectivity, and is an example of the digital making a difference in people's lives. Chapter 8 is a critical introduction to e-government, and it also deals with potential innovations

within e-government as for example PSS and its contributions towards enhancing efficiencies, and strengthening independence and local capacities. The final chapter deals with the contentious issue of e-waste, an issue that is often ignored in the literature on CSC that seems to thrive on all manner of digital solutions in development and social change. While digital interventions do make a difference in people's lives, how to deal with the digital in sustainable ways remains a challenge. This chapter provides an introduction to the larger context of the digital, and the detrimental impact of e-waste on lives and the environment. Taken together, the four chapters on this section explore the affordances, limitations and possibilities of the uses of the digital in social change. It also introduces readers to new theory and to making sense of the digital in the context of social change.

CHAPTER 6

Digital Humanitarianism

Challenges and Opportunities

In the context of CSC, digital humanitarianism, while acknowledged, has yet to become mainstreamed as an area for focused study. Arguably, this is a relatively new area in which digital affordances have become quite central to crisis/disaster information gathering, processing and responding. What I would like to do in this chapter and in the following chapters that deal with the digital in development and social change is to quite intentionally highlight the specific materialities of the digital, and to highlight the need for CSC theorists to take seriously the variabilities in digital practices in development that are shaped by power and political economy as much as by the availability of digital innovations and possibilities.

Digital humanitarianism refers to the various ways in which digital technologies and their applications along with personal devices and platforms can be used to mitigate and control the impact of human-made and natural disasters, and offer opportunities for post-disaster relief, re-development and re-construction. Key to the roll out of digital humanitarianism are the many opportunities that networked communications offer for a more focused approach to the logistical

requirements in the event of disasters of one sort or the other. Take for example a cyclone whose pre-landing is tracked through weather satellites with information that is constantly fed to the Met office, which in turn communicate the status of the cyclone through Facebook and Twitter updates, and warnings via traditional media and their online sites. During the actual event, disaster-monitoring centres collect data through crowd sourcing—SMSs that are sent by ordinary people who provide micro-accounts of the cyclone, including information on high danger and potential loss to life and property—that can, in turn, become the basis for emergency rescues. A focused collection of Big Data from areas affected by the cyclone can become the basis for a mapping of the cyclone's path through any given area including information on the severity of its impact, thus leading to focused emergency responses. The role of the average citizen in digital humanitarianism is foregrounded precisely because, unlike say three decades ago, growing numbers of people have access to smart mobile phones that facilitate communication and responses in real time. It is not only in the context of natural disasters that the role played by ordinary people is critical to targeted relief and development. As we have seen over the last decade, human-made disasters such as civil conflicts and wars also provide opportunities for targeted relief, especially so in contexts such as the war in Syria where humanitarian agencies are explicitly targeted and where ordinary individuals have used their mobile phones to send alerts to humanitarian agencies, resulting at times in the provisioning of timely humanitarian assistance, often with the support and cover provided by the military. Digital resources are being extensively used in Syria by humanitarian agencies, and this includes technologies used in biometric identification of refugees; smart cards used by refugees to collect welfare and aid; electronic money transfers; e-health, e-surgery and e-education courses; and so on. An online account of the many uses of digital support in Syria by ISIL, the Syrian Electronic Army and the humanitarian forces makes the point that,

> [H[uman rights and civil society organizations have invested in digital tools to more accurately map the dynamics of the ground, including by relying on crowd-reporting and satellite imagery to document attacks and their consequences. Humanitarian

> organizations have also improved their digital tools to help address the refugee crisis triggered by the Syrian war. These include an app to improve access to UN services for refugees, developed by Vancouver-based PeaceGeeks, and tools to improve coordination and data collection by actors on the ground. These tools are especially important in a context like Syria, where many international organizations cannot send their staff on the ground and thus rely on remote management, often requiring digital technologies to coordinate their efforts with local partners.[1]

While humanitarian disasters have always been mediated, the extent of that mediation has been conditioned by the nature of the medium. While radio in particular has been highly effective in the context of communicating with people in a disaster area, it is for the most part a one-way communication from the sender to the receiver. While phone-ins and lines open throughout a disaster help mitigate and help with better multi-directional flows of communications, it is the capacity of networked smartphones to provide constant, immediate information that places these new digital devices in a different category. Instantaneous communication has led to the collapsing of time and space, and whether it is a Fukushima or the smog in Singapore, or for that matter the 9/11 attacks, these events are now both recorded and transmitted through hand-held devices and are received in that same way. Simon Cottle (2015, 24–25), in a chapter on humanitarian communication, places emphasis on six distinct characteristics of new media in humanitarian crisis.

1. Scale: The fact that billions of people now can watch, receive information and transmit information on disasters in real time.
2. Speed: The speed of digital communication offers possibilities to respond at a faster pace, even predict the trajectory of a disaster through the help of data visualisation.
3. Digital communications: It can help with the saturation of information on alerts, information on disaster preparedness and post-disaster rehabilitation.

[1] See 'Who is Winning the Syrian Digital War?', https://www.opencanada.org/features/who-winning-syrian-digital-war/, accessed 9 July 2018.

4. Social relations enfranchisement: Events such as natural disasters help bring concerned, tech-savvy groups together, who set up voluntary monitoring groups in local neighbourhoods and information feeds that are relayed to humanitarian agencies and state-based initiatives. These voluntary technical communities (VTCs) are playing an increasingly important role, given that they have the flexibility and knowledge of the local to compile disaster maps and pinpoint the areas and peoples most affected. The VTCs are made of volunteers just as Wikipedia is made up of volunteers, and they create maps, assess damage, create lists of emergency requirements, etc.

   > The impacts of VTCs are profound. As demonstrated in Haiti, for example, the crisis mapper community coordinated imagery and mapping activities. The disaster response portal Sahana geolocated 100 hospitals in 24 hours, and served as an organization registry, food cluster [and] request portal. Ushahidi, a crowdsourced crisis mapping platform, geolocated incoming messages, e.g. trapped individuals, [and] they developed an SMS shortcode for aid in collaboration with local telecom providers, and developed a translation and micro-tasking platform in creole. Humanity Road developed the first online first aid reference material in Creole, mapped the cholera outbreak and disseminated educational materials through social media. And Humanitarian OpenStreetMap (HOT), deployed and trained over 500 Haitians on mapping and assessing techniques.[2]

5. Surveillance: The fact that everyday devices now have the capacity to record, monitor, share and transmit information means that governments are not able to ignore the reality of unfolding tragedies. News blackouts are no longer possible or at least are difficult to maintain for any length of time, given people's capacities to transmit images, text and data. Remoteness is increasingly becoming a non-issue, given that geo-spatial satellites and digitally

[2] See 'Lending a Digital Hand', http://relieftorecovery.ca/lending-digital-hand-overview-digital-humanitarianism-get-involved/, accessed 12 May 2017.

networked information facilitates are monitoring disasters and conflicts in real time. While I do broadly agree with the globalisation of surveillance and its implications for the actioning of humanitarian relief, there is a sense in which the state's power to act cannot be taken for granted, even in the light of ubiquitous surveillance by a range of actors in society. While there is no denying the fact that civil society actions and actors continue to play an important role in responding to humanitarian crisis, the state continues to have the power and resources to support such activities, partner with humanitarian groups, establish its own response and, for that matter, impede and obstruct relief, and delay supplies of critical aid to communities that for whatever reason are not considered to be part of the mainstream. The mere availability of Big Crisis Data does not guarantee a scaling up the state's response to emergencies, illustrated clearly in the lacklustre response of the government in Tamil Nadu, India, to the maps of floods in Chennai in December 2014.

6. Seeing: The fact that we live in an era of the image ensures that we cannot ignore compelling images of people's sufferings or that of people bearing witness in the context of civil conflicts. In other words, images can stir emotions, and can result in empathy and public opinion-led interventions.

The Risk Society

This extraordinary use of many types of digital technologies by an array of communities across the public and private sectors, digital activists and people on the ground not only offers the potential to respond to crisis in real time but also highlights the fact that we do live in 'risk' societies that are prone to both man-made and natural disasters. The German social scientist Ulrich Beck (1992) had written a book more than three decades ago entitled *The Risk Society* in which he had outlined the nature of risk in a globalising society, meaning the uncertainty, and the contingent and global nature of risk faced by human beings in the light of man-made catastrophic disasters such as Chernobyl. To him 'uncertainty' is an aspect of industrialised

societies, although one can argue that this is a reality for all societies tied together in a globalising world. Increasingly, risk has become global—just as nuclear ash from Chernobyl settled in parts of Europe, so terrorism and financial crisis is no respecter of borders, as we have seen in the many cross-border manifestations of terrorism that have allegiances to ISIS and in the 2008 financial crisis that affected many countries, and quite spectacularly bankrupted one country—Iceland. Beck (2006, 333–35) has argued in a subsequent paper that global risk is characterised by de-localisation (its causes and consequences are omnipresent; it has a spatial dimension, and has complex temporal and social effects over the long term), incalculableness (one cannot predict its intensity or extensity) and non-compensatibility. (With the exception of planes being downed by a terrorist missile, we are faced with living life in a context in which it is close to impossible to remain safe against global risks. This has become the normal state of life. And all we can do is to take precaution through prevention. Compensation remains a reality in national contexts, and in disasters such as the Bhopal gas tragedy that has been blamed on the negligence of the MNC Union Carbide.) In other words, in the context of a risk society and with the inability of authority such as the state or government to protect citizens, 'risk' has increasingly become an issue for individuals to sort out themselves. Arguably, therefore, digital humanitarianism is a two-edged sword. While it does offer hitherto passive and silent communities to respond through contributing to crisis mapping—as was the case in earthquakes in both Haiti and Nepal, through enhancing participation and cooperative crisis efforts—it also highlights in stark contrast the limits of the state, and the increasing role played by non-state actors in the creation of crisis mapping and the structuring of relief efforts. A key question is whether or not the states are open to learning from their handling of natural disasters, or if they are, instead, satisfied with the fact that can rely on a variety of volunteers to help out. The more we live in neoliberal economic environments where the state and private sector increasingly refuse to factor in extensive risk to populations, the greater the possibility for the individual to manage risk—a reality best illustrated by the fact that many insurance companies in Brisbane refused to compensate their customers for flood

damage in 2011, arguing that insurance for water-based damage did not include risks to property associated with flooding. In other words, if your property is built on a flood plain, tough luck.

> The individual must cope with the uncertainty of the global world by him or herself. Here individualization is a default outcome of a failure of expert systems to manage risks. Neither science, nor the politics in power, nor the mass media, nor business, nor the law or even the military are in a position to define or control risks rationally. The individual is forced to mistrust the promises of rationality of these key institutions. (Beck 2006, 336)

In other words, increasingly, the individual has been left to navigate his/her way through the risks associated with eating GM food, the harmful effects of radiation related to constant cell phone use, and using potentially carcinogenic material in households paints, furnishings, processed foods, etc. 'Risk' is mitigated to some extent by the fact that both the expertise and the ability to respond to natural disasters is no longer a prerogative of the state sector but also of civil society. The availability of platforms such as Ushahidi and Open Street Maps based on open source has enabled 'crisis mapping' in many disaster zones around the world—from Syria, to Haiti, Nepal, Ecuador and other countries that have experienced natural and man-made disasters of one sort or another. Here again, and in the context of understanding the notion of 'sharing' in CSC, there is evidence of web developers, open knowledge advocates and other volunteers freely sharing their labour in the context of responding to emergencies. Brown (2016), in a piece in the New Internationalist on the earthquake in Ecuador in 2016, specifically comments on the nature of volunteerism in the use of Ushahidi.

> Open knowledge advocates, software developers, website designers and mappers soon joined the chat to work out the specifics. This meant collecting, validating and organizing the incoming reports from the coast, as well as maintaining the website. The team eventually changed the name of the site to the more positive sounding AyudaEcuador.ec.

> This chat group also included specialists from around the world, like Spain and Colombia, who had previously worked with Ushahidi, as well as its original creators in Kenya, who all shared their expertise and experience with the new volunteers.

However, as opposed to the celebratory accounts of participation and technology-based collaborative solutions, there are scholars such as Michal Givoni (2016), who has argued that there is a need to interrogate digital humanitarianism and to make needed distinctions between what has been achieved and what has not. Givoni has argued that the efforts of such collaborative responses to crisis has merely led to ICTs being used to generate data used to reassert state law and order and to transfer responsibilities to these new actors, thus, making contentious the very purpose and objectives of digital humanitarianism. Using two examples of crisis mapping using MicroMappers and the Missing Maps Project, Givoni (2016, 1039) has argued that

> Participatory technologies accentuate the very same problems of public engagement they aim to address; their considerable success in triggering engagements and the quantitative monitoring of participation made available to them through their own digital platforms open up a whole new terrain of concerns and interventions related to the questions of how public engagements are to be orchestrated and what they should reasonably be expected to yield.

There are many questions that require answers. The increasing role played by the private sector in crisis mapping can pose issues related to privacy: Who owns the data used in crisis mapping? Will it be commodified and become the basis for targeted interventions by advertisers and the market in the post-crisis context? Additionally the role of the state can be hugely problematic, given that not only have disasters exposed their incapacity to respond but post disaster, few states have learned their lessons or have invested in preparedness. The Government of Tamil Nadu was simply absent in the context of flood relief, and attempted in its aftermath to badge all relief efforts and products with the image of the then chief minister, the late J. Jayalalitha. Similarly, civil society efforts can be problematic,

especially if these efforts are at cross purposes. Givoni (2016, 1026) has observed that

> In the weeks following the earthquake in Nepal in April 2015, for example, more than 4,000 volunteers added over 13,199 mile of roads to the OpenStreetMap map of Nepal in an effort coordinated by the local Kathmandu Living Labs; at least nine teams flying unmanned aerial vehicles (UAVs) operated in the country to produce up-to-date aerial imagery of damages; six million tweets were automatically processed in search of relevant info; and no less than 52 different crisis maps were created by a plethora of governmental, business, and grassroots actors.

