The Technosocial Subject: Cities, Cyborgs and Cyberspace

Ph.D. dissertation submitted to

MANIPAL UNIVERSITY

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BANGALORE—560061

March 2012

Bangalore

2012

Declaration

I, Nishant Shah, do hereby declare that this dissertation titled **The Technosocial Subject: Cities, Cyborgs and Cyberspace** contains original research work done by me in fulfilment of the requirements for my Ph.D. degree in Cultural Studies from the Centre for the Study of Culture and Society and that this report has not previously formed the basis for the award of any degree or diploma in this or any other institution. This work has not been sent anywhere for publication or presentation purpose.

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Certificate

Certified that this dissertation titled **The Technosocial Subject: Cities, Cyborgs and Cyberspace,** is a record of bonafide study and research carried out by Mr. Nishant Shah under my supervision and guidance. The report has not been submitted by her for any award of degree or diploma in this or in any other university.

Dr.S.V. Srininvas

(Supervisor)

Ashish Rajadyaksha

(Member, Ph.D. Committee, Director, CSCS)

Acknowledgements

I owe much emotional and intellectual gratitude, to many people scattered over geographies and lifestyles, without whom, this dissertation would not have been possible. The list is long, and much labour expended by many people shall remain invisible here. But I hope that the people I name will realise what a crucial role they have played in my life, and the people I don't will know that I appreciate their presence in my life, beyond formal acknowledgements.

My family has been my rock. My parents Amita and Nikunj Shah and my brother Swapnil, have given me hope, strength and the conviction to push through obstacles even when they seem insurmountable. They have been there, even when they might not always have understood choices that I make, ready to let me know that if everything fell through, I could always come home.

The Centre for the Study of Culture and Society was my home away from home, where I found a warm and nurturing environment and friends and mentors who I shall cherish for life. S.V. Srinivas has been the guide that only a fortunate few can hope for – he pushed me without pushing me away, helped me without getting exasperated when I fumbled, and invested such faith in me that I wanted to do better than I thought I could. To him, this dissertation owes everything, from conception to final execution.

Ashish Rajadhyaksha and Tejaswini Niranjana have been friends, philosophers and guides. From continued interaction with them – from their research practices as well as their guidance in shaping mine – I have learned and benefited immensely. I also owe my Asian Consciousness to their introducing the Inter Asia Cultural Studies project and know that my work remains richer for their presence in my life.

The intellectual life at CSCS has left its inedible traces in my work. The faculty and student body, in their own ways, have contributed to my ways of thinking and writing. However, there are some people in that space, who have shown incredible generosity, love, affection and warmth, and I want to mention them here because without them I wouldn't have found my gravitational centre. Radhika, Ratheesh, Sujith, Subhajit, Meera, Sufiya, Polly, Vishnu, Zainab, Nitya, Ram, Anup, Milind, Vivek, Mrinalini, Aparna, and Rochelle have all helped me grow through their own research and also because they helped me find home and heart in Bangalore.

Asha Achuthan, you have been my writing buddy, my shoulder to cry on and the person who saw me through some of the toughest writing periods. I am glad that our collaboration and friendship has lasted beyond the research programme and I feel blessed to have found a friend and collaborator in you.

There are other homes that I have found outside of CSCS – Ashwini, Chirag, Kiran (Jace), Manish, Pallavi, Yamini, Ganesh, Tana and Parag, all opened their houses and families to me, giving me love and solace and support when I needed it.

Along with work on the dissertation, I have had the pleasure of working with some of the most interesting people in the country. Vijay Ramachandran who gave me my first IT job at Yahoo India, opened up a whole new world for me. Rufo Gurroeschi at Partecs and Sanjay Bobde at Comat have supported my career in unexpected ways. Kiran (Jace) Jonallagadda has been a friend and a colleague over many different projects across almost a decade, and I have the privilege of continued work and social interaction with him. Pooja Sood at Khoj in

Delhi gave me the first sandbox to implement my ideas on and I will always remain grateful for the energy and warmth that Khoj has always brought to my life.

I spent the happiest months of my adult life as a visiting scholar in Taiwan at the National Central University. Chen Kuan-Hsing, who examined my proposal and inspired and supported me to have larger regional visions shall always remain my hero. Josephine Ho at the Sex Centre is a visionary who made it possible for me to visit Taiwan and live in Chungli. Amie Parry and Naifei Ding took it upon themselves to show me how valuable generosity, love and affection are, even in the midst of rational theorisation. I found friendship, perspective and hope in Taiwan, and I owe it to the friends who I shall cherish for life – Zona, Ted, Madalena, Christina, Mandy, the other Mandy, Amy, David Barton, David Stewart, Teri Silvio, Eric Ilya Lee and the many other friends, colleagues and students who went out of their way to make me feel at home in a country where nobody knew my name!

Bangalore found me before I found the city. The vibe, the structures of support, and the networks of collaboration in this city are unparalleled. A wide range of people who live here, who passed through here, and who keep on coming and going away from the city have been my base, my inspiration and my support. Lawrence Liang, whose work I admire, has been a friend and a mentor and has shaped my life in more ways than he would know. Namita, Maya, Nithin, Suchetan, Vivek, Kalindi, Aneesha, Noopur, Prayas, Rashmi, Tejas, Yash, Zeenath – you have all shaped my intellectual horizons and pasts and I am grateful for that. Kavita Phillip, who, in a short while, has become such a close friend, has inspired me in her work and her conversations to approach life and work with better sense and sensibility.

At the Centre for Internet and Society, I found peers within a new institutional structure and the platform to implement and execute my research visions in extraordinary ways. To my research team there, but especially to colleagues who inspired me towards new forms and methods of research – Anja, Prashanth, Haseena, Samuel, Shweta, Malavika – I shall always be proud that I had the opportunity to share and collaborate with you in several research and personal capacities.

Also through CIS, I had the opportunity to work with the fantastic cutting edge and fun research team at Hivos – Josine Stremellaar, Fieke Jansen, Hapee de Grot, Seema Nair, Remko Berkhout – who taught me that in the midst of earnestness are moments of fun and joy. Renee Ridgway, Stephen Wright, Julia Hoffman, Marlieke Kiebom, Sally Wyatt, Bernike Pasveer and Esha Shah have all found intersections with my life in Netherlands, and I am sure you know, that you form my home screens in Europe. The entire Digital Natives team that across Asia, Africa and Latin America has taught me more in the short three years than I had learned in all my life as a researcher – You guys are absolutely 'teh rock!'

I have always been blessed with teachers who have gone beyond their call of duty to help me make intelligent choices, in education and in life. Suguna Ramnathan, Sarvar Sherichand and Rita Kothari at St. Xavier's College Ahmedabad shall be my teachers for life, for it is with them that I learned to really read and write. Sharmila Rege at the Women's Studies Centre (Pune University) taught me how to be political in my personal and continues to be a strong influence in my life. Friends I have grown up with in my life as a student – Judith, Susan, Shantanu, Urvi, Priya, Pradnya, Kasturi – have taught me, over the years, lessons more valuable than anything that is ever taught in a classroom.

Several Institutions and the people therein have played a significant role in shaping my ideas by making their resources and knowledge available to me. The Centre for Media Culture and Communication at the Tata Institute of Social Sciences in Mumbai, Mudra Institute of Communications Ahmedabad, Faculty of Humanities at the Indian Institute of Technology New Delhi, Sarai and the Centre for the Study of Developing Societies at the Delhi University, Dutch Art Institute in The Netherlands, Christ University in Bangalore, Association of Internet Researchers, Library.nu, Inter Asia Cultural Studies Society in Taiwan, Centre for Contemporary Studies at the Shanghai University in Shanghai, Asia Scholarship Foundation in Thailand, University of Maastricht and The Institute of Network Cultures also in The Netherlands, and the Berkman Center for Internet and Society at Harvard University in Cambridge, have all shown me what wealth lies in collaboration and how sharing only increases knowledge capitals.

This dissertation was written, largely in cafes, where patient and smiling staff let me sit for hours, providing me with coffee, electricity and internet access. To them, I owe thanks for all the freebies. And last, but not the least, through the course of the Ph.D. the superb and unmatched works of Terry Pratchett and his world of fantasy reminded me that 'there's a billion places like home. But only one of 'em's where you live.' To him, and his 'L-Space' library, I owe all the theses I did not write, all the theses I could have written, all the theses that other Me's wrote in other fractured quantums –in short, every other thing except for this very particular dissertation that shall not find space in a magical library.

With the warmest gratitude and regards

Nishant Shah

30th March 2012

The Technosocial Subject: Cities, Cyborgs and Cyberspace

Abstract:

The rise of new digital technologies of Information and Communication, of which the Internet is the most visible, has introduced an accelerated rate of change in the global economy and socio-cultural practices. A body of work that seeks to deal with, account for and explain the ways in which every-day practices and realities are changing due to emerging (or emerged) forms of computer and digital networks is clubbed together as Cyberculture.

This dissertation locates itself within the Cyberculture discourse to develop a theoretical perspective that treats digital and internet technologies as central and integral to the practices of what I call the Technosocial Subject. Beginning with the crises of early technology studies, the dissertation maps how the emergence of digital and internet technologies in the country have shaped our understanding of technology-individual relationships. In revisiting these different crises in the Indian context, which cursorily seems to reflect common trends in other parts of the world, there is an attempt to show how they challenge existing concepts, ideas and theoretical frameworks between space, body and technology within Cyberculture.

In the process, it demonstrates how existing research and scholarship in Cyberculture is flawed in its attempt to produce universally identifiable, common resolutions to events and occurrences which require detailed contextualisation. The dissertation attempts this contextualisation through time, space, and histories of human-technology interaction, to offer new insights into understanding the material practices of the Internet, the changing patterns of regulation and control, and new forms of citizen-state relationships in the age of technology mediated life.

The dissertation proposes that inscribed within all these changes is the production of technology-mediated identities which are produced in the material and everyday transactions with new digital and Internet technologies. It looks at these transformations - the emergence of new cultural and symbolic forms of expression, spatial restructuration of cities, production of technology mediated subjectivities, and inherent tensions as these identities negotiate with existing regulation regimes – to see how the rise of a new technology (and the tools that come with it) significantly alter the processes by which a technology mediated social subjectivity is produced.

It is not the intention to propose a new theory of technologised subjectivity. Instead, the dissertation begins with a common sense understanding of *Subjectivity* as has been considered in Cyberculture literature and theory, as emerging out of transactions and negotiations with new technologies. The interest is more in looking at the contextual production of such identities and a further examining of the different crises that such identities signal; crises, which, in contemporary discourse, are often neglected or produced as false binaries. Such a mode of thinking relies less on the study of the content of technology, as do the disciplines of media studies and Cyberculture, and focuses upon how technologised forms materially inflect existing ways of living. The dissertation thus produces a new framework to understand the Technosocial Subject, marking its points of departure from earlier models of cyborgs or netizens to look at the subject to, of and for the future.

The rise of new digital technologies of Information and Communication, of which the Internet is the most visible, has introduced an accelerated rate of change in the global economy and socio-cultural practices. A body of work that seeks to deal with, account for and explain the ways in which every-day practices and realities are changing due to emerging (or emerged) forms of computer and digital networks is clubbed together as Cyberculture. Lev Manovich, in his essay "New Media From Borges to HTML" (2003), identifies a series of social phenomena associated with the Internet and network communications. Manovich writes,

> Examples of what falls under Cyberculture studies are online communities, online multi-player gaming, the issue of online identity, the sociology and the ethnography or email usage, cell phone usage in various communities; the issues of gender and ethnicity in Internet usage; and so on. (2003, 33)

He tries to make a clear distinction that 'Cyberculture is focused on the social and on networking; new media is focused on the cultural and computing' (34). However, as Jakub Macek (2004) points out, 'Cyberculture is an ambiguous, confusing, unclear term describing a set of issues. It can be used in a descriptive, analytical or ideological sense. It has a multiplicity of meanings and thus everyone willingly uses at least one of them. (35)'. Macek's own typology understands Cyberculture as a 'socio-cultural formulation' (35) that is informed by concepts that are utopian, informational, anthropological and epistemological in nature. While it is not the ambition of this project to give a detailed map of how the field has evolved, here is a brief time-line of the concepts and ideas that have shaped Cyberculture.