That is a lot of data, and questions remains as to the usefulness of the data, the worth of multiple data gathering initiatives and, more importantly, who benefits from all this data.

While there is a lot to celebrate in the coming of age of digital humanitarianism, there are, as I have pointed out, a variety of issues that requires sorting out. A major issue relates to the analysis and interpretation of Big Data—the accurate making sense of vast amounts of data in the context of a disaster that could run into hundreds of thousands of tweets and postings. In other words, here again we need to temper the tendency to attribute social change primarily to technological interventions—what we refer to as 'technological determinism'—given that improvements in the technological capacity to gather information needs to be separated from post-disaster relief and logistics that requires human input and that are based on decisions taken by human beings. In other words, there is a need to distinguish between useful techniques that can be called upon and that can help with crowdsourcing as against the technology itself. While there is certainly a utility element in the use of Big Data, as for example increasing situational awareness and access to unmediated information, how the information is used further and becomes the basis for actioning involves the exercise of power. Which neighbourhood gets relief and when is a political question, as is which neighbourhoods are prioritised to get back on to electricity grids and running water

supplies. There is also the issue of sifting through Big Data and selecting consequential information from the inconsequential that can result in the geo-tagging of tweets. Today we have access to digital platforms such as Ushahidi that can be used to synthesise data, and digital communities such as the Digital Humanitarian Network that offer monitoring services in real time. It has been reported that quite often, as was the case with Typhoon Yolanda, of the 250,000 tweets received at a crisis centre during a 72-hour period, only 0.25 per cent is actionable. There are also issues with bias and reliability of the data. Verification remains a big issue. Today drones and other unmanned aerial devices are also employed to map the scale of a given disaster. There are also issues with the data's representativeness. While there are hubs such as the BBC's User-Generated Content centre that help with the verification of social media content, the sheer volume of such content remains a challenge although there is ongoing work on digital verification technologies. There is of course the possibility that in a city affected by floods, neighbourhoods that are saturated with smartphones (middle/upper middle class) are better positioned to send data and avail of emergency services quicker than neighbourhoods that could be worse affected but where residents are not in a position to use their mobile phones in ways that result in the actioning of relief. Such asymmetries also dovetail with existing asymmetries of class, neighbourhood, and the capacity to exert and leverage power to avail of emergency services faster than in worse-affected areas. There is, in other words, a knowledge politics even in the context of digital humanitarianism. In the words of Ryan Burns (2015, 484–85), 'The knowledge produced through Big Data technologies, data, and practices is always partial and reflects the geographical and social contexts of the people producing those knowledges'. Mulder et al. (2016), on analysing the making of Big Data, have argued that it is socially constructed and that, as such, it is political. Tracing the making of Big Data through crisis mapping in the context of earthquakes in Nepal and Haiti, the authors argue that crowdsourced, local information that became the basis for Big Data was then used by other groups of shapers, from civil society to the state and the private sector, for fulfilling priorities that excluded

those who contributed to the making of this data in the first place. The migration and transformation of information into knowledge became the basis for other priorities.

> [Mulder et al.] explain how digital inequalities are created during the Big Data making process, showing that crowdsourced local crisis information becomes gradually less accessible to certain affected communities as 'local knowledge' is transformed through various stages into 'data'. We demonstrate that crowdsourced crisis data can end up reflecting societal inequalities due to the fact that, as a result of digital and virtual barriers, certain population groups have less of an online presence. This raises the concern that reliance on crowdsourced crisis data can result in these inequalities being replicated, especially if marginalized communities are underrepresented by or excluded from data. (Mulder et al. 2016, 10)

There are also issues with stand-alone digital humanitarianism as opposed to digital practices that dovetail with the ongoing work of established humanitarian agencies. In the context of any given humanitarian crisis, there is a need for clear lines of authority, for well-planned responses, and for adequate and just allocation of resources—in other words an overall approach that is coordinated, accurate and extensive. And there is also that perennial issue in communication for social change—the privatisation of digital humanitarianism and its consequences when the logic of 'efficiency' and proprietorial technologies trump the value of grassroots responses and collaborative labour.

While the technologies that are being used have their pros and cons, one of the critical issues related to digital humanitarianism is the tendency to withdraw from face to face, on the ground interventions and to rely on remote, digital interventions. Just as war no longer is based on face-to-face combat but is all about information warfare, drones that can be manipulated from a military base in Nevada to deliver death to targets in Afghanistan, so the critique goes that digital humanitarianism faces the risk of aiding with

development at a distance. Its story becomes one of technology. This critique overlaps with the political-economy inspired critique of new technologies—that in the context of non-investments in people, human interventions in health, development, emergency relief and all things digital have been enlisted to make up for government's lack of investments in relief efforts, and there are fears that such technologies could be used to strengthen the surveillance of already vulnerable communities.

> [R]emoteness involves a combination of epistemological, existential and physical distancing, while, simultaneously calling forth new technological means of digital recoupment and re-embodiment. Remoteness is inseparable from the increasing sophistication of the [G]lobal North's atmospheric ability to digitally rediscover, remap and, importantly, govern anew a now distant South. (Duffield 2016, 149)

References

Beck, U. 1992. *Risk Society: Towards a New Modernity*. London: SAGE.

———. 2006. 'Living in the World Risk Society'. *Economy & Society*, 35 (3), 329–45.

Brown, K. 2016. 'What Is Digital Humanitarianism and What It Do for Ecuador'. *The New Internationalis*t, 15 June. Available at: https://newint.org/features/web-exclusive/2016/06/15/what-did-digital-humanitarianism-do-for-ecuador (Accessed 16 May 2017).

Burns, R. 2015. 'Rethinking Big Data in Digital Humanitarianism: Practices, Epistemologies, and Social Relations'. *GeoJournal*, 80 (4), 477–90.

Cottle, S. 2015. 'Humanitarianism, Human Insecurity, and Communications: What's Changing in a Globalised World?' In *Humanitarianism, Communication and Change*, edited by S. Cottle and G. Cooper, 19–38. New York, NY: Peter Lang.

Duffield, M. 2016. 'The Resilience of the Ruins: Towards a Critique of Digital Humanitarianism'. *Resilience*, 4 (3), 147–65.

Givoni, M. 2016. 'Between Micro Mappers and Missing Maps: Digital Humanitarianism and the Politics of Material Participation in Disaster Response'. *Environment and Planning D: Society and Space*, 34 (6), 1025–43.

Mulder, F., J. Ferguson, P. Groenewegen, K. Boersma and J. Wolbers. 2016. 'Questioning Big Data: Crowdsourcing Crisis Data Towards an Inclusive Humanitarian Response'. *Big Data & Society*, 3 (2), 1–13.

CHAPTER 7

Contemporary Digital Alternatives

Community Informatics, The Case of Telecomunicaciones Indigenas Communitarias and the Information Commons

CI refers to the appropriation and use of a diverse range of information technologies and digital solutions by community networks, cooperatives and community organisations specifically to contribute towards expanding capacities, enabling agency, strengthening knowledge development and management, and fostering digital applications in development. At the core of CI is a commitment to social inclusion and the exploration of a number of solutions in areas as diverse as education, governance and health to create digital interventions and to complement such interventions with other ongoing offline interventions in development. An example of this would be farmers receiving agricultural pricing in real time over their mobiles and/or their access to online agricultural knowledge during the various stages in the agricultural season. It could also be an app for migrants trying to get into the USA through Mexico that has information on where drinking water can be found in the desert. It could be a community's

online repository of knowledge of indigenous medicinal practices or a functioning telecom cooperative in a remote part of Mexico or providing 'civic bandwidth' through Wi-Fi solutions in public areas such as parks and urban centres. The solutions in other words are expansive and extensive—from collective solutions such as telecentres along with e-commerce and e-trade solutions to effective use of targeted health messaging for individuals such as for expectant mothers and new mothers. In other words CI is based on an understanding that access to information and knowledge is of primary importance in a world in which such access has begun to define one's quality of life. Information has become a primary resource that is key to the fulfilment of social, economic, political and cultural objectives. CI is concerned with bridging the digital divide that exists everywhere. At the core of CI is the enabling of communities to control knowledge and networks to their advantage through disintermediation, cutting out the middle man thereby increasing the transparency of information and possibilities for independence and inclusivity. The solutions typically strengthen both weak and strong communities. Strong communities are characterised by shared frameworks of understanding of a given intervention, community involvement in the planning and implementation of a given project, and collective belief in the worth of its impact on the local community. Weak community is normally the outcome of informatics in development that is of a top-down nature.

CI is of course staple fare in CSC although there are variations in the extent to which 'community' is involved in the ownership of a project and play a defining role in its operationalisation and setting the objectives of the project. Sustainability is of course a key issue for such CI projects as it is for CSC projects in general given the many exigencies—funding, resources, lack of volunteers, etc.—that seem to be persistent issues in community media and information projects. The example of Rhizomatica that is highlighted in this chapter is based on an NGO in partnership with local communities and involved in a community telecoms project that services rural indigenous communities in Mexico. I have used this example to illustrate the nature of a community-based project that has actually made a difference in people's lives and highlight the possibilities today for local

communications infrastructure. I highlight the fact that this is a case of the 'information commons' becoming a reality.

A critical approach to CI eschews a celebratory account of the digital and opts for a contextually grounded approach in which technology is one important driver, among many others, in social change. There are a number of popular writers such as Alvin Toffler and scholars such as Nicholas Negroponte and Henry Jenkins who are technology optimists and who believe that digital solutions are the answer to the world's many intractable problems. However, as the history of previous generations of technologies reveal, it pays to invest in contextual understandings of technology and to learn from the history of such interventions. At the same time, it makes sense to not take the attitude of a Luddite given the real opportunities that CI offers to community development. However, we need to also take note of the fact that there are those who find solace in solutions that are off the grid as it were. In other words just as there is a right to remain silent, people also have the right to opt for other than technology-based solutions. It is important that we give some consideration to the possibility of the grid failing and its consequences for the majority of humankind who are now dependent on multiple information-based mediations for their survival on a day-to-day basis. CI needs to be seen as an essential aspect of community development particularly in the extension of capacities, education, mobilisation and organisation skills at the level of community. The nature of agency in a CI project is bound to differ from project to project. Arguably, most CI projects are oriented towards maximising the efficiencies of employing digital technologies in social change. While the community may learn how to use social media and computing, it is not often not the case that communities learn about understanding hardware and software—so that these can be appropriated for local uses. Curry (1995) makes the point that

> It is helpful…to distinguish between knowing *how* and knowing *that*. Knowing *how* refers to the ability to do something, the ability of the average person, say, to use a computer, to enter data, or to do analysis using simple, perhaps menu-driven routines. Knowing *that* refers to knowledge about how something works.

However, one cannot argue against knowing *how* given that digital literacy is important in a world that has become digital. The digital divide in other words needs to be seen as one aspect of other divides—economic, social, cultural and political—and is also about the lack of capacity and understanding that can make a difference. CI in a real sense offers possibilities to educate and upskill people on how to tackle the divides facing them although the quality of that education and the learning and use of skills is bound to vary from project to project.

There are two aspects to CI—the community that can be geographically bound or dispersed and informatics that refers to digital programming, social networking, content production and management and so on by the community. Like a number of other words used in the social sciences, community is a multi-accentual term that lends itself to multiple meanings. It denotes a group of people bound by common interests and who collectively acknowledge and contribute towards solutions that make a difference in their lives. While dealing with community, we need to acknowledge the force of networked individualism that characterises the predominant relationship between new technologies and its users. CI however is characterised by its intentionality—the intentional uses of information technologies to make a difference in people's lives. It makes sense to understand the word Community as used in CI to specifically refer to all groups of people who face information/communication deficits and who are interested in solutions that offer them opportunities to use information, to network and create possibilities for change. In any collective that is characterised by diversity in status and socio-economic positioning, community is bound to be a lot more difficult to invoke and operationalise via projects. Critical CI acknowledges the fact that all technologies are shaped by human interests, and that, as such, artefacts such as social media platforms and mobile phones are shaped by political, economic and other factors that are deeply embedded in these technologies. The uses of these technologies by communities will involve both following its prescribed, mainstream uses as well as its appropriations—through the sharing, creating and use of code, embracing the principle of openness, contributions towards its design and engineering solutions

that increase access and affordable uses of technologies. Critical CI is based on an understanding that digital divides are an aspect of other divides in society and that solutions can be based on CI rather than the networked individualism that is a hallmark of technology-mediated relationships in our contemporary world. So in a sense the objective of a critical CI is to strengthen collaborative identities as opposed to individual identity that is the very basis for identity in the transactional environments that we are in. Critical CI attempts to displace the controlling power of networks to define the nature of interactivity and participation through their control of algorithms and to replace it with a network that is shaped by a community and their use of open technologies—both hardware and software—thus strengthening their autonomy and independence.

Michael Gurstein (2012, 43), in an edited volume on CI and its uses among indigenous communities in Canada, makes the following observations:

> It is thus not surprising that the resistance and alternatives to this totalisation comes from opportunities and frameworks that enable the individual to overcome the fragmentation and to integrate their identity and, more importantly, find the means for entering into collaborative relationships. This process of reintegration is necessarily theoretically, and practically the discovery or rediscovery of a community and of organic and integrated inter-individual relationships, rather than purely contractual and electronically fragmented internetworked connections.

There is a sense in which critical CI is disruptive in the sense that it can empower communities to reassess their relationships with the digital through appropriating technology and adapting it to local uses. While such examples of radical CI are not as common—they do represent one pathway within CI. An example of disruptive CI is the ways in which mobile phones are used in shanty towns throughout the world to organise and mobilise for better conditions and opportunities for health and education—technologies that are supported by informal mechanisms and arrangements whereby access and use of data, downloads and networking are based on alternative circuits of production,

distribution and consumption. The culture of mobile phone use in these contexts is bound to be very different from mobile phone use in say a middle class neighbourhood because connectivity both offers opportunities for straightforward networking and idiosyncratic ways of contributing to leisure, well-being and security in contexts that are not always geared to the provisioning quality of life.

Researching Community Informatics

How to do research on CI is an interesting question as it relates to understanding both community and informatics, their interrelationships, possibilities and limitations. The dominant tradition that informs research in this area is the technology shaping community approach that is often based on an uncritical attitude towards this shaping—as inevitable and a wholly natural principle of life. So telecentres and information kiosks are often described in the language of technology ushering in knowledge societies, access to technology as a missing dimension, digital literacy as the passport to modern futures and so on. This is a case of classic technological determinism in which the community is acted upon by technology. The community is a recipient of technology and its user—in other words this is a classic top-down approach that people like Freire and others have so cogently critiqued.

How to conceive of technology today is becoming increasingly difficult precisely because our lives are increasingly intertwined with the uses of multiple technologies and platforms. While it is certainly the case that a plethora of platforms are shaping how we interact with and use technology, we are also at the same time shaping how technologies are being conceived and used. Take for example a smart mobile phone that is smart because humans who design the technology, the hardware and software, are imbuing the technology with a smartness that is useful to its users who are human beings. So there is the shaping of 'the passage or the inscription of cultural behaviors into the objects that we create to perform these social norms for us' (Kien 2016). It is fruitful to think of community and informatics mutually shaping each other especially from within a networks perspective.

This is where ANT comes in. Introduced by the French theorist Bruno Latour and others, this is a theory of how material networks and meanings are mutually shaped by both users and by the technologies they use. In other words it is a constructivist theory meaning that it is a theory that evolves from the reality of interactions between and within networks. The radical departure that this theory makes is its giving agency to what it calls 'actants'—to both people and technology that have the power to shape each other. If actor can only apply to human being, actants can be used to all sorts of objects including technology, policy and the like. So to apply this theory to understanding a telecentre, one can begin with the fact that the telecentre is a part of and is impacted by many networks—political, economic, technological, policy, the local environment in which it is located, by power hierarchies and so on. This is necessarily a fluid relationship; although for the telecentre to function and to deliver, there has to be close correspondences between these different networks. More often than not, it is a fluid and evolving relationship based on numerous contingencies. In other words, the flows between networks are bound to vary, to ebb and flow. If the funding runs out, then the telecentre has to downsize and review its priorities. If local power relationships remain entrenched then empowerment will become a casualty and so on. ANT deals with how networks are formed based on four stages of translation: problematisation, interessement, enrolment and mobilisation of allies. Translation refers to the ways in which actants influence each other for example through negotiations, adjustments, calculations, persuasions and so on. An actant can motivate change and can in itself change. The key innovation of ANT however is that it tries to account for the ways in which technology, the material and human, technology and policy, political choices and interests shape and give meaning to networks. ANT has been criticised for being agnostic about 'power' and its implied equivalences of power between actants. This can be problematic especially when it comes to investigations related to race, gender, etc. that are based on structural, deeply systemic inequalities (see Andrade and Urquhart 2010).

Community Telecoms: The Case of Telecomunicaciones Indigenas Communitarias, Oaxaca, Mexico

(I would like to thank Sean O'Siochru and Bruce Girard for material that they shared with me and that was essential to the writing of this section.)

Over the last two decades, possibilities for CI have improved dramatically in many parts of the world owing to the availability of new, low-cost technologies such as WiFi & VOiP, PPPs aimed at alleviating the digital divide, civil society organisations that have the required technical competencies and capacities for training, local government support, government regulation and policy environments that are sympathetic to community needs for connectivity, among many other factors. From the early experiences of the phone ladies of Grameen fame in Bangladesh, to tele-centres, we are now witnessing cooperatives at the level of local communities being involved in small-scale connectivity projects as local telecom providers. Telecom coops however are not new and in fact in the USA there is a National Telecommunications Cooperative Association[1] that currently serves the needs of 550 independently owned and telecom coops out of the close to 30,000 coops in this country alone. 260 out of the 550 are run as telecom coops. Coops essentially function as one person one vote institutions catering to the needs of producers, consumers, workers.

> The 260 U.S. telephone cooperatives are consumer-owned utilities established to provide quality telecommunications service at reasonable cost. They offer various telecommunication services to 1.2 million rural Americans in 31 states. Telephone cooperatives are most often located in rural areas where there is a strong cooperative tradition. They provide local telephone exchange services, long distance telephone operations, direct broadcast satellite, wireless, TV, mobile radios, cellular and key systems, and Internet access.[2]

[1] See http://www.ntca.org/

[2] See http://reic.uwcc.wisc.edu/telephone/, accessed 10 July 2018.

The history of these telecom coops in the USA is interesting for by 1927 there were close to 6,000 such coops servicing the information needs of communities in the USA. However, the advent of big companies such as AT&T that pretty much dominated US telecoms until 1982 and thereafter the seven regional Baby Bells led to their involvement in provisioning universal service obligations. However the global history of public sector and private sector companies fulfilling their universal service obligations has been poor given that the returns for high investments in remote and rural areas that were sparsely populated was very low.

In Australia, the monopoly provider Telstra was paid an annual grant of A$300 million to ensure that every household had access to a land line and payphone although this regional network has been superseded by mobile phone connections. Although Telstra was a monopoly provider they had the law on their side and could refuse to connect if the requirements and circumstances were not in their favour.[3] In 2016 the Productivity Commission recommended that the Telstra-USO contract be scrapped and that the National Broadband Network (NBN) be given similar obligations. The reality however is that national fibre coverage under the NBN does not extend to some remote areas (7 per cent of Australians) that have to rely on satellites or fixed wireless services that are not at the moment reliable. The Australian Communications Consumer Action Network along with other rural lobby groups are pushing for a better provisioning of the NBN.

> First up is a universal service obligation that is technology neutral and provides access to both voice and data. Second, customer service guarantees and reliability measures 'to underpin the provision of voice and data services' and deliver more accountability from providers and the NBN.
>
> Third, long term public funding for open access mobile network expansion in rural and regional Australia. Fourth, 'fair and equitable' access to Sky Muster satellite services for those with a genuine

[3] See https://www.legislation.gov.au/Details/F2011L00417, accessed 10 July 2018.

> need for the service, and access which reflects the residential, educational and business needs of rural and regional Australia.
>
> The last outcome is pushing for fully resourced capacity building programs that build digital ability, and provide learning and effective problem solving support for regional, rural and remote businesses and consumers. (Johnston 2016)

Continuing problems with the provisioning of NBN connectivities in Australia point to a reality—that neither the private sector nor its public counterparts have been successful in ensuring access for all. This then is the context of telecom coops.

Telecom coops belong to what are known as 'microtelcos'—low cost, local scale, community-based business models for local telecoms that are often community driven and based on local needs. In other words and despite the ubiquity of smartphones and projects linked to extending its foot print, a lot of communities who live subsistence lives are primarily interested in basic connectivities and the ability to make a phone call and to be connected. Everything else, including access to the Internet is secondary. In other words the services normally offered by the big public and private telcos are beyond the reach of a number of communities simply because they cannot afford it and because they do not fulfil local needs.

The Informational Commons

At the heart of the debate related to the commons is a very simple notion. How can a resource—be it parks or digital information—be managed in such a way that it offers a majority maximum benefits—benefits that can be of an economic, social, cultural and political kind. For the commons, is not just the opportunity for us as citizens to sit and enjoy the ambience and serenity of a national park but to also use freely available, non-rivalrous resources, such as knowledge in the public domain in the pursuit of creativity. The cost of a 30 second excerpt from a 1980s Bollywood song for use in a digital mix may be as much 5.5 lakh rupees (US$14,000) in a proprietorial system. Or such music can be made available in the public domain or at least be

part of knowledge management systems that people can access for less onerous sums. David Bollier (2007, 29) explains that

> [T]he language of the commons…..provides a coherent alternative model for bringing economic, social, and ethical concerns into greater alignment. It is able to talk about the inalienability of certain resources and the value of protecting community interests. The commons fills a theoretical void by explaining how significant value can be created and sustained outside of the market system. The commons paradigm does not look primarily to a system of property, contracts and markets, but to social norms and rules, and to legal mechanisms that enable people to share ownership and control of resources. The matrix for evaluating the public good is not a narrow economic index like gross domestic product or a company's bottom line but instead looks to a richer, more qualitative and humanistic set of criteria that are not easily measured, such as moral legitimacy, social consensus and equity, transparency in decision making, and ecological sustainability, among other concerns.

That the idea of the commons is making a comeback in a number of domains—the environment, the economy, culture, is significant and would seem to suggest that there is greater appreciation of and value for commons-based solutions in our world today. Certainly, the 2009 Nobel Prize for economics that was also shared by Elinor Ostrom, a champion of the commons, indicates that the commons-based approaches to production and consumption now present a serious alternative to conventional market-based economics. The recognition of the value of the commons in the 21st century has been accompanied by a critique of anti-commons literature, most notably that of Garrett Hardin's (1968) piece on the Tragedy of the Commons in which the author, taking a Malthusian line, had stated the case that the freedom to breed (human and animal) along with selfish human behaviour placed intolerable limits on the commons such as pasture land. Using the selfish individualist, economics-based behaviour of a herdsman to continually add flock in a pasture where all other herdsman do the same, Hardin argued thus

> [T]his is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is

> locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruins to all. (1968, 1244)

While over-use and over-harvesting of resources certainly are contemporary problems, critics have pointed out various examples of human beings in different parts of the world managing the sharing of resources following varieties of 'cooperative individualism', resulting in economic prosperity and sustainability over time. Schlager and Ostrom (1992, 250–51) describe the rights and responsibilities (duties) associated with common-pool resource management as follows:

> Access: The right to enter a defined physical property.
>
> Withdrawal (later termed Extraction): The right to obtain the 'products' of a resource (e.g., catch fish, appropriate water, etc.)
>
> Management: The right to regulate internal use patterns and transform the resource by making improvements.
>
> Exclusion: The right to determine who will have an access right, and how that right may be transferred.
>
> Alienation: The right to sell or lease either or both of the above collective-choice rights.

An equally influential phrase that directly relates to the present-day reality of enclosures around information/knowledge is that of the 'tragedy of the anti-commons', enunciated by Michael Heller (1998) in the *Harvard Law Review*. Using empty stores in Moscow as a way of describing an inefficient use of resources by a state that had sold rights to too many owners who held no commonality of purpose, Heller described this tragedy as follows:

> [A]nticommons property [is] a *property regime in which multiple owners hold effective rights of exclusion in a scarce resource…. A tragedy of the anticommons* can occur when too many individuals have rights of exclusion in a scarce resource. The tragedy is that rational individuals, acting separately, may collectively waste the resource

> by under-consuming it compared with a social optimum. (1998, 668–77; author's emphasis)

Taking off from this description of the anti-commons, one can also add that the anti-commons is also the consequence of extreme concentrations—as for example, Microsoft's worldwide control over basic systems software used in PCs and laptops that is the result of aggressive IP contestations and the bundling of software that effectively shut out competition along with proprietorial, global IP regimes and trade and corporate lobbies such as the WTO, the WIPO, the MPAA, the Business Software Alliance (BSA) and other lobbies that have effectively placed enclosures around the possibility of information/knowledge in the public domain. And one can also extent this analogy to contemporary moves by dominant telcos to control access to connectivity. The use of spectrum remains a thorny issue and options for microtelcos include:

1. Secure primary access to spectrum (i.e., become the exclusive or main licence holder) via the regulatory structures;
2. Achieve secondary access (i.e., become a secondary user alongside a primary user but with safeguards against interference) to spectrum;
3. Establish a network without recourse to a spectrum concession (i.e., essentially to act illegally or in what is arguably a legal grey area; see O'Siochru 2016a, 12).

Co-production

Key to the success of community telecoms in Latin America is the idea and operationalisation of co-production—meaning that there is a recognition that a partnership between an NGO, the local municipality and the local community can work to the advantage of all the stake holders. While local communities may be poor in terms of their access to financial resources, they do exercise power as a community in their neighbourhood and can help in the establishment of a microtelco by granting the right of way for wiring, help with the wiring, siting antennas, etc.—in other words co-production is based on the maximisation of complementarities. A local coop can help aggregate

local demand, be creative in their strategies, experiment with services, mobilise resources while an NGO can be involved in exploring regulatory solutions, lobbying for spectrum, internationalising the cause while an apex coop can be involved in critical lobbying at regional and state levels for autonomy.

Rhizomatica (R) and the Telecomunicaciones Indigenas Communitarias: Democratising Networks and the Access and Use of Networks

> We create open-source technology that helps people and communities build their own networks. We advocate, agitate and organize to gain access to spectrum for these networks and those that people might want to build in the future. And we create organizing and sustainability strategies so that these networks can thrive without exploiting users.[4]

Rhizomatica (R) is a Mexican NGO that was established in 2009 specifically to explore low cost mobile solutions and empower communities to run their own telecom services thus reducing their dependency on external service providers. While low-cost Global System for Mobile Communication (GSM) options were available, how to operationalise it was a major issue. Working together with another Mexican NGO REDES, the two NGOs developed a strategy that included (a) selecting a community to work with and who saw the potential of a community-owned 2G GSM networks; (b) dealing with the technical and economic feasibility of the project; (c) mobilising the local community take a leadership role; (d) dealing with regulatory issues especially as it related to indigenous communities and their access and use of information resources; (e) compiling a legal case for a concession; and (f) advocating for it in a positive manner so that its benefits to all stakeholders were highlighted. The rural village of Talea de Castro, consisting of 2500 indigenous people in Oaxaca, Mexico was chosen for the project since the community had expressed an

[4] See https://www.rhizomatica.org/about/, accessed 10 July 2018.

interest in connectivity. They were also chosen for the fact indigenous communities in this region had for long been involved in strong community actions—including the fact that the region was home to close to sixty unlicensed community radio stations. So when Rhizomatica approached the Local municipality, they immediately saw the value of such a network as a natural progression from community radio. R was involved in getting the technical side off the ground including the actual GSM network and establishing Red Celular de Talea (RCT) owned by the local community and supported by R. They began without a licence in March 2013 and soon had 600 subscribers who paid 15 pesos per month for unlimited calls as opposed to 85 pesos for a single call within the State of Oaxaca. The total cost of the network was US$7000.