One of the earliest and basic definitions of Cyberculture refers to the discussions on new media and marks a cyberpunk movement of hackers' subcultures that emerged with the first

computer and digital networks. Douglas Rushkoff in *Cyberia* (1996) and Mark Dery in *Escape Velocity: Cyberculture at the End of the Century* (1996) both representatives of this understanding of Cyberculture, identified it as a sub-culture of the digital age that helped imagine an initiation of a futuristic regeneration of society. This view point was perhaps most eloquently articulated by Andy Hawks, who, in his *Future Culture Manifesto, writes*

> Futureculture, then, is a way of deciphering what tomorrow will look like in a technoculture... Cyberculture is probably most closely associated with the idea of futureculture, yet Cyberculture is often mis-and-over used. If you look at the meaning of the word "cyber", basically "information" is an oversimplified context, it has little to do with frequently used notions of Cybercultures, specifically a Gibson-esque cyberpunk world as it exists today or in the near-future. (Hawks,1993).

The French humanist philosopher, offers a conceptual framework in his book *Cyberculture* (2000). Levy builds on the idea of a 'Barlowian Cyberspace' – a deteritorialized symbolic stage of technology mediated communication where the complexity of the experience depends solely on the complexity of the technology – in order to make a point of departure from William Gibson (1984) inspired metaphorical vision that was an integral part of cybercultural discourses of his time. Levy argues that with the emergence of digital technologies, new forms of knowledge production and distribution emerge which transform not only the ways we manipulate information but the society itself. For him, Cyberculture is the consolidation of this change; it refers to the 'set of techniques (material and intellectual), practical habits, attitudes, ways of thinking and values that develop mutually with cyberspace' (2000, 15) and embodies 'a new form of universaity: universality without totality'. Levy's fiercely optimistic conception of Cyberculture refers to a possibility of 'creating a virtual participation on your own self (universality) in a way that is different from the identity of meaning (totality)' (107) betrays the conservative utopian techno-optimism of

the 1980s and 1990s, where the spread of digital technologies was directly linked to the regeneration of a new society.

Social Anthropologists like Arturo Escobar offer a wider concept of Cyberculture. In his essay "Welcome to Cyberia: Notes on the Anthropology of Cyberculture" (1996), Escobar posits Cyberculture as research on 'cultural constructions and reconstruction on which new technologies are based and which they, conversely, contribute to shaping' (11). He marks a specific point of rupture in the domain on anthropological practice with the emergence of Internet technologies:

> The point of departure of this inquiry is the belief that any technology represents a cultural invention, in the sense that technologies bring forth a world; they emerge out of particular cultural conditions and in turn help to create new social and cultural situation(s)...[that] are bringing about a regime of *technosociality* (Escobar, 1996, 112).

By the turn of the century, though, the optimism that informed Levy and Escobar, was already facing scepticism and mistrust from ethnographers like David Hakken and Sherry Turkle who questioned the taken-for-granted nature of techno-utopianism. In his descriptions of cyberspace, Hakken talks of a technologically mediated social arena entered by everyone using Advanced Information Technologies (AITs) in social interaction, which can offer insights into life practices and forms outside the digital networks but produced through the AITs. He writes,

> Lifeways based on AIT are not only real and distinctly different; they are transformative. The transformative potential of AITs lies in the new ways they manipulate information. The new computer-based ways of processing information

> seem to come with a new social formation; or, in traditional anthropological parlance, cyberspace is a distinct type of culture (Hakken 1999, 1-2)

Hakken's privileging of the informational and transformative powers of the AITs and their role in producing socio-cultural artifacts and lifeways was speculative as it was conceived of, just before the Internet went popular and social media became a naturalized term. Writing at the turn of the millennia, and after the neck-break speed of Internet adoption and usage in the 2000s, Lister et al produce a more comprehensive understanding of Cyberculture. They see Cyberculture as a cultural context of Information and Communication Technologies (ICTs), characterized by its themes – programming, software, communication networks, artificial intelligence, virtual reality, robotics, synthetic life, etc. The language of cyberpunk fiction and films still provide the language, meaning and values that shape Cyberculture discourse but they are no longer hinged on futurisms. As Lister et al write,

> [C]yberculture is used to refer to the theoretical study of Cyberculture...that is, it denotes a particular approach to the study of the "culture + technology" complex. This loose sense of Cyberculture as a discursive category groups together a wide range of (on many levels contradictory) approaches, from theoretical analyses of the implications of digital culture to the popular discourses on science and technology journalism. (Lister et al 2003, 385)

Even in this brief mapping out, we can see that Cyberculture refers to subcultures (gone and emergent), contemporary socio-cultural practices, potential forms of future society and groups, theoretical visions of human-technology relationships, and cultural artifacts of everyday life.

The examples I give (subcultural, literary and theoretical) are only representative in nature and there has been a rich discourse on what constitutes Cyberculture and how to study it, in

different disciplines and geo-political conditions[1]. My interest is to indentify the knowledge gaps and blind-spots of this discourse which is not contingent upon an exhaustive mapping of the field but in recognising some patterns that disciplines as varied as anthropology and robotics inherit in their engagement with the cyberspaces.

There are three particular sets of knowledge gaps which help me build on my formulation of the Technosocial Subject.:

First is the celebrated rhetoric of how "the world is flat" (Friedman, 2005) and that Internet Technologies are levelling the geography and differences, producing exactly similar practices and subjects around the globe[2]. This particular argument is fuelled, in part by the digital aesthetic of making seamless copies, and in part by the market driven idea of a shrinking world that is only a click away. As a result, we have a majority of research that concentrates on developed worlds with a much larger Internet penetration and presumes that the rest of the world also experiences the emergence and rise of technologies in the same way Technology mediated subjectivities thus, are imagined as the same everywhere. People who are outside the folds of these technology practices are sought to be "rehabilitated" to become just like everybody else.

Second, the pervasive and persuasive alternative realities and virtual worlds that cyberspace has created. These digital universes are so self-contained, immediate and infinite that it is very easy to forget the larger contexts within which they are embedded. Significant effort has

[1] Jakub Macek's essay on "Defining Cyberculture" remains one of the most comprehensive recapitulation of the various ways in which the term Cyberculture has been used and understood in its short history, at least within a Euro-American context.