While the GSM was up and running, Rhizomatica parallely was involved in lobbying the regulatory body, The Instituto Federal De Telecomunicaciones (IFT) for a licence. Including a long-term GSM licence for such initiatives. R lobbying was based on both a normative and legal. The IFT was not able to refute the fact that this was a successful, low cost solution despite the fact that it was illegal. R held meetings with 33 indigenous communities in Oaxaca and together they made a submission to the Mexican Secretariat of Communications & Transport highlighting the fact that they had been denied such services that was their Constitutional right. R & REDES also explored the status of indigenous Mexicans to communications under Article 2 of the Mexican Constitution and the public use of spectrum under the Telecommunications Law. They also lobbied at regional and international levels including the ITU-Development Sector for provisions related to small scale, rural solutions. An IFT Commissioner visited Talea and in May 2014, the IFT granted an experimental licence to REDES for a two-year period and soon close to 16 communities set up their own GSM initiatives. Later that year the IFT proposed a new concession for rural connectivity initiatives that came into effect in July 2016 that was based on a dual concession system—a Unified Social System—a licence to use spectrum to cover radio, TV and telephony for 30 years along with a GSM licence for 15 years. The TIC was established in November 2015 specifically to help indigenous

communities with the setting up of their own GSM systems and TIC was awarded these licences. In the words of Lakhani (2016),

> Indigenous Communities Telecommunications (TIC) last month won a long battle with the government to become the world's first not-for-profit group to be granted a mobile phone concession. The social cooperative has licence to install and operate mobile phone networks in 356 marginalised municipalities in five of the country's poorest states: Chiapas, Guerrero, Oaxaca, Puebla and Veracruz.

The TIC was granted concessions on behalf of communities and they have also begun to progressively take over the maintenance of the GSM networks from R. Each local community is now involved in the everyday running of these initiatives and are involved in laying down tariffs, administration, etc.

There are many challenges including erratic electricity supply and reliability of services related issues. At the moment the 2G system is not able to deliver Internet-based services and they are looking into upgrading this to 2.75 G capabilities. They are also involved in lobbying for a nation-wide solution and for resourcing such a solution that would allow the expansion of such initiatives throughout Mexico.

There are a number of lessons to be learned from this initiative. Telecom coops do contribute to the democratisation of communications and the communication rights of users, in this case indigenous communities who have not been well serviced by the dominant information and communication infrastructures in Mexico. It is also clear that they strengthen community engagement given that its success, to a large extent, is dependent on the commitment of the community, their willingness to support the initiative, their involvement in its management and decision-making. They offer employment opportunities. They are non-profits so any surplus is put back into developing the network. And quite fundamentally such projects generally are not dependent on funds from outside nor do they contribute to the migration of funds to outside companies. They also function as social centres involved in solidarity supportive of the interests of local communities. They work best as partnerships with NGOs and local government and

empowerment, as in other communication and social change projects will be based on the extent to which the local community progressively take on the responsibility to control and run GSM services.

Low Cost 2G Solutions in Other Parts of the World

While Latin America has pioneered a number of these microtelco solutions—the Pinamar Telecommunications Cooperative was established in Argentina, for example, in 1962—there are a great variety of coops based on different fiscal arrangements, partnerships and opportunities for community ownership. Today there are a number of companies involved in the manufacture and supply of lost cost GSM technologies. These include:

- Fairwaves was one of the first producers of a 'network in a box' with a strong commitment to Open Source. The system has been deployed by Rhizomatica in Mexico (see Case Study 1);[5]
- Endaga emerged from a team of the University of Berkeley in the US and has direct experience of building a network in Papua (see below).[6]
- Nuran is another example, more focused on commercial markets.[7]
- Vanu provides rural GSM solutions with an emphasis on very low power consumption, which can be vital in some rural areas and in disaster zones (Talbot 2013)[8] (see O'Siochru 2016a, 5; Song 2015).
- Zenzenleni Networks Mankosi Ltd. is a telecoms coop. located in Eastern Cape, South Africa (see Rey-Moreno 2016).

Endaga, for example supplies a network in a box that costs around US$6000 today although that is expected to fall to US$1000 in the new few years. They built a cellular network in Papua with funding from USAID although the team involved in this project—all from

[5] See https://fairwaves.co/
[6] See https://www.endaga.com/
[7] See http://nuranwireless.com/
[8] See http://www.vanu.com

the USA, have since joined Facebook. It is extraordinary that they set up this network without a licence and that they partnered with a group that had a missionary focus (Misionaris Sekolahin) in Desa, and WamenaCom also in Desa, the leaders of whom controlled the organisations completely. They are quite open about the fact that as a for profit group, theirs was not set up like Rhizomatica's initiatives.

So it is clear that community control of such networks vary but that some kind of a partnership that includes an eventual exit clause for support organisations is ideal for community building. Arguably, the more community ownership there is, the better possibilities for the sustainability of the project. Local communities that are based on a culture of participation and reciprocity often given freely of their labour to set up networks and maintain it precisely because a microtelco fulfils community needs. The more community ownership there is the more possibilities for tailor-made solutions and decision-making that supports the reinvestments of profits for better and more sustainable services. Funding remains a problem although membership subscriptions based services as in a telecoms coop offers the best possibilities to avoid dependency given that other sources including bank loans, overseas aid, etc. are often accompanied by conditionalities and start-up capital is accompanied by significant risk. Most significantly, evidence shows that there are knock on effects for the economy—and this is the case especially in coops that are community-owned precisely because the services are needs-based, intentional and based on locally valid deliberative processes for the fulfilment of locally agreed to outcomes. As in all such community-based projects, local leadership, the presence of organisations such as Rhizomatica, local political support etc. can play an important role in the advocacy of community friendly initiatives. Ideally friendly and supportive policy and regulatory environments and uncomplicated licensing processes can play significant roles in the establishing of community-based microtelcos.

References

Andrade, A. D., and C. Urquhart. 2010. 'The Affordances of Actor Network Theory in ICT for Development'. *Information Technology and People*, 23 (4), 352–74.

Curry, M. R. 1995. 'GIS and the Inevitability of Ethical Inconsistency'. In *Ground Truth: The Social Implications of Geographical Information Systems*, edited by J. Pickles. New York, NY: The Guildford Press.

Bollier, D. 2007. 'The Growth of the Commons Paradigm'. In *Understanding Knowledge as a Commons*, edited by C. Hess and E. Ostrom, 27–40. Cambridge: MIT Press.

Gurstein, M. 2012. 'Towards a Conceptual Framework for a Community Informatics'. In *Connecting Canadians: Investigations in Community Informatics*, edited by Andrew Clement, Michael Gurstein, Graham Longford, Marita Moll and Leslie Regan Shade, 35–60. Alberta: Athabasca University Press.

Hardin, G. 1968. 'The Tragedy of the Commons'. *American Association for the Advancement of Science*, 162 (3859), 1243–48.

Heller, M. A. 1998. 'The Tragedy of the Anticommons: Property in the Transition from Marx to Markets'. *Harvard Law Review*, 111 (3), 621–88.

Johnston, R. 2016. 'Rural Australia's Internet Is So Bad It Needs Its Own Lobby Group'. *Gizmodo*, 30 November. Available at: https://www.gizmodo.com.au/2016/11/rural-australias-internet-is-so-bad-it-needs-its-own-lobby-group/ (Accessed 21 June 2017).

Kien, G. 2016. 'Why Are Politicians Similar to Machines'. Available at: http://serious-science.org/actor-network-theory-machines-and-authority-7716 (Accessed 21 May 2017).

Lakhani, N. 2016. 'It Feels Like a Gift: Mobile Phone Coop Transforms Mexican Rural Community'. *The Guardian Online*, 15 August. Available at: https://www.theguardian.com/world/2016/aug/15/mexico-mobile-phone-network-indigenous-community (Accessed 22 May 2017).

O'Siochru, S. 2016a. 'Spectrum Innovation for Small Scale, Community Owned Mobile Telephony: Strategic Considerations'. Unpublished manuscript prepared for FAO/AMARC/WACC, Nexus Research, 1–26.

O'Siochru, S. 2016b. '*Telecomunicaciones Indígenas Comunitarias* in Oaxaca, Mexico: A Case Study of Community-owned and Managed Mobile Telephony'. Unpublished document, Nexus Research, 1–10.

O'Siochru, S., and B. Girard. 2005. *Community-based Networks and Innovative Technologies: New Models to Serve and Empower the Poor, A Report for the UNDP*. Available at: http://www.digitalfutures.ca/wp-content/uploads/2013/10/community-based_nets.pdf (Accessed 12 January 2018).

Rey-Moreno, C. 2016. 'Alternatives for Affordable Communications in Rural South Africa: Social Purpose GSM Licenses'. Submission to the Parliament of South Africa on 'The Cost to Communicate in South Africa', 1–4 South Africa: Research ICT Africa, Association for Progressive Communications, Policy Brief. Available at: https://researchictafrica.net/publications/Other_publications/2016_Submission%20Cost%20to%20Communicate-Rural%20Connectivity%20South%20Africa.pdf (Accessed 12 April 2018).

Schlager, E., and E. Ostrom. 1992. 'Property Rights Regimes and Natural Resources: A Conceptual Analysis'. *Land Economics*, 68 (3), 249–62.

Song, S. 2015. 'How to Let GSM Serve the People That Other Networks Can't Reach'. *Many Possibilities*, 17 April. Available at: https://manypossibilities.net/2015/04/how-to-let-gsm-serve-the-people-that-other-networks-cant-reach/ (Accessed 12 April 2018).

Talbot, D. 2013. 'A Tiny Cell-Phone Transmitter Takes Root in Rural Africa'. *MIT Technology Review*, 29 May. Available at: http://www.technologyreview.com/news/515346/a-tiny-cell-phone-transmitter-takes-root-in-rural-africa/ (Accessed 20 May 2015).

Telecommunications Universal Service Obligation (Standard Telephone Service—Requirements and Circumstances) Determination (No. 1) 2011, Commonwealth of Australia. Available at: https://www.legislation.gov.au/Details/F2011L00417 (Accessed 21 May 2017).

Zenzenleni Networks Mankosi Ltd. Available at: http://zenzeleni.net/ (Accessed 29 July 2018).

CHAPTER 8

Making the Digital Count

E-government, Public Sector Software and Social Change

The New Informational Administration Model

The turn towards e-government is, in a real sense, an indication of a move towards a new form of public administration, smart government, based on a qualitatively different approach to the delivery of services. The Weberian bureaucratic model is largely posited to have resulted in the creation of silos—inert empires that have presided over multiple inefficiencies in the planning and, more importantly, delivery of services. As Bekkers (2007, 105) describes it, this change has multisectoral ramifications and is based on the adoption of new ICTs-based innovations inclusive of 'product or service innovations'; 'technological innovations', including alert services for citizens; 'process innovations', such as the digital assessment of taxes; 'conceptual innovations', such as the idea of governance; and 'institutional innovations', such as direct democracy and meshed networks in the public sector. E-government is in many ways the basis for government involvement in expansive communication for social change initiatives involving availability of, access to and use of information on a range of welfare and other services.

The provisioning of smart ID cards such as the Aadhaar scheme in India was instituted ostensibly to ensure the transparency of welfare payments, although its mandatory links with individual bank accounts, etc. has upset civil rights and privacy activists who believe that this is an example of government over-reach and desire to increase surveillance and control of its citizenry.

The adoption of digital innovations in governance does have the potential to increase transparency and accountability, and it is therefore not surprising that there are very few examples of governments around the world who have embraced wholeheartedly new models of governance based on the deployment of conceptual and institutional innovations. One of the meanings of 'government' in Swahili is 'fierce secret' (see Article IX in Mendel 1999, 7), an apt descriptor of governments throughout the world who are unsure of how to respond to new expectations from their publics that are hinged on transparency and openness. The global spread of Freedom of Information and, more potently, right to know based RTI legislations have presented governments with intractable problems that are mainly linked to the implementation of accountability and transparency. So it is not altogether surprising that governments, more likely than not, have embraced product, technological, process and organisational innovations that have resulted in a more efficient delivery of services through decentralised means such as websites and e-government, rather than institutional innovations such as e-governance that is based on multistakeholderism and the enabling of citizens to exercise their digital rights, thus contributing to the democratic process.

E-government, Opportunities and Limitations

Kunstelj and Vintar (2004, 133) describe e-government in terms of four stages:

1. Web presence—publishing basic information;
2. Interaction—digital possibilities such as the use of search engines, email, etc.

3. Transactions—via the making available of electronic forms; and
4. Transformation—making services transparent and efficient.

They also point out that e-government in the context of EU countries, for the most part, consists of web presence and interaction but very little transaction and transformation. Such studies seem to suggest that e-government, to be fully functional, simply has to be backed up by massive investments in networking, training, and the computerisation of front-end and back-end services.

The evidence from global initiatives in e-government is not very encouraging. While some countries like India have invested greatly in increasing efficiencies in the availability of and delivery of digital information, there is little evidence that this has led to any substantive increase in citizen involvement in e-government except as a passive consumer. Thomas and Streib (2003, 98), in an article on citizen's access of e-government services in the state of Georgia, USA, report that 'those survey respondents who reported using government websites have been mostly seeking information rather than attempting to communicate information to government. This pattern no doubt reflects in part that government has been slow to adapt the Web to facilitate communication *from* citizens' (authors' emphasis). Findings from another study, also in the USA, indicate that while individuals are largely satisfied with the services provided on government websites, they recognise that their government has 'not sufficiently addressed interactivity expectations' (Welch, Hinnant and Moon 2004, 387). This gap signifies the vastly different approaches and expectations related to e-government as opposed to e-governance.