[2] Friedman, in his book *The World is Flat* looks at 10 flatteners of the technologised world- economic production and commerce structures, the emergence of global flows of information and the hegemony of universally adaptable machines feature in them. For Friedman, who drew the title from a statement made by the Technocrat Nandan Nilekani (2009), so strong is the neo-liberal paradigm of the market as the only decision maker, all other diversities [fall flat on their face]--rephrase.

gone in exploring, explaining and providing insider information on the new spaces and experiences that cyberspaces throw up at an accelerated rate. This is compounded by the out-sourcing models deployed by the ICT multinational companies that also imagine that social contexts, cultural diversity and geo-political arrangements can be overridden and bypassed by the almost endless reach of Internet technologies. Thus, there is research that confines and contains itself only within the digital and virtual circuits, concentrating only on the virtual and overriding the physical purports and ramifications of these technology interactions.

Third, the scholarship and discourse, from Cyberculture, which are informed by and contribute to Cyberculture, remains isolated in their inquiries around the production of technology mediated identities and subjectivities. Either the research remains focused exclusively on the experience of cyberspace (and the ways in which people interact, mediate, mobilise and network online) or it concentrates only on development studies interested in the questions of access, exclusion, enablement, infrastructure etc. There are very few studies that locate the digital experiences and platforms in relationship with the rapid changes in the physical world. Within human-technology studies, the material practices of the people and the dialectics between the virtual and the physical are not factored in and what we get is either abstract ideas that do not have a material grounding, or an everydayness of technology mediated identities that do not have a conceptual value.

The chapters in this dissertation do a symptomatic reading of various cases and significant developments in the rise of Internet technologies in contemporary urban India. They develop a theoretical perspective that treats technology as central and integral to the practices of what I call the Technosocial subject rather than being merely instrumental or functional. The dissertation identifies some of the crises that early technology studies – especially in

Cyberculture – and how they have shaped our understanding of technology-individual relationships. I intend to re-visit these different crises in the Indian context, which cursorily seem to reflect common trends in other parts of the world, in order to show how they challenge existing concepts, ideas and theoretical frameworks within Cyberculture. In the process, I demonstrate how the existing research and scholarship on Cyberculture is flawed in its attempt to produce universally identifiable, common resolutions to events and occurrences which require a detailed contextualisation. This contextualisation through time, through space and through histories of human-technology interaction, offer new insights into understanding material practices of the Internet, the changing patterns of regulation and control, and the new forms of citizen-state relationships which emerge with the spread of technology mediated governance.

The changes that the rise and spread of Internet technologies have ushered in, in countries like India, are clearly manifest in the emergence of new cultural and symbolic forms of expression, spatial reconstruction of city spaces, forms of governance and state-citizen relationships, and emergence of new lifestyle and consumption patterns. Inscribed within all these changes is the production of technology-mediated identities which are produced in the material and everyday transactions with new digital and Internet technologies. Some of the changes that accompany these technology mediated transformations are examined in this dissertation – the emergence of new cultural and symbolic forms of expression, spatial restructuration of cities, production of technology mediated subjectivities, and inherent tensions as these identities negotiate with existing regulation regimes – to see how the rise of a new technology (and the tools that come with it) significantly alter the processes by which a technology mediated social subjectivity is produced.

It is not my intention to propose a new theory of technologised subjectivity. Instead, I begin with a common sense understanding of *Subjectivity* as has been considered in Cyberculture literature and theory, as emerging out of transactions and negotiations with new technologies. The dissertation is more interested in looking at the contextual production of such identities and a further examining of the different crises that such identities signal; crises, which, in contemporary discourse, are often neglected or produced as false binaries. Such a mode of thinking relies less on the study of the content of technology, as do the disciplines of media studies and Cyberculture, and focuses upon how technologised forms materially inflect existing ways of living. In this dissertation, the Technosocial is produced as unique to a particular context and location and not easily universally replicable. While there might be certain similarities in how technologies – especially Internet technologies – emerge and make themselves manifest in different information societies, the points of departure produced by the stakeholders and actors in the field produce specific Technology mediated identities which need to be explored contextually.

I begin with the clarification that the while I am aware of and often situate the dissertation in a much larger discourse around technologies of mass production, the particular interest is in the early days of the emergence of Internet technologies in India. The Internet has produced many kinds of forms and objects. However, my primarily focus is on cyberspace as one of the largest public spaces shaped by the Internet, though not necessarily contained within it. Also, while there is an account of the emergence of cyberspace in India, documented through popular stories and case-studies, the dissertation does not deal either with the history of the Internet in its material sense – hardware, technology, protocol and programming – or with the questions of convergence and legislation that often riddle the development driven

imagination of Information and Communication Technologies For Development (ICT4D) agenda[3].

Additionally, I place cyberspace in the realm of cultural production and hence will be drawing largely from popular and populist techno-cultural productions (and the theories that deal with them). In the instances when I do look at the cyberspace platforms of cultural production – blogs, micro-blogs, social networking systems, user generated content sites, peer-to-peer (p2p) sharing, etc. – the interest is in looking at how these platforms, often dismissed as faddish or sub-cultural, provide a more complex understanding of the rapidly globalizing and digitized world. I thus, veer away from either providing insider reports of what happens in the digital spaces or from quantitative data collections to measure impact and effect of Internet technologies on various populations. Instead, I seek to produce a framework that is simultaneously grounded in material practices and draws from philosophical inquiries towards a more fruitful engagement with questions of technology mediated subjectivities and the related practices. In the process, I hope to capture the more complex human-technology relationships that include affective tropes of engagement, contexts of regulation and policy and material changes in lifestyle. I show how such a contextualization helps in better understanding technology-mediated identities which are rapidly becoming central to the changing governance structures in India.

While the dissertation seeks a point of departure from the larger body of Cyberculture literature which has emerged in many different disciplines, it also borrows concepts and

[3] The ICT4D programmes and projects have been specifically interested only in questions of access and infrastructure without taking into account either the contexts or quality of these interventions. Michael Edwards' position paper 'Thick Reality, Thin Solutions: How NGOs can bridge the gap"on the problems with the 'NGOisation of Technology Development' gives a fair idea of how there has been a growing discrepancy between the real problems at stake and the ICT4D solutions that have been developed in the last two decades. http://www.thebrokeronline.eu/var/broker/storage/original/application/960b295f2838b63a6609cea4fdf0a51f.pdf

contexts which have been formulated around the question of technology and subjectivity, which I seek to build upon and find necessary to introduce here.

1. CONCEPTS AND CONTEXTS

1.1 Technosociality

Scholarship in Cyberculture has been interested in exploring the relationships between the virtual and physical worlds since the very rise of Internet technologies. Technology studies have concentrated on how the building of technology infrastructure and the new configurations of State-Citizen-Market relationships shape and are shaped by the emergence and widespread adoption of Internet technologies. Steven Miller (1996), in his study of the National Information Infrastructure (NII) in the USA, despite his interests in policy and regulation, privileges the Internet as the new space that is outside of the geo-physical nation about which he is writing, and hence having the powers to produce benefits and conditions which will help in re-creating the nation.

> We--The American people--are not building a national information infrastructure so that a handful of firms can make money from the NII itself. We are building it because of the benefits we hope the entire nation will derive from that the NII makes possible. Achieving those benefits requires policies that lead, slowly but definitely, toward universal service. (p. 207)

He also writes,

> Universal service means having use of the tools required to receive, utilize, create, and send basic types of transmitted material. It means getting adequate training to know how to use equipment for the desired results. It means being able to participate in meaningful commercial and noncommercial online activities that make it worthwhile to use the system and allow users to speak in their own voice. (207-208)

Literary and communication theorist Brenda Danet (1997) in her analysis of a "Virtual Party" that happened on an IRC channel is able to demonstrate how the referents from physical practices and contexts get translated, morphed and mutated in the virtual worlds. In playful ways, this process of translation affects not only the perception of the virtual avatars but also of our material bodies

> Cyberspace is by no means wholly benign, and IRC is no exception…The synchronous modes of CMC can release aggressive, even shockingly malicious behavior, including sexual harassment and racism. Moreover, people can get themselves into fairly unpleasant RL trouble. One striking example, by now well known on the Net, is the case of the New York male psychiatrist who misled a number of co-participants on the CB channel of CompuServe into believing he was a woman (Danet, 1997)

While both these authors are already moving out of the Real-Virtual binaries and trying to establish a new order of relationship between the virtual and the physical, instead of looking at them as mutually exclusive, virtuality still remains central to the conception of cyberspace which is described using spatial metaphors. There is a sense of travel in the very etymology of the word cyberspace, which gives the notion of how the individual users within cyberspace, travel to a mythical land behind the interface, leaving behind their real bodies and having out of the worldly experience. However, as this experience seeks to simulate the experiences of the body left behind, this world is looked upon as fantastic or one of escape.

The cyberpunk fiction inspired by William Gibson (1984), who was among the earliest to propose this divide, only adds to these binary divides of the virtual and the real, the meat and the machine. Legacies of Virtual Reality have been so deeply ingrained in Cyberculture

studies that it has merited the acronyms of VR and RL (Real Life) which are in currency throughout the blogosphere and in popular descriptions as well as in scholarship around the Internet.[4] Theorists, starting with Arturo Escobar, have effectively introduced the notion of bridging the gap between the so-called Virtual and the Real, to look at cyberspaces as constitutive of the Real. Arturo Escobar (1994) pointed out that computer and information technologies set into motion a process of 'Technosocial construction' – a new order for the production of life, nature and body, through technological interventions. He observed that

> Cyberculture refers very specifically to new technologies in two areas- artificial intelligence (particularly computer and information technologies) and biotechnology…[that] embody the realization that we increasingly live and make ourselves in techno-biocultural environments structured indelibly by novel forms of science and technology (1994, 214).

In these 'techno-biocultural environments', technology is no longer juxtaposed against the organic but redefines a world where the boundaries between the natural and the cultural, organism and machine, are permeable, allowing for assemblages or mash-ups of machine, body and space. Such a positing of a technosociality forces us to locate the subjectivities in a state of continuous interaction and negotiation with the physical and the virtual. It also moves away from the metaphor of the space and imagines the cyberspace as produced out of processes and transactions, through the different forms like databases, networks and archives. Sandy Stone elaborates these processes in more detail. She posits that

> In technosociality, the social world of virtual culture, technics is nature. When exploration, rationalisation, remaking, and control mean the same thing, then nature, technics, and the structure of meaning have become indistinguishable. The Technosocial subject is able successfully to navigate through this treacherous new

[4] As recently as in 2007, the International Conference on Virtual Reality was hosted in Beijing and the proceedings were published in an anthology titled *Virtual Reality*. (Shumaker, 2007)

> world. S/he is constituted as part of the evolution of communication and technology and of the human organism, in a time in which technology and organism are collapsing, imploding, into each other (1991, 81).

While Stone's articulation remains in exploring the 'social world of virtual culture' to forward her own dissertation, it logically extends to look at another phenomenon, which is the 'virtual world of social culture'[5]. Technosociality, by straddling the two worlds together, and by looking at the spills and overflows of one into the other, blurs the boundaries between the real and the virtual. What it produces, instead of a Virtual Reality, is virtuality which is not removed from the reality but a constitutive part of it. Such an understanding of Technosociality helps shape my project outside the expected realms of digital and Internet circuits. Instead, it looks at the larger ecologies of fear, tension, crises, and legal combats which inform the shape, the form and the manifestation of Internet technologies and practices in the country.

[5] The virtual world of social culture indicates how the digital domains of cyberspace and Internet have perpetrated and become so central to the mechanics of urban survival that, indeed, the virtual world has become constitutive of the so called Real.

1.2 The Space of Technology

Even before cyberspaces came to populate the public imagination, various scholars, especially with the advent of digital media, had already begun conceiving the city as a site upon which the relationships between emerging technologies and social organisations have been inscribed. For example, new media theorist Marshall Mcluhan (1964) suggested that 'any (new) technology gradually creates a totally new human environment' (34) which eventually leads to the technology becoming an 'habitus or a space of living' (67) which sustains the production of the social, cultural and political imaginations.

With communication technologies, the shrinkage of distance and time (Giddens, 1985) became the parameters by which functioning and unfolding of the city – the masthead of modernity, underwent dramatic changes. Different scholars have formulated different ways by which the technology and space configurations can be calibrated. Ackbar Abbas (1997), in his work on Hong Kong notices a 'condition of disappearance' for the territory, where the need to sustain the economy and the height of globalisation produce it as

> ...not so much a place as a state of transit... not as a "third space" that can be located somewhere; not as a neither-nor space that is nowhere; not even as a mixed or in-between space, if by that we understand that the various elements that make it up are separable. Above all, hyphenation refers not to the conjunctures of "East" and "West", but to the disjunctures of colonialism and globalism (143).