On the Notion of 'Governmentality'

E-government, one can argue, enhances what Foucault (1991, 102–03) has described as 'governmentality'—that is essentially about administering and managing a territorially bound population. In Foucault's words:

1. The ensembles formed by the institutions, procedures, analyses and reflections, the calculations and tactics that allow the exercise of this very specific albeit complex form of power, which has as its target population, as its principal form of knowledge political economy, and as its essential technical means apparatuses of security.
2. The tendency which, over a long period and throughout the West, has steadily led towards the pre-eminence over all other forms (sovereignty, discipline, etc.) of this type of power which may be termed government, resulting, on the one hand, in the formation of a whole series of specific governmental apparatuses, and on the other, in the development of a whole complex of *savoirs* (knowledges).
3. The process, or rather the result of the process through which the state of justice of the Middle Ages, transformed into the administrative state during the fifteenth and sixteenth centuries, gradually becomes 'governmentalised'.

To Foucault, government was a body involved in shaping the very 'conduct of conduct', the shaping of relationships between the self and self, and the self and a plethora of institutions. Lemke (2001, 201–02) has argued that the turn towards governmentality needs to be seen in the context of the march of neoliberalism and the consequent retreat of the welfare state in Europe.

> By means of the notion of governmentality the neo-liberal agenda for the 'withdrawal of the state' can be deciphered as a technique for government. The crisis of Keynesianism and education in forms of welfare-state intervention therefore lead less to the state losing powers of regulation and control (in the sense of a zero-sum game) and can instead be construed as a reorganisation or restructuring of government techniques, shifting the regulatory competence of the state onto 'responsible' and 'rational' individuals. Neoliberalism encourages individuals to give their lives a specific entrepreneurial form. It responds to stronger 'demand' for individual scope for self-determination and desired autonomy by 'supplying' individuals and collectives with the possibility of actively participating in the solution of specific matters and problems which had hitherto been

> the domain of state agencies specifically empowered to undertake such tasks. This participation has a 'price-tag': the individuals themselves have to assume responsibility for these activities and the possible failure thereof.

While Lemke's explanation may not hold entirely true for the situation in parts of the Global South, there is certainly a sense in which e-government has placed the onus on citizens to take responsibility, but in that process has resulted in the government becoming a disembodied entity, existing in virtual mode in cyberspace.

However, there are key issues in need of clarification as the scholarly focus on e-government becomes a growth industry. One issue that is of key importance is what to focus on—the ubiquity of informationalisation or the transformation of bureaucracy by these new technologies. For if, as O'Loughlin (2007, 184) observes in a review of a book by Sandra Braman,

> [N]o process is without an informational aspect and information is increasingly embedded in surfaces and bodies, then the informationality of things and events may not be our primary concern in political and social analysis. In fact, questions of bureaucratisation and other 'old' issues become more urgent and require re-thinking in today's 'informational' conditions.

This is a fair point, given that it would be wrong to surmise that an introduction of an innovation—in this case new technologies—will automatically result in a radical overhaul of processes and of ways things are done. The deep-rooted bureaucracy linked to public administration is resilient to change and in the context of countries such as India, the mere computerisation of courts—as for instance e-courts—will not automatically result in the speedy clearance of the literally millions of cases that have not been resolved in courts throughout the length and breadth of India. In other words, the deployment of technologies simply has to be accompanied by a political will to train the Indian bureaucracy for 21st-century tasks mediated by new technologies. One can, in other words, argue that e-government efficiencies are best witnessed in contexts characterised by the more or less complete

disintermediation of middle-men, as for example in the context of the Bhoomi project in Karnataka, but not in contexts such as courts that exist and thrive because of a hierarchy that is deeply synergised and based on finely graded flows of power and influence.

E-government and E-governance

Before we deal with whether or not any government's embrace of new technologies in government is in fact a strategy directed towards strengthening its control over its many and varied populations, it is best that we deal with the meanings attached to government and governance, and e-government and e-governance. While government refers to that ensemble of public institutions that have authority, enforce obligations and connect to a diverse range of private people, institutions and processes, governance refers to,

> [T]he processes and institutions, both formal and informal, that guide and restrain the collective activities of a group. Government is the subset that acts with authority and creates formal obligations. Governance need not necessarily be conducted exclusively by governments. Private firms, associations of firms, nongovernmental organizations (NGOs) and associations of NGOs all engage in it, often in association with governmental bodies, to create governance; sometimes without governmental authority. (Saxena 2005, 2)

Saxena (2005, 3) also points out that e-government 'commonly refers to the processes and structures pertinent to the electronic delivery of government services to the public', while 'e-governance is the commitment to utilise appropriate technologies to enhance governmental relationships, both internal and external, in order to advance democratic expression, human dignity and autonomy, support economic development and encourage the fair and efficient delivery of services'. For the most part though, the two terms e-government and e-governance are used interchangeably in spite of the fact that they are related to different lineages—on the one hand to that tradition of governmentality, and on the other hand to a multistakeholder and shall we say mature

vision of democracy which is conditioned by its shaping by citizens as well as by the government and other actors. A typical example of such usage is the following: 'E-governance can be defined as delivery of government services and information to the public using electronic means' (Paul 2007, 176). At the heart of public administration there is a belief that its marriage with new technologies was long overdue precisely because the core business of public administration is about information gathering and its use in the allocation of resources. As Lenk (2007, 210) describes it, the core functions of public administration include,

> [G]athering information about society in order to monitor it and to intervene when necessary, and…intervening into the social fabric, chiefly by making decisions which allocate positions or resources to members of society.

The accent on governance itself is relatively new and is, in a sense, both a recognition that citizen's indeed want to participate in the making of the 'public' and also a pragmatic response to a general fatigue with dominant politics and the evidence of massive gaps between policy and practice. To some extent, the accent on governance is led by the development industry who are keen to create a new framework for development expenditures based on multistakeholder processes in the many 'failed states' that exist in many regions of the world. While governance might have emerged in the context of reshaping governments in the developing world, its ramifications are just as problematic for developed world governments. While there is a general belief in the value of governance models that are inclusive, there is a contra-view that remains state-centric and that is hinged on the argument that the government is the most 'representative' of all institutions in any given country, and therefore it should remain more than just 'first among equals'. Peters and Pierre (2006, 212) are critical of multistakeholder governance models because of the possibility of sectoral and other interests taking precedence over goal-based development: 'While this model of governance might be said to be sufficiently in touch with society to make good choices, those

choice (sic) will not reflect the collective preferences of the polity but rather those of a very small segment of society'. New technological platforms such as the Internet offer the government an opportunity to redeem its image as a caring and responsive entity, and also offer its citizens a chance to be involved in conversations that enhance the public sphere. It offers a fresh opportunity to reinvent the practices and processes of public administration–from its moorings in what can be described as a colonial approach and attitude towards its subjects characterised by a grudging reluctance to the sharing of information to one that is characterised by seamless, constant, top-down information flows. While new technologies certainly do have the capacities to increase genuine interactivity, there is little evidence that the deployment of such technologies in the contexts of e-government have enhanced multi-way flows. While the Internet, in theory, does have the scope for such possibilities, in the context of e-government, its architectures are designed and weighted towards one-way flows from the government to its citizens. The rosy projections of e-government ushering in a promised land of communications therefore remains far-fetched, and one can argue that what we do have are merely accentuated investments in the technologies of e-government that are not accompanied by a valuation of the required processes that will result in citizenship involvement in the shaping of democracy.

In spite of such developments, it is clear that simultaneously, along with drastic cuts in certain sectors—such as for example in the financing of traditional public broadcasting services throughout the world, as for instance to the BBC and Deutschwelle—there are currently major investments in the provisioning of public information services, moves that have been interpreted as an aspect of Gov. 2.0—leaner governments that are committed to delivering public services in a context characterised by financial crises and budget deficits. Given the critical role played by information flows in the context of any government, it does make infinite sense for governments to both invest in e-government services and maximise citizen's access to and use of this information for social and economic ends.

Citizen Access to Public Data Sets

Arguably, in a digital era, there is the potential for social change that is based on the availability of public data sets. The EU Directive of 17 November 2003 on the re-use of public sector information, while strongly focused on the commercial exploitation of this data, provides information on the extent of public sector data and the possibilities for its re-use:

> 4 The public sector collects, produces, reproduces and disseminates a wide range of information in many areas of activity, such as social, economic, geographical, weather, tourist, business, patent and educational information.
> 5 One of the principal aims of the establishment of an internal market is the creation of conditions conducive to the development of Community-wide services. Public sector information is an important primary material for digital content products and services and will become an even more important content resource with the development of wireless content services. Broad cross-border geographical coverage will also be essential in this context. Wider possibilities of re-using public sector information should inter alia allow European companies to exploit its potential and contribute to economic growth and job creation.

In the UK, for example, there have been attempts to open up public sector information to the public for both social and economic ends. The website Data.gov.uk offers public sector data for private or commercial use. There is a pervasive belief that non-personal data in the public sector can be 'mashed up' by citizens to create innovative solutions to a range of issues, both local and national. As Nancy Hoffman (2009) explains,

> The term mashup came into the popular lexicon to refer to new music created by combining two or more existing ones. A data mashup has come to describe the practice of combining two or more sets of data electronically to enhance current meaning or create new meaning, where the original data and the resulting

> product are all usually available on the Internet. For example, Google makes their map data available for reuse, and as a result, a plethora of mashups have sprung up that combine many types of geographically referenced data with Google maps. The quantity, variety and intrinsic value of government data make it suitable for use in mashups. Citizens and government entities have begun to ask for direct access to data, especially to the critical information that can improve decision making inside and outside of government.

The use of such public data sets by citizens has already begun to make a difference. David Bollier (n.d.) gives an example of what can be achieved when such data sets become available to citizens.

> When New South Wales made train timetable data available, some enterprising soul built an iPhone application around it, making the data immensely more useful. In Australia, there was a huge public outcry when people couldn't access real-time information about raging fires in the nation's bush country. They had wanted to do a data mashup with Google Maps, so that people could quickly see where the fires were and where they were moving.

While the transformation of Gov. 1.0 to Gov. 2.0 ostensibly signals a new commitment to citizen orientation in the context of the network society, there is a need for empirical knowledge on whether, indeed, this laudable objective has led to the desired results. There are doubts as to whether such investments are motivated by the desire to implement governance, or whether these are merely the latest examples of information-led governmentality, to use a Foucauldian term that describes the ways in which the technologies of power, self and market mediate the government and the governed. Having said that, the public desire to create 'communities of practice' via the access to and use of public knowledge is an evolving global issue. Wenger, McDermott and Snyder (2002, 27) describe three elements that make up any given community of practice: 'a domain of knowledge, which defines a set of issues; a community of people who care about this domain; and the shared practice that they are developing to be effective in their domain'. The release of Ordinance Survey Open Datasets

in the UK in 2010 has enabled the mapping of ambulance services, environmental concerns, traffic hot-spots and other useful public data. State responses to the deployment of digital solutions are complex and often conditioned by the changing nature of political alignments, budgetary pressures and market-based rationalism. Given the deep pockets of global software and hardware companies, they are often in a position to lobby for government purchase of proprietorial hardware and software across the entire range of the public sector. However, occasionally, governments do take decisions that go against the grain as it were, and arguably, PSS is an example of a proactive government policy that enables the access and use of information for all in the context of information and knowledge societies.

Open Government

Federal government agencies in Australia spend on average A$4.3 billion annually on ICTs. And state government too invest large amounts of money on ICTs.

Open government is about creating opportunities for increased transparency, and about recognising that citizens have knowledge, concerns and expertise to share (Pyrozhenko, 2011). The public are stakeholders in government and should therefore have a right to 'participate in its structuring' (Lessig 2006). According to Senator Kate Lundy (2011), the three principles of open government are democratising data, participatory governance and citizen-centric services. Lundy (2011) argues that open source software shares many attributes with open government, such as being innovative and often leading to more efficient service delivery. She asserts that tight budgets and lack of adaptability or capability for innovation have led the Australian government to consider open source. Web 2.0 and open source emphasise agility. Mistakes are made, indeed failure may be encouraged, but they are 'readily corrected, sometimes by the original contributor, sometimes by others' (Government 2.0 Taskforce 2009, 18). Waugh (2013) states, 'the need to adapt and evolve in the public service is vital to provide iterative, personalised and timely responses to new challenges and opportunities both locally and globally' (n.p.).

Furthermore, Waugh (2011) claims 'you're only as free as the tools you use' (n.p.). One-size-fits-all solutions lack the flexibility that governments need if they are to remain relevant and responsive to citizen needs (Melanie Martin 2012).[1]

Australian Government Open Source Software Policy

Open Source Software Policy Principles

This policy directs agencies to comply with three core principles.

Principle 1: Australian Government ICT Procurement Processes Must Actively and Fairly Consider All Types of Available Software

Australian government agencies must actively and fairly consider all types of available software (including but not limited to open source software and proprietary software) through their ICT procurement processes. It is recognised there may be areas where open source software is not yet available for consideration. Procurement decisions must be made based on value for money. Procurement decisions should take into account whole-of-life costs, capability, security, scalability, transferability, support and manageability requirements.

For a covered procurement (over A$80,000), agencies are required to include in their procurement plan that open source software will be considered equally alongside proprietary software. Agencies will be required to insert a statement into any Request for Tender that they will consider open source software equally alongside proprietary software. Tender responses will be evaluated under the normal requirements of the Commonwealth Procurement Guidelines. For a

[1] See also file:///C:/Users/uqpthom4/Downloads/BCR%20Open%20government%20data%20report%20-%20final%20-%205%20Feb2016.pdf on open government data in Australia, the value of which is estimated at US$25 billion annually.

non-covered procurement (below A$80,000), agencies are required to document all key decisions, as required by the Commonwealth Procurement Guidelines. This includes how they considered open source software suppliers when selecting suppliers to respond to the Select Tender or Request for Quotation.