Jai Sen (1989), in his essay on "Unintended Cities" takes up the perspective of planning to examine the ways in which different technologies shape and influence the physical plans and execution of city spaces. Pico Iyer (2001), in his search of *The Global Soul*, looks at the processes of consumption that come with technology and produce certain 'shallow spaces'

like the Airports. Commenting on the seamless flow of technology through these spaces of constant movement, he says that in the technologised worlds that we live in, 'Everywhere is so made up of everywhere else (183).' Chua Beng Huat also contributes to this idea of consumption as producing and shaping the physical materiality of urban design and planning. In his work on *Consuming Asians* (2000) he identifies the coupling of technology, consumption and lifestyle as creating and shaping the urban experiences in cities like Singapore. David Harvey, the urban geographer, looks upon technology as leading to a 'reorganisation of social structures' (1989) that produces new spaces of social interaction and mobility in the panning of a city. Drawing from the discourse in Architecture and Design, Marcos Novak (1997) introduces the idea of 'transmitting architecture' in an essay by that name. In the essay he writes,

> Space is no longer innocent. Under the impact of science and technology, ordinary space has become just a subset of a composite "newspace" that interweaves local, remote, telepresent, interactivated, and virtual spacetime into the new spatial continuum that is the focus of emerging transarchitectures (Novak, 1997, 205).

On the other side of Novak's lyricism is urbanist Paul Virilio, who, in his work that predates the mass adoption of Internet technologies already foretold that the new cities would be cities that shall house new technologies. Virilio, in his book *The Lost Dimension* (1991), suggests that these technologies can unify 'immense territories into one city (34)', thus producing new ways of navigation and mobility.

In all these studies, there is no attention given to the redefinition of the city as linked to the emergence of new subjectivities – group and individual – that come into being with the emergence of new technological forms. With the telecommunication technologies, we had,

perhaps for the first time, communities and groups that are formed, housed and sustained by the medium. Earlier forms like cinema and television have resolved the anxiety around the notion of space by making the spectator as the supreme receptacle of meaning and interpretation. Following the trajectory of this association of technology, space, and body, some of the earliest theorists formulated the notion of the cyber-publics (Sundaram, 2001) as residing within the cyber cafes and formed within the collective networks that sprout up in neighbourhoods. The machines serve as nodes in the circuits of digital consumption and proliferation. This move to look at the physical spaces that house the cyberspaces has been extremely significant and important to rescue Cyberculture from being contained only within the digital domains of virtual interaction and community building. However, this direct link between the physical anchors of Internet technologies and the experience of cyberspace does not take into account the subjective interpretations, investments and imaginations of who we are online.

As computing increasingly becomes mobile and interfaces of cyberspace access no longer remain confined to the large and stationary screens, the shape of cyberspace usage and the spaces that house them have also changed. The first instances of these changes can be found in the architecture and the sprouting up of globalised spaces of consumption. Traces can also be found in new spaces of social interaction and socialisation – malls, multiplex cinema houses, new age coffee houses, large commercial roads and complexes, lifestyle shops and body sculpting salons – that have also emerged to house the aesthetic if not the technologies that foster cyberspaces.

Within cyberspaces, individuals meet at random in virtual spaces to interact with each other through tools that are unique to the Internet. In the process they convert these virtual

platforms into spaces simulating physical structures as can be illustrated in case of Multiple User Dungeons (MUDs)[6] and text based chat rooms, or in forming relationships and communities which stay within the medium – a feature that can be observed in the instance of Social Networking Systems (SNS) [7] and Blogs. However, as cyberspace no longer remains restricted to the computer screens on our desks but is made available 'through Wireless Local Loops (WLL) nodes, through cell phone networks, through IMAX theatres' (Rheingold, 2000) and hand held palm tops, the way these social patterns are constructed and performed, are diverse and unprecedented.

Mizuko Ito in her study of young children engaging with the legendary Internet game SimCity2000, points out that the generation that is growing up internalising digital technologies is already looking upon the city as a space that relies 'on cellular automata techniques, creating an impression of lively growth, interactivity, and change – a sense of the city as a living entity' (2009, 164). Elinor Ochs points out that the interactions of the users with the representations 'is a means not only of representing [possible] worlds but also of imagining or vicariously experiencing them' (Ochs et al, 1994).

Howard Rheingold pointed out these 'Virtual Communities' straddle two worlds in their formation. On the one hand, they are the 'communities of shared meaning' (Carey, 1989) that emerge within cyberspace, and on the other, they also inhabit the physical world of social activity and interaction. However, these formulations seem to suggest that this straddling of the two worlds happens in the same way all around the world. Carried away by the idea of a

6 Multiple User Dungeon: A text based social communication interaction platform that originally started with the game of Dragons and Dungeon, wherein the users could go and relive the game all over again.

7 Social Network Systems work towards expanding the social network of the users. Each user is given the choice of inviting his/her friends onto the network who in turn get to invite their own separate friends. In the process, the members inherit each other"s friends, till sometimes up to five levels of recognition. They also facilitate activities like dating, partying, meeting, etc.

‘global community’, these theories do not take into account that the Computer Human Interaction (CHI) communities negotiate with the market and the state at different levels and hence the contexts that they exist within play an important role in their shaping. The cyberspaces, with their decentralised structure and the ability to evolve at an almost cellular level are deeply affected by the material practices within which the users shape these digital forms. When looked through the framework of the forms of cultural expression, cyberspaces can no longer be universal but contextual, developing, evolving and sustaining the different activities through an engagement with the interstices between legalities and regulation.

Urbanisation and reshaping of new cities to support the global flow of economy – through outsourcing centres, through development of Special Economic Zones, through construction of IT and Mega Cities – has been one of the most obvious effects of technologised globalisation. The metaphor of space was so firmly entrenched within early Cyberculture, primarily because the cyberspaces seemed to be de-linked from the physical, tangible material practices of everyday life. With the new Asian urbanisation and the emergence of IT capitals of the world – Shanghai, Taipei, Tokyo, Bangalore – there has been an increased interest in looking at the spatial dimensions and implications of ICTs (Abbas, 1997; Huat, 2000; Novak, 1997; Krane, 2009). The attempt is to locate digital media, not only within the digital matrices or economic circuits of labour and capital, but to see how they create new forms of spatial interactions and negotiations.