Principle 2: Suppliers Must Consider All Types of Available Software When Dealing with Australian Government Agencies

Australian government agencies will require suppliers to consider all types of available software (including but not limited to open source software and proprietary software) when responding to agencies' procurement requests.

Agencies are required to insert this requirement into their tender documentation. Suppliers will need to provide justification outlining their consideration and/or exclusion of open source software in their response to the tender. Agencies will determine compliance with this requirement when assessing tender responses.

Principle 3: Australian Government Agencies Will Actively Participate in Open Source Software Communities and Contribute Back Where Appropriate

The Australian government, through the Australian Government Information Management Office (AGIMO), will actively seek to keep up-to-date with international best practices in the open source software arena through engaging with other countries and organisations. Australian government agencies should also actively participate in open source software communities and should contribute back where appropriate.[2]

[2] See https://www.finance.gov.au/sites/default/files/australian-government-open-source-software-policy-2013.pdf, accessed 10 July 2018.

One positive development in the context of Gov. 2.0 is the recognition by some governments of savings, efficiencies and public control linked to open source and open standards based PSS.

Public Sector Software

The moves to explore the possibilities for PSS were precipitated by (a) the realisation of the breadth and depth of public sector investments in the digital revolution inclusive of the informationalisation of services and infrastructure development; (b) the recognition of the critical roles played by information and knowledge in society and the economy; (c) evidence of vendor lock-in, particularly the overwhelming presence of a single, dominant, software player in the public sector —that is, Microsoft—and the financial costs associated with licensing along with the political economy of IP; (d) the growing recognition of the strengths, particularly access to software code, interoperability, flexibility and acknowledgement of the costs associated with FOSS; (e) the billions of dollars' worth of investments in e-governance and issues related to software deployment and access to information; and (f) broader public domain issues articulated by champions of open access both within and outside of the public sector in different parts of the world.

In a concept note prepared by one of the key NGOs in India involved in the campaign for PSS, *IT for Change*, it is defined as follows:

> Public software can be defined as software developed for the public good, which is publicly owned. Public ownership also implies that it cannot be privatized or privately owned. It is freely shareable and customizable and hence is basically Free and Open Source Software. Public software is of two kinds: 1. Public Software developed to promote public good—that helps government (public sector) to fulfill goals of government—software that supports National Rural Employment Guarantee Act (NREGA) transactions in a transparent manner; 2. Public Software itself as a public good—new digital goods such as Wikipedia where the software itself performs public

> interest functions. Public Sector for the purpose of these guidelines, is defined broadly as comprising of institutions working for public interest. While this includes not only governments but also academic institutions, civil society (NGO/CBO), community media institutions etc, there is a special role for the government as the key public sector actor in promoting public software.

The Costs of Vendor Lock-ins

A fundamental reason for a more proactive approach adopted by governments to establish the presence of PSS can be attributed to the recognition of vendor lock-in and the costs associated with licensing and upgrades. As Bob Griffith (2003, 24) observes in the case of the UK, this shift accentuated soon after the change in Microsoft's licensing policy towards an annual licence and expenditures on licensing.

> There are about 850,000 PCs in use in the local authority sector in the UK. Many of these run Microsoft. That represents a lot of money and explains why IT managers have started to pay this area a great deal more attention and to consider the possibilities presented by open source software. (see also Waring and Maddocks 2005)

The public sector in countries and blocs in the developed world including the USA, the EU, Japan and South Korea, and in the developing world including India, China, Peru, Venezuela, Brazil and Thailand among other countries are now open to procurement processes that also include FOSS, and they exhibit a variety of FOSS deployment intensities, varying from high as in Brazil to relatively low as in the USA, although of late the military establishment in the USA has invested significantly in FOSS-based alternatives. Estimates of annual savings related to switchovers from Windows in the public sector are as high as US$120 million (Kingstone 2005) in Brazil to US$10.5 million by the IT@School Project in Kerala, India (see De 2009), to a more modest £105,000 by the Birmingham City Council (Broersma 2006). Baguma (2006, 203), in a chapter on FOSS in e-governance in Uganda, clarifies the nature of these savings.

> OSS/FS can be obtained free of charge or at a far cheaper cost, where a manufacturer charges for the packaging/distribution. One pays for the physical CD, with or without an additional small cost of packing additional tools. When it is downloaded from the Internet, the cost incurred is for connectivity. Apart from that no loyalty or licence fees apply, and one copy is enough for unlimited installations and distribution. The options are using Linux at UGS 2,000/= equivalent to USD 1.2 (cost of CD) or buying Microsoft Windows XP at UGS 100, 000, equivalent to USD 59. Linux saves UGS 98,000 (USD 58), and one copy is enough for multiple installations. An office desktop computer will need 3 other products minimum at the same price or higher, coming to 100,000x 4=UGS 400,000/= on software only, whereas for OSS/FS, these products come bundled with the operating system, and if not can be obtained free of charge. Then comes expensive hardware for the latest high specifications at UGS 2,000,000 (USD 1,176) per PC. OSS/FS can efficiently run on older hardware (Pentium II/III, 32/64MB RAM, 5GB HDD), most of which are available refurbished at approximately USD 150 or less. This makes OSS/FS a far more cost-saving option as opposed to proprietary solutions.

Apart from costs, the ability to create flexible solutions, iron out bugs, strengthen security, and freely innovate and adapt software are additional reasons for the adoption of FOSS by the public sector.

Public Sector Software and the State: An Example from Kerala, South India

The southern Indian state of Kerala, in many respects, has been at the forefront of experimenting with the project of substantive democracy in India. Kerala has been globally lauded for its social indices—including women's literacy and health that has been consistently above national averages—and for its many projects linked to participatory planning in development. Much of Kerala's 'social' successes can be put down to its unique political history and its traditions of advocacy supported by a number of passionately committed civil servants and civil society activists. So in some ways, it is not surprising that this

state is also involved in citizen-focused, FOSS-based solutions through a variety of public sector projects, notably in education. The Kerala government's 2007 IT Policy (Kerala Information Technology Policy 2007, 4) is intentional in its advocacy of, and preferential option for FOSS, and it explicitly states that one of its objectives is to become a global centre for FOSS through the establishment of an International Centre for Free Software and Computing for Development:

> 2.10 The Government realizes that Free Software presents a unique opportunity in building a truly egalitarian knowledge society. The Government will take all efforts to develop Free Software and Free Knowledge and shall encourage and mandate the appropriate use of Free Software in all ICT initiatives.

The Centre for Advanced Training in FOSS (CATFOSS) set up by the government is involved in both FOSS training and the development of low-cost software solutions.

Public support for FOSS-based solutions has translated into numerous practical projects. The FOSS-based IT@School project in Kerala, for example, has led to ICT-enabled education in 8,000 schools in the state, and has involved the training of 160 master trainers and 5,600 IT coordinators (selected from teaching staff). The IT@School Project began in 2000, and its major aim was to impart IT-enabled education. The publically owned software has been bundled into a single CD for a one point installation—not achievable in the context of the use of proprietary software. The operating system in use in all government aided schools in the state is the IT@School GNU/Linux/Ubuntu system. What is perhaps the most significant aspect of this project is that there has been a massive investment in teachers and students as co-learners and foot soldiers of FOSS in Kerala. From the very beginning, there was a strong commitment to teachers and students taking responsibility for the development of FOSS. This was an important innovation given that the norm in IT in education projects is for outside consultants and/or vendor employees to fix bugs and malfunctioning hardware and software. Such dependence can be costly both in terms of time and expenditure, and this accent on 'disintermediation' is one of the most important characteristics of

this project. Mobile hardware clinic teams regularly visit schools. As Kasinathan (2009) explains in a policy brief,

> The program has created 'mobile hardware clinic' teams, which regularly visit schools for inspection, checking hardware and doing most of the required maintenance and repair work. A policy of cannibalising computers that cannot be repaired has two benefits; it substantially lowers costs of maintenance while ensuring higher uptime. Teachers are trained to install software and to also do routine software upgrades. The program disproves a commonly held belief that school teachers in India's public education system are not capable of, and/or are unlikely to be interested in, engaging with ICTs beyond being simple users. (Kasinathan 2009, 2)

I would argue that this approach is in many ways in the Freirean tradition, with its accent on demystifying technology, enabling users to understand how it works and getting people to use software for their own ends—in this case in the context of secondary education. Just as significant, the story of FOSS in Kerala is that of people realising that software is a tool that can and should be adapted to local ends, and that knowledge-making is a process involving teachers, students and technology. Hardware clinics and content development classes are held frequently, and the school wikis help in the creation of collaborative content. Not only has FOSS been customised to teachers' needs, it is available in Malayalam, the local language, and all material is owned by the public and is shareable. The teachers have been involved in the creation of content, and a number of FOSS-based applications have been customised. These include Dr Geo and Geogebra for Mathematics; Rasmol, Chemtool and Kalzium for Chemistry; K-tech lab for Physics; and Marble, KStars and XrMaps for Geography. An equally important outcome of this initiative is the training of women master trainers. Given that 67 per cent of school teachers in Kerala are women, a number of them became master trainers and are familiar with strong skill sets. As an article on gender in the IT@Schools project (Raji and Arun, 2009) notes,

> Master Trainers have skills that are on par with those of IT technicians. Their skill sets include basic administration of computers

> with GNU/Linux operating systems, installation and troubleshooting of computer hardware and software, setting up of small office network, connecting to the Internet and using various specialised software. They have also developed strong managerial capacity as each of them manage IT implementation in 22–30 schools, arrange and execute training programmes for teachers and support the implementation of various e-governance programmes of the Education Department.

In the case of this project, the use of FOSS-based solutions has saved the government US$2.27 million that otherwise would have been expended on licensing proprietorial software (see le Fevre 2009).

Another project that highlights the potential of FOSS-based solutions is the Insight Project, a joint initiative between the Government of Kerala and an NGO, Society for Promotion of Alternative Computing and Employment (Space), which is specifically focused on developing software for the differently abled, especially for the visually impaired. One of the better examples of solutions is the screen reader software ORCA that is available for free to the visually impaired at no cost, compared to its proprietary counterpart that is costs around INR 55,000 (US$1,100).

Public Software Challenges

One of the major issues facing the PSS movement is the fact that they are involved in both 'reacting' and responding to the reality of multiple standards and issues with interoperability in e-governance projects and to the politics of resistance to change at government levels, as well as proactively lobbying for a more focused, intelligent and centralised approach to PSS development. The silo approach to departmental management affects the sharing of content, and this is a major concern when consanguineous units act as if they are unrelated. The lack of UNICODE compliant fonts, for example, has led to compatibility issues. While there are a number of initiatives that are looking to deliver on free software Unicode typefaces, much more work needs to be done in this regard. The lack of training in FOSS and the resistance to FOSS in the public sector are also issues that PSS enthusiasts have to contend with.

Both open government and public service software offer new opportunities to strengthen citizen–state relationships. While such innovations enable the state to control how data, and hardware and software is used, modified and adapted to local needs, it also offers the public an opportunity to be involved in shaping software in the service of public education, as is the case in the example from Kerala. In the case of PSS, there is a recognition that access to software is of critical importance in a range of public services—and the potential for empowerment and social change that is a consequence of citizens using and adapting software to their own ends. Every once in a while, governments are involved in initiatives that support justice and equity, and strengthen capabilities while providing enabling environments that are supportive of such services. Understanding the nature of these initiatives and their impact will contribute to an appreciation of the role played by communications in the public.

References

Baguma, R. 2006. 'Affordable E-governance Using Free and Open Software'. In *Information and Communication Technology for Sustainable Development: Measuring Computing Research Excellence and Vitality*, edited by Ddembe Williams and Venansius Baryamureeba, 199–208. Kampala: Foundation Publishers. Available at: http://cit.mak.ac.ug/iccir/downloads/SREC_05/Rehema%20Baguma_05.pdf (Accessed 21 November 2010).

Bekkers, V. 2007. 'Modernisation, Public Innovation and Information and Communication Technologies: The Emperor's New Clothes'. *Information Polity*, 12 (3), 103–07.

Bollier, D. n.d. 'Unleashing Public Sector Information'. *On the Commons*. Available at: http://onthecommons.org/unleashing-public-sector-information (Accessed 31 January 2011).

Broersma, M. 2006. 'Birmingham City Council Claims Open Source Success'. *Techworld*, 30 November. Available at: http://news.techworld.com/operating-systems/7459/birmingham-city-council-claims-open-source-success/ (Accessed 21 November 2010).

De, R. 2009. 'Economic Impact of Free and Open Source Software: A Study in India'. Paper presented at Interop, Mumbai, October 7–9. Available at: http://www.slideshare.net/InteropMumbai2009/

rahul-de-economic-impact-of-free-and-open-source-software-a-study-in-india-interop-mumbai-2009 (Accessed 21 November 2010).

EurLex. 'EU Directive 2003/98 of the European Parliament and of the Council of 17 November 2003 on the Re-use of Public Sector Information'. *EurLex*. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0098:EN:HTML (Accessed 4 July 2018).

Foucault, M. 1991. 'Governmentality'. In *The Foucault Effect: Studies in Governmentality*, edited by G. Burchell, C. Gordon and P. Miller, 87–104. Hemel Hempstead: The University of Chicago Press.

Ghate, R. 2010. 'South Asia Commons Are Weakening: Interview with N. S. Jodha'. *HimalSouth Asia*, October. Available at: http://www.himalmag.com/-Southasia-s-commons-are-weakening-_nw4738.html (Accessed 23 November 2010).

Griffith, B. 2010. 'Public Sector IT Chiefs Favour Open Source'. *Computer Weekly*, 28 October 2003, 24.