This physical anchoring of the Internet technologies suggests that there is a need to understand the Internet technologies as a constitutive part of our material reality. It also establishes a more complex relationship between the use and presence of Internet technologies and the changes in urban cityscapes. I do not merely mean a change in the

architecture or planning patterns that can often be attributed to models forwarded by new technologies. Instead, I want to foreground that ubiquitous computing and Internet presence changes the very way in which we understand the city and in effect exposes the influences that the contexts have in the shaping of these new networks of life, labour and language.

1.3 Cyborgification

The fusing of these spheres – of the physical and the virtual, the digital and the sensory, is best understood in the processes of creating a cyborg – cyborgification. The concept of production of the self within Technosocial spaces is perhaps the most visible within Donna Haraway's notion of the cyborg- 'a cybernetic organism, a creature of social reality as well as a creature of fiction…The cyborg is a matter of fiction and lived experiences' (1991, 82). The earliest definitions of the cyborg have vaguely hinted at an organic-mechanical coupling drawing from visions of androids or bionic humans, to look at the boundaries between the real and the non-real, the biological and the mechanical. Haraway's cyborg, however, rests in the 'optical illusion between social reality and science fiction', thus defining a 'technological polis' that rests on the blurring of three boundaries of biological determinism, organism-machine, and the physical-non-physical Haraway also hints at how we are all in a process of becoming cyborgs – she calls it 'cyborgification'- as our lives become increasingly intimate with machines and technologies in the age of cyberspace.

Haraway further asks the question: What are we to make of the cyborgs that we have created. A troubling figure that lives on the boundaries, irreducible to the binaries of human/machine, human/animal, nature/technology, the cyborg inhabits both worlds simultaneously, our knowledge experience and imagining of it distributed across its multiple sites.

> From one perspective, a cyborg world is about the final imposition of a grid of control on the planet, about the final abstraction embodied in a Star Wars apocalypse waged in the name of defense, about the final appropriation of women's bodies in a masculinist orgy of war...From another perspective, a cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship and machines, not afraid of permanently partial identities and contradictory standpoints. (Haraway 2000; 295)

Haraway's reflections on the cyborg is to look for alternatives, to search for other kinds of cyborgs, other places where we meet cyborgs, and other ways of thinking about them.

By the turn of the century, even as Kevin Warwick[8] was busy transforming himself into 'the first living cyborg', David Bell (2000) was able to think of Haraway's cyborg as an 'everyday cyborg' as embedded in a crucial mechanics of urban survival, where urban social reality functions as an information system. His cyborg did not exist between improbable neural networks of neural-interactive simulation but in a *performative* relationship between human beings and the technology that they use to define themselves and the world around them. He writes,

> It is this performative relationship that defines technosociality – that for the users of these technologies, the content and capabilities of one system seem to affect the ongoing social activity in another, thus creating similar environments in both the worlds that they simultaneously straddle. (Bell 2000, 12)

8 A professor of robotic technology, Warwick experimented upon his own body to aide and enhance his "senses" by installing neural chips and prosthetic circuits in himself. David Cronenberg's film *Crash*(1996) had already put forth the idea of prosthetic symbiosis to demonstrate a notion of cyborgification

Theorists like Turkle (1996) could imagine the cyberspace as a "postmodern context for playing with the self" (202). However, as the notion of a cyborg slowly becomes a lived possibility and as other fields like Biotechnology and Artificial Intelligence in particular, prepare to embody the cyborg as Manfred and Clynes (1960) originally intended it to be, we need to do a reverse suturing of the cyborg as a physical being, retrieving it from the domains of the virtual.

One would want to explore whether the processes of cyborgification are imposed from the outside or can be looked upon as a conditioning of the human subject into interacting meaningfully with its immediate urban environment. Does the cyborg remain in the imaginations of the city and the urban or does it transcend these boundaries? Does a physical cyborg become a gendered being? Is cyborgification just a syndissertation of machine and body or are we indeed living in an age of 'Natural Born Cyborgs' (Clark 2003). It is necessary to look at the material practices of regulation, containment and interaction that produce these cyborg subjects.

1.4 Ecology Of Fear And The Law[9]

Technosocial subjects are already moving markets and transforming industries, education and global politics. However, this transformation is accompanied by a growing sense of danger and fear about being online and is almost integral to our imaginations of cyberspaces. Parents, educators and psychologists all have legitimate concerns about the digital environments as younger users spend an increasing amount of time online. Social and political leaders also have a cause of concern as they see the arena of the political and the forms of mobilisation undergoing quick transitions as more people embrace these new

[9] Mike Davis, in his conception of cinematic representations of LA and how they shape surveillance and policing patterns in the physical city, coined the phrase "Ecology of Fear". I use it cursorily right now but will explore it in greater detail in Chapter Two *Techno-social Spaces*

technologies of viral networking and social communication. Corporations see their revenues at risk in industry after industry – recorded entertainment, telephony, newspapers and so on. And this growing sense of fear leads them to look at the law– globally and contextually – to provide them with directions and resolutions. Lawmakers, responding to the sense of crises, often come up with knee-jerk reactions which are detrimental to the environment of creativity, self-expression, innovation, social transformation and political participation that the new wave of digital revolution has ushered in.

The media feeds the fear. News coverage is saturated with frightening stories of online pornography and predators, Internet addiction, cyber terrorism, and thefts – of identities, property and lives. There are no well developed signs and symbols that remind us to be careful in the largely unsupervised digital environment. We leave traces and often commit acts which might not always be legal or safe. We expose ourselves to unnecessary threats – especially true in the case of younger children – and more than often, face unexpectedly traumatic behaviour in our interactions online. It is this ecology of fear that allows for laws that ignore the tremendous potential of cyberspaces and put blanket bans on activities that are sometimes fundamental to the opportunities in the digital environment. Many legislations or legal battles have not only resulted in a severe abuse of public resources around the globe, but also resulted in calamitous repercussions which were unforeseen.