Government 2.0 Task Force. 2009. 'Engage: Getting on with Government 2.0: Report of the Government 2.0 Task Force Task', 1–136. Available at: https://www.finance.gov.au/sites/default/files/Government20TaskforceReport.pdf?v=1 (Accessed 10 September 2018).

Insight: ICT for Differently Abled. Available at: http://insight.kerala.gov.in/about/ (Accessed 7 December 2011).

Kasinathan, G. 2009. *ICTs in School Education—Outsourced Versus Integrated Approach: Policy Brief*. Bengaluru: IT for Change.

Kerala Information Technology Policy. 2007, *Towards an Inclusive Knowledge Society*. Available at: http://www.catfoss.kerala.gov.in/pdf/ITPolicy-2007.pdf (Accessed 7 December 2011).

Kingstone, S. 2005. 'Brazil Adopts Open-source Software'. *BBC Online*, 2 June. Available at: http://news.bbc.co.uk/2/hi/4602325.stm (Accessed 21 November 2010).

Kunstelj, M., and M. Vintar. 2004. 'Evaluating the Progress of E-government Development: A Critical Analysis'. *Information Polity*, 9 (3, 4), 131–48.

Le Fevre, J. 2009. 'Open Source Software Saves Indian IT@Schools $2 million'. *Thaindian News*, July 23. Available at: http://www.thaindian.com/newsportal/tech-news/open-source-software-boosts-indian-itschools-program_100222131.html (Accessed 7 December 2011).

Lemke, T. 2001. '"The Birth of Bio-politics": Michel Foucault's Lecture at the College de France on Neo-liberal Governmentality'. *Economy and Society*, 30 (2), 190–207.

Lenk, K. 2007. 'Reconstructing Public Administration Theory from Below', *Information Polity*, 12, 207–12.

Lessig, L. 2006. *Code: And Other Laws of Cyberspace, Version 2.0.* NY: Basic Books.

Martin, Melanie. 2012. *Open Source Software and Government in Australia*. Summer Research Project. Australia: University of Queensland.

Lundy, Senator Kate. 2011. 'Open Government and Citizen Centric Services', Creative Commons Australia. Available at: https://creativecommons.org.au/blog/2011/03/senator-kate-lundy-on-open-government-and-citizen-centric-services/ (Accessed on 10 September 2018).

Mendel, T. ed. 2000. 'Secrets, Spies and Whistleblowers: Freedom of Expression in the UK', Article 19 and Liberty, *The Guardian*. Available at: https://www.article19.org/data/files/pdfs/publications/secrets-spies-and-whistleblowers.pdf (Accessed 10 September 2018).

NeGP Vision Statement, India Development Gateway: E-Governance. Available at: http://www.indg.in/e-governance/e-governance/egov-plan (Accessed 21 November 2010).

O'Loughlin, B. 2007. 'Book Review of Change of State: Information, Policy and Power (2006)', by Sandra Braman, in *Information Polity*, 12, 183–85.

Paul, S. 2007. 'A Case Study of e-governance Initiatives in India'. *The International Information and Library Review*, 39, 176–84.

Peters, B. G. and J. Pierre, J. 2006. 'Governance, Government and the State'. In *The State: Theories and Issues*, edited by C. Hay, M. Lister and D. Marsh, 209–22. Basingstoke and NY: Palgrave Macmillan.

Pyrozhenko, Vadym. 2012. 'The Impact of Citizens' Knowledge On Public Administration: Exploring the Links in Three Social Movements', *Public Administration—Dissertations,* Paper 84.

Raji, P. R., and M. Arun. 2009. 'Gender Experiences in IT@School, an ICT-enabled Education Project of Kerala'. *Community Informatics: A Global E-journal*, 6, 1. Available at: http://ci-journal.net/index.php/ciej/article/view/534/514 (Accessed 7 December 2011).

Software Principles for the Public Sector with focus on Public Education. 2010, 1–2 February. Workshop Report, Bengaluru.

The Assam Gazette. 2009. 'Information Technology Policy of Assam'. *The Assam Gazette*, 4 August. Available at: http://assamgovt.nic.in/pdf/ITPOLICY-2009-Final-Gazette-Style.pdf (Accessed 28 September 2010).

Saxena, K. B. 2005. 'Towards Excellence in e-governance', *International Journal of Public Sector Management*, 18 (6), 1–12.

Thomas, J. C., and G. Streib. 2003. 'The New Face of Government: Citizen-initiated Contacts in the Era of E-government'. *Journal of Public Administration Research and Theory*, 13 (1), 83–102.

Waring, T., and P. Maddocks. 2005. 'Open Source Software Implementation in the UK Public Sector: Evidence from the Field and Implications for the Future'. *International Journal of Information Management*, 25 (5), 411–28.

Waugh, Pia. 12 June. Pipka.org. Blog Post, Available at http://pipka.org/page/3/?afg1_page_id=4 (Accessed 10 September 2018).

Welch, E. W., C. C. Hinnant and M. J. Moon. 2005. 'Linking Citizen Satisfaction with E Government and Trust in Government', *Journal of Public Administration Research and Theory*, 15 (3), 371–91.

Wenger, E., R. McDermott and W. M. Snyder. 2002. *Cultivating Communities of Practice*. Boston, MA: Harvard Business School Press.

Workshop on 'Public Software for Social Sector—Principles and Practice'. 2010. Jaipur, February 2010. *IT for Change*. Available at: http://www.itforchange.net/wksp-jaipur (Accessed 1 February 2011).

CHAPTER 9

The Other Side of the Digital

E-waste

One of the paradoxical features of ICTs in development is that digital technologies themselves are conflicted entities. CSC theorists and commentators often wax lyrical on the real and imagined impact of ICTs in development—the mobile phone being the latest recruit in information-led change. While these technologies certainly have potential, cumulatively and over decades, every new digital wonder has contributed to an ever-growing mountain of e-waste. Television, computers and now mobile phones are non-renewable—meaning that the material used to manufacture these technologies including plastics are non-biodegradeable, and while they can be recycled, there is very little evidence to show that there is a global imperative for recycling such products. Recycling is at best a haphazard activity, and there are not many domestic or international laws that mandate the recycling of e-waste. For the most part, recycling of e-waste in countries such as India is part of the informal economy. While NGOs such as Greenpeace and ToxicLink have highlighted the health and environmental issues related to recycling and disposal of e-waste, this has not as yet become a pressing concern in countries such as India, given that employment alternatives for those working in this area is

limited. As this chapter highlights, massive stockpiles of e-waste, especially in countries in the developing world, are contributing to an ecological disaster and to major health hazards. Moreover, and despite some international regulations related to the cross-border transfer of e-waste, there are no binding international treaties, haphazard regulatory oversight and minimal policing, resulting in global shipments of hazardous waste including e-waste. For CSC theorists and practitioners, there simply needs to be an engagement with appropriate digital technologies. There is a tendency in CSC to uncritically accept every new technology, and large donors in particular those involved in PPP are responsible for globalising the adoption of new technologies in development, the latest being the mobile phone. While there are obvious opportunities stemming from the use of mobile phones in development, there is arguably a need for more sustainable new technologies in development. The appetite for 'green' digital technologies is not in evidence, given that the large digital companies involved in PPP are interested in expanding the foot print of their own, proprietory technologies, both hardware and software. I have yet to come across a health communication project that is explicitly based on the use of recycled mobile phones. The use of mobile phones is from a business perspective—the best way to create a captive audience—given that additional upgrades and investment in newer models are aspects of the business cycle of mobile phones.

This chapter on e-waste attempts to highlight the fact that, for the most part, we take the technologies for granted. The mobile phone is treated as a given, as a product that can contribute to 'achievements' in development, although we rarely question the long-term consequences of obsolescence or for that matter raise questions related to its manufacture, the conditions of labour involved in its manufacture or the origins of some of the minerals and other material (for example, the political economy of cobalt mined in the Congo that is controlled by militia groups) used in the manufacture of mobile handsets. There is the mindset that newer is better—a way of thinking that was pronounced in the era of the PC and remains constant in the era of the mobile phone. There occasionally are discussions in the media about the ill effects of exposure to low levels of radiation through our use of mobile phones and our living close to mobile towers, although these

are neither sustained nor is there any evidence of any mounting international public concern. The California Department of Public Health did issue guidance for consumers in 2017 to enable them to minimise risks associated with radiation from mobile phones, although the lack of concrete causal evidence disallows a serious engagement with some of the key issue of exposure to radiation (see Mukerjee 2017).

The Politics of E-waste

The term e-waste covers a range of electrical and electronic equipment, from temperature exchange equipment such as freezers to lamps and computers. E-waste is a global issue. The disposal of e-waste has become as significant an issue as the disposal of solid waste. Despite the existence of the Basel Convention on the Control of Transborder Movements of Hazardous Wastes and Their Disposal (1992) that 184 countries have signed, its violation is unfortunately commonplace, even by countries that are signatories to this convention. There are three chemical conventions that cover trade in hazardous wastes (Basel), trade in hazardous chemicals (Rotterdam) and the elimination of persistent organic pollutants (Stockholm), and arguably all three need to invoked to understand the scale of waste production and disposal in any given country, and the transborder trade in waste.

The provisions of the Basel Convention centre around the following principal aims:

- The reduction of hazardous waste generation and the promotion of environmentally sound management of hazardous wastes, wherever the place of disposal;
- The restriction of transboundary movements of hazardous wastes, except where it is perceived to be in accordance with the principles of environmentally sound management; and
- A regulatory system applying to cases where transboundary movements are permissible.[1]

[1] See http://www.basel.int/theconvention/overview/tabid/1271/default.aspx, accessed 10 July 2018.

There are also other region-specific conventions. The Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention) is one such agreement which entered into force in October 2001.

The main effect of this Convention is to ban the import of all hazardous and radioactive wastes into South Pacific Forum island countries. It also enables Australia to receive hazardous wastes exported from South Pacific Forum island countries which are not parties to the Basel Convention. There are 24 countries within the coverage area of the Waigani Convention. As at December 2002, 10 parties had ratified the Waigani Convention. These were Australia, Cook Islands, Federated States of Micronesia, Kirribati, New Zealand, Papua New Guinea, Samoa, Solomon Islands, Tuvalu and Vanuatu.[2]

The Nature of E-waste

The violations of this treaty are not entirely surprising given the global mountain of hazardous e-waste that the developed world in particular is not keen to keep in its own back yard. The global appetite for electronic goods, and the increasingly limited life of goods such as computers and mobile phones that become rapidly obsolete in a context characterised by frenetic innovation, decreasing costs and increasing correspondences between the technologies of leisure and of work, have led to the creation of many e-wastelands throughout the world. Landfills, dumps and swamps are common dumping grounds for e-waste. And there are multiple environments and spaces for the processing of e-waste in the heart of cities in the developing world—in Abidjan, Lagos, Delhi, Chennai and Bengaluru, among very many other cities in the developing world. A typical computer's parts contain a number of classified toxins including lead, mercury, arsenic, cadmium, chromium, beryllium and brominated flame retardants (BFRs) among other toxins. These toxins are found in cathode

[2] See https://www.environment.gov.au/protection/hazardous-waste/conventions, accessed 10 July 2018.

ray tubes (CRTs), computer batteries, capacitors, liquid crystal displays (LCDs), circuit boards and other parts of electronic goods. The dismantling that is carried out in these mainly informal economies is directed towards the recovery of copper, gold, silver, platinum and other metals. Toxic chemicals such as cyanide are used to recover these metals, and the open smelting process results in the release of noxious fumes. Any waste arising out of these processes are dumped into surrounding areas causing serious environmental pollution and increasing health risks to the general population.[3]

> One of the more well-known examples is the dumping of hundreds of tons of chemical waste in Abidjan in Ivory Coast in 2006. The waste was shipped into Abidjan via the Panama-registered Probo Koala, owned by the multinational company Trafigura, with its headquarters in the Netherlands. At least 16 people died and over 100,000 people sought medical treatment for vomiting, nosebleeds or breathing difficulties. Another example is the Italian Mafia's trade in unsorted municipal solid waste, which is indiscriminately dumped on land or at sea regardless of content.[4]

There was an operation by Interpol's E-Waste Crime Group on the illegal trade in e-waste that led to the seizure of 240 tons in ports in the UK, Netherlands and Belgium that used to ship e-waste to Ghana, Guinea and Nigeria. Forty companies were prosecuted as a result of this raid.

Given the increasingly central role played by the Internet, mobile technologies and computing in our daily lives, it is inevitable that over the next few decades, connectivity will become truly global in scale as an array of technologies take over the organisation of our lives, adding, of course, to e-waste. The advent of 'smart' housing and smart cities will increase the volume of e-waste along with the increasing availability of a diverse range of leisure technologies. It is interesting that as media academics theorise on social networking, interactivity,

[3] See the e-waste clip on Youtube produced by Greenpeace: http://www.youtube.com/watch?v=5sMOAWW6I0k)

[4] See Illegal Shipment of Wastes, http://actionguide.info/t/6/, accessed 9 July 2018.

access and a time of information plenty, the political economy of e-waste hardly merits even a passing mention. Richard Heeks (2009, 29) in a working paper entitled 'The ICT4D 2.0 Manifesto: Where Next for ICTs and International Development' envisages the global expansion of inclusion policies and concludes with 'three overarching questions for this next phase…. How can the poor be producers of digital content and services? How can they create new incomes and jobs through ICTs? And how can we recognise and scale the ICT-based innovations they produce?' The intention to globalise access and use of ICTs is of course entirely laudable, and inter-governmental organisations, foundations and aid agencies may well argue that the extension of ICTs access to all and its affordable use is, indeed, an expression of communication rights. However the global consequences of abandoned, obsolete new technologies primarily by the rich, although in the future also by the poor, needs to become a priority issue simply because these technologies, at least for the moment, are non-biodegradable, and because of the high personal costs of recycling e-waste in the developing world. Additionally, groundwater pollution is a serious consequence of e-waste dumping in the developing world. A solution to e-waste is more 'green' technologies at the heart of the information revolution. A number of global IT and mobile technology manufacturers including Dell, Samsung, Hewlett Packard, Nokia and Sony-Ericsson among others have committed to phasing out the use of hazardous chemicals, flame retardants and PVC (see report on *BBC Online* 2006), although there is little pressure on these companies to deliver on their promise of green IT products nor are there monitoring agencies to assess compliance. Just as the spectre of global warming has led to increased efforts at finding alternatives to fossil fuels, there is a need for environment-friendly technologies and greater awareness of both the politics and consequences of e-waste.

The Basel Convention and Its Contraventions

Why is there a flow of hazardous goods to the developing world and to countries such as Nigeria and Ghana?

- Lack of available sites for the installation of toxic waste facilities in industrialised countries.
- Increased environmental awareness in industrialised countries resulting primarily in local opposition to toxic waste dump sites in their neighbourhoods.
- Financial inducement, particularly for those African countries faced with heavy debt and in need of foreign exchange.
- Lack of technical and regulatory means of reducing and preventing the production of toxic waste.
- Economic incentives for foreign companies faced with costly means of disposal in industrialised countries as opposed to cheap disposal costs in African count.

The EU's Waste Electrical and Electronic Equipment Directive (WEEE Directive) that became law in 2003 highlights the responsibilities of manufacturers in the collection, disposal and recycling of e-waste. This legislation was a response to the need to annually recycle 6.4 million tonnes of e-waste in the EU. The UK was one of the last of the EU countries to adopt the WEEE Directive in July 2007. While the directive is sound enough, there are issues with its operationalisation, in particular, the additional costs related to the recycling of e-waste that inevitably is passed on to consumers. The establishment of large e-waste recycling plants in Europe is definitely a step in the right direction, although the sheer volume of global e-waste is bound to result in contraventions of the Basel Convention. Canada, a country that is a signatory to the Basel Convention and that has implemented E-Waste Product Stewardship in most of its provinces/territories—with the exception of Newfoundland and Labrador, the Northwest Territories, Nunavut, Prince Edward Island and Yukon—has been involved in the dumping of e-waste. In 2006, federal agencies seized 50 containers of e-waste in the Port of Vancouver bound for China—merely the tip of the iceberg. Twenty-seven companies settled out of court and paid up to C$2,000 apiece (see Lachance n.d.).

E-waste is simply not an issue of out-of-date IT products and its disposal but is also linked to the state, the exercise of state

power and the extension of neo-colonial relationships in a context characterised by a generally low priority given to e-waste recycling and its exports, irrespective of whether or not countries are party to e-waste recycling laws. E-waste, in other words, is yet to become a global priority, and is enveloped by grey areas of policy and practice. In the USA, the Environmental Protection Agency that is supposed to monitor exports of the only 'officially' recognised hazardous e-waste in that country—CRTs— has done very little to enforce this rule. In an interesting Government Accountability Office (GAO) testimony on e-waste, John Stephenson (2008) reports on the findings from an undercover operation: 'Posing as fictitious buyers from Hong Kong, India, Pakistan, Singapore and Vietnam, among other countries, we found 43 electronics recyclers in the United States who were willing to export to us broken, untested, or nonworking CRTs under conditions that would violate the CRT rule' (2008, 2). The testimony goes on to add that some of these companies were actively involved in Earth Day 2008 recycling events, and that most 'used electronics can be legally exported from the United States with no restrictions' (2008, 10). States in the developed world, whether a party or not to such laws, continue to find ways to export their e-waste to the developed world. And most countries in the developing world are not in a position to obstruct e-waste overtures from the developed world. Praveen Dalal (n.d.) has observed that

> The two largest nations exporting their e-wastes are the United States and Britain. According to a British Environmental Protection Agency Report, Britain shipped out 25,000 tons of e-waste to South Asia…in 2005, the US recycled about $2 billion worth of electronic equipment, which may be just 20 per cent of the e-waste it generated, much of which found its way to India, China, Southeast Asia and Africa.

It is clear that there is a global political economy of e-waste that involves states, manufacturers, exporters, importers, recycling and re-sale units involved in a trade that is worth millions of dollars.

Countries face challenges implementing the Basel Convention highlighted by these issued faced by the Government of Bangladesh (see UNEP-CHW-COP12FU-SUBM 2015).

> Lack of or inappropriate domestic legal or institutional framework to implement and enforce paragraph 4 of Article 9 of the Basel Convention;
>
> Lack of access to adequate information about possible cases of transboundary movements of hazardous wastes or other wastes deemed to be illegal traffic as the result of conduct on the part of the importer or disposer;
>
> Challenges in identifying that a transboundary movement of hazardous wastes or other wastes may be a case of illegal traffic as defined by paragraph 1 of Article 9 (constitutive elements).

E-waste and Income Differentials

In spite of the global spread of electronic products, best exemplified by the ubiquity of mobile phones, the technology trail continues to follow a familiar route, as for instance in London, where studies have shown that 'income and wealth differentials' and 'social location' impact the access to ICTs (Murdock and Golding 2005). The previous technological revolution that led to the circulation of white goods also followed a similar circulation trajectory. Those on the periphery tend to hang on to technologies even after their use by date—as is the case with mobile phone and computer use in the developing world. A study by Kurian Joseph (2007) in Chennai revealed that, 'low-income households use the PC for 5.94 years, TV for 8.16 years and mobile phones for 2.34 years while the upper income class uses the PC for 3.21 years, TV for 5.13 years and mobile phones for 1.63 years'. Higher income groups, irrespective of their location in the world, tend to disproportionately consume and discard ICTs, thus contributing to e-waste. And public and private enterprises throughout the world are involved in a constant updating of their electronic technologies. The issue, of course, is more than just consumption patterns. It has to do

with the policies that govern the production of technologies that have become indispensable to life in the 21st century along with the lack of political will to create binding policies on the recycling and disposal of e-waste.

E-waste in India

In response to growing international pressure from non-governmental agencies such as Greenpeace, the Indo-German-Swiss e-Waste Initiative and local groups such as Toxiclink, GOI, has announced the finalising 'of the world's strictest set of rules on disposing of electronic waste' that also includes a 'complete ban on import of any kind of electronic and electrical equipment for dismantling, recycling and disposal purposes' (*The Economic Times* 2009). This new rule will also place responsibility on manufacturers to recycle e-waste and encourage the setting up of official e-waste recycling plants. In places like Chandni Chowk in Kolkata, or Seelampur in North East Delhi, there are hundreds of informal e-waste recycling initiatives. While the Indian government has passed laws in 2008 and 2011 (Forests Hazardous Wastes (Management and Handling) Rules 2008; an exclusive notification on E-waste (Management and Handling) Rules, 2010 under the Environment (Protection) Act, 1986, has been notified (S.O. 1035) on 12 May 2011) specifically on formalising the recycling of e-waste, the rules were amended in October 2016, and the accent is on Extended Producer Responsibility, meaning that manufacturers now have to take some responsibility for product disposal and recycling. However a report in *LiveMint* (Turaga and Bhaskar 2017) on a study of the roll out of the EPR found that,

> Except for a couple of manufacturers out of the 20-odd that we studied, no one could give us a clear idea on how to actually deposit e-waste. On the consumer side, most institutional waste generators such as educational institutions and industries, which generate close to 70% of the e-waste, are not aware of the rules and continue to sell their e-waste to the informal sector. Overall, the impact of the e-waste rules is disappointingly limited.

Moreover, the costs of formalising are high—US$15,000, that is unaffordable to most in the informal sector (see Gallagher 2014). However, if the Greenpeace (2008) report 'Take Back Blues: An Assessment of E-Waste Takeback in India' is anything to go by, it would seem that the implementation of these rules is fraught. The study found that with the exception of one foreign company—Acer—and two Indian companies—WIPRO and HCL—the major foreign vendors including Apple, Microsoft, Panasonic, PCS Technology, Philips, Sharp, Sony, Sony Ericsson and Toshiba did not offer takeback services (2008, 10). The report also reveals that of those that did offer these services, those of Dell, HP, Lenovo and Zenith did not function (2008, 2), and that none of the major vendors were involved in educating the public on this service (2008, 12). However, and to keep this initiative in perspective, focusing on these large companies remains an issue, given that 95 per cent of e-waste is currently being recycled in the informal sector by the one million people involved in this sector (*The Hindu* 2016). There are some moves by individual states in India to recycle products such as in Telangana where there are moves to designate space in its industrial parks for recycling of e-waste. Given India's position as the second largest consumer base for mobile phones, and the fifth largest producer of e-waste, development initiatives in health, education, etc. that are based on the use of mobile phones will simply have to factor in environmentally conscious frameworks for such interventions.

E-waste and the Media

So what are some of the communication and media issues with respect to e-waste? First, there is a need for a greater public awareness of the need to exercise personal responsibility for the care and disposal of consumer technologies. This is a question of ethics and of environmental responsibility. Second, the media needs to encourage the formation of public opinion related to the responsibility of IT manufacturers and retailers in the disposal and recycling of IT products, and to hold these companies responsible for their e-waste. Third, there is a need for the media literacy movement to factor issues related to e-waste in their curricula. Fourth, there is a need for research on the political economy of

e-waste. Given the lack of political will by nations to deal with e-waste in their own back yards, it is important that the gaps between principles and practice are monitored, and that investments are made into comprehensive mappings of global e-waste flows. Fifth, it is important that issues related to e-waste are factored into the pedagogy of ICTs for social change, and that e-waste is taken seriously by agencies such as the World Bank and others that are involved in supporting ICTs project throughout the world.

Chris Long (2006), in an article in BBC online refers to an exhibition at the Science Museum, London, that featured among other green technologies a circuit board made out of pasta, as well as,

> [A] printer case made of corn-based BioPlastic that degrades gracefully, and a phone case made of Kenaf, a plant grown all over the world, which effectively melts when you bury it…. One mobile phone case had been made from biodegradeable plastic, with a sunflower seed inserted in it. By planting the case in the soil a flower grows.

While there are doubts related to the scalability of some of these innovations, it is certainly important that such innovative solutions to the problem of e-waste are encouraged. The wise use of personal technologies will certainly contribute to smaller personal carbon footprints, although there is also a need for such actions to be complimented with comprehensive policies on the manufacture and disposal of electronic goods and the recycling of e-waste.

References

Basel Convention. Available at: http://www.basel.int/theconvention/overview/tabid/1271/default.aspx (Accessed 23 May 2013).

BBC Online. 2006. 'PC Users Want Greener Machines'. *BBC Online*, 26 June. Available at: http://news.bbc.co.uk/2/hi/technology/5107642.stm (Accessed 12 June 2016).

Dalal, P. n.d. *E-waste in India*. Available at: http://assets.wwfindia.org/downloads/e_waste_in_india_3.pdf (Accessed 10 May 2013).

Heeks, R. 2009. 'The ICT4D 2.0 Manifesto: Where Next for ICTs and International Development'. Development Informatics, Working Paper Series No. 42. 1–29. Institute of Development Policy and Management, University of Manchester, Available at: http://bit.ly/W6y4a (Accessed 12 May 2015).

Gallagher, S. 2014. India: The Rising Tide of eWaste. Pulitzer Centre, 16 January. Available at: https://pulitzercenter.org/reporting/india-rising-tide-e-waste (Accessed 12 May 2015).

Greenpeace. 2008, August. 'Take Back Blues: An Assessment of E-waste Takeback in India'. Bengaluru: Greenpeace, 1–28. Available at: http://www.greenpeace.org/raw/content/india/press/reports/take-back-blues.pdf (Accessed 9 July 2018).

Joseph, K. 2007. 'Electronic Waste Management Strategy in India: Issues and Strategies'. Proceedings of Sardinia 2007, Eleventh International Waste Management and Landfill Symposium, S. Margherita di Pula, Cagliari, Italy, 1–5 October 2007, pp. 1–9. CISA, Environmental Sanitary Engineering Centre, Italy.

Lachance, I. n.d. 'Vancouver Computer Recycler Says Illegal Canadian E-waste Dumping "No Surprise"'. *Free Geek*. Available at: http://freegeekvancouver.org/en/canadian_ewaste_dumping (Accessed 17 May 2015).

Long, C. 2006. 'Innovators Seek Greener PC Future'. *BBC Online*, 1 September. Available at: http://news.bbc.co.uk/2/hi/programmes/click_online/5305344.stm (Accessed 25 May 2017).

Mukerjee, S. Y. 2017. 'California Warns That Cell Phone Radiation May Be Bad of Health'. *Fortune*, 18 December. Available at: http://fortune.com/2017/12/18/california-cell-phone-radiation-fact-check/ (Accessed 21 January 2018).

Murdock, G., and P. Golding. 2005. 'Culture, Communications and Political Economy'. In *Mass Media and Society*, edited by J. Curran and M. Gurevitch, 60–83. London: Hodder Arnold.

The Economic Times. 2009. 'India Prepares Strictest Rules on Disposing E-waste'. *The Economic Times*, 18 August. Available at: http://m.economictimes.com/PDAET/articleshow/4906529.cms (Accessed 12 May 2015).

The Hindu. 2016. 'India Fifth Largest Producer of EWaste: Study (PTI)'. *The Hindu*, 18 October. Available at: http://www.thehindu.

com/sci-tech/energy-and-environment/India-fifth-largest-producer-of-e-waste-study/article14340415.ece (Accessed 14 May 2017).

Turaga, R. M. R., and K. Bhaskar. 2017. 'Managing India's Electronic Waste'. *LiveMint*, 18 May. Available at: http://www.livemint.com/Opinion/hAAWLseZDUfMLCFc58UPiO/Managing-Indias-electronic-waste.html (Accessed 9 July 2018).

UNEP-CHW-COP12FU-SUBM. 2015. 'ICC Illegal Traffic Bangladesh'. Basel Convention (2015), UNEP-CHW-COP12FU-SUBM Response on Illegal Traffic Bangladesh (PDF).

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