The ecology of fear enables the State and the legal apparatus to produce conditions of illegality that can be used against the citizen who leaves traces of usage, interaction and presence through the use of digital technologies. It leads to the construction of fetishised identities that emerge need to be deconstructed and mapped against a much larger picture of the State's visions and imagination of digital technologies. It is also necessary to examine

how these fetishised Technosocial subjectivities also allow for certain kinds of violence to be justified as they add to the anxieties around us. Moreover, one needs to see the inherent tensions in the fact that the law, on the one hand, becomes the State's arm in containing and chastising these subjectivities, and on the other, also becomes the biggest actor in creating such identities, often against the will or beyond the understanding of the human actors involved.

2. CHAPTER DIVISION

To make my arguments, I rely largely on secondary and tertiary data rather than primary ethnography. The focus of the dissertation is on formulating a conceptual argument rather than in collecting data and adding to already inflated data streams which often end up mimicking each other and show similar patterns. The primary methodology is an analysis of practices of the Technosocial Subjects to understand the socio-cultural implications of emerging popular technologies and technological forms in the lived experiences of the contemporary urban. Each chapter maps different perspectives and ideas around technology-mediated identities as they have emerged in influential literature from around the world and landmark practices which have garnered attention in India, to better understand the idea of Technosociality and the dialectics of the virtual and the physical in constructing the Technosocial Subject.

The dissertation argues that cyberspace is a new realm of cultural production, especially for young users of digital technologies, who have incorporated cyberspaces integrally, in their daily functioning. As more and more people turn towards digital cyberspaces for their needs to communicate, interact, network, innovate and create new forms of expressions, new crises emerge and resolutions have to be found. Novelty or newness has been a standard trope that

has marked both the descriptions of cyberspace and the kind of questions that emerge. However, this dissertation wants to veer clear of either the euphoria or the techno-anxiety that such an approach demands, and talks about the newness, not as something original or unique to digital cyberspaces, but as re-surfacing of older problems, which each 'new' technology has always had to face

The first chapter begins by looking at substantial literature around an identity that is central to the imagination and discourse around Internet technologies across the disciplines – Digital Natives. Young users of technology, in different contexts, who have experienced a significant transition in their everyday practices because of the presence of digital and Internet technologies, are probably the most researched and written about. A large part of Cyberculture discourse revolves around bridging the gap between what the Digital Natives do and what the people around them should know.

In looking at the substantial literature (published scholarly work, but also grey literature online and in unpublished writing), the first chapter charts out the major sites of contestation that have been produced in critical interventions around Technosocial subjects and practices. It recognises that some of the discourse around Digital Natives is specific to the particular age group that is under study, but for a large part, the discussions around it are symptomatic of much larger anxieties around the Internet which exist in other studies. I also find it relevant to focus on Digital Natives because when talking about the early days of Internet technologies in the country, the users, the adopters, the people who have been involved in cultural production and consumption, are these very users of technology

The second chapter further explores the space-place dialectic by looking at the construction of digitally premised spaces. The implication of technology in the production of physical places like Special Economic Zones (SEZs) which are mushrooming around the country is obvious. However, the chapter focuses on other spaces of consumption, of negotiation and of interaction, which are more tenuous, less permanent but inflected by digital cyberspaces in their very unfolding and structure. These are spaces which are often not recognised as having direct links with digital cybserpaces and not easily understood as the physical anchors of cyberspatial cultural production. The chapter begins by looking at the first flash-mob in India, with specific interest in the production of a flash-site, and what the notion of the flash-site does to the notion of a happy resolution of the space-place tensions. It also draws our attention to the changing nature of political engagement and social transformation that is often rendered invisible or gets discounted because of the belief in the resolved space-place conflicts. It offers a way of reading the act of cultural production within digital cyberspaces, as more than entertainment or expression, and as defining Technosocial subjectivities as involved in the larger socio-political contexts.

The third chapter addresses the emerging crisis in body and technology relationships by exploring the cyborg as a category that has gained currency in technology and Cyberculture studies. It begins by looking at the cyborgs as they have been portrayed in popular fictions and how they shape our understanding of the relationship between the selves that we create online and the much larger consolidated human subject that we imagine as controlling these various selves. It identifies a need to add to the debates on gender, sexuality and labour that Donna Haraway initiated and emphasises the need for material and embodied identities to understand a series of changes that are emerging in our everyday lives. Looking at social networking systems and other digital spaces of "being", the chapter locates a certain "ecology

of fear" that surrounds a post-human imagination which guides the popular discourses and socio-legal understanding and regulation of such bodies. The chapter posits the Technosocial subject as straddling multiple worlds and looks at the practices (often arising out of fear and anxiety) that shape Technosocial subjectivity in a rapidly digitising world.

The fourth chapter recognises that the law is a major player in the production of Technosocial identities and that not all Technosocial subjects are equally conscious, or have the agency of making informed decisions about their digital choices. The technologised enablement of economies and lifestyles leads to the production of bodies that are at the same time, fetishised and yet not immediately within the reach of the law. For example, a focus on technologised bodies as produced through genetics or experiments in biological life sciences is under the scrutiny of the law. These bodies are regulated in their being and in their material practices. A premium is placed upon the role of new digital technologies in the fields of medical science and reproductive techniques to keep a check on processes of producing clones, hybrids, cybrids etc. However, bodies inflected by technological prostheses are not the only ways in which these Technosocial identities are produced. The production of Technosocial bodies is not so well regulated and indeed, in many cases, not even understood by existing legal paradigms. The law and the judiciary system are quickly orienting themselves to thinking of the citizens' bodies as mediated by technologies and rapidly changing their conception of what practices are ideal and what need to be punished, thwarted or changed. I want to emphasise that I am not approaching the law as a trained legal scholar and do not intend to provide either interpretations of or suggest amendments to existing laws. Through the course of the dissertation, I mention the law as an actor and representing a much larger state apparatus, that seeks to sort, regulate, control and contain the newly emerging cyberspatial

practices and digital identities, thus becoming a significant influence in the shaping and understanding of a Technosocial identity.

In the fourth chapter, I complicate the idea of access, which is central to development based technology discourse and looks at three fetishised identities - the pervert in his cubicle, the terrorist wielding a cell-phone, and the pirate in the network – as Technosocial subjectivities that are, simultaneously, hyperactively imagined and recreated, and materially untraceable and hence potentially omnipresent. Rather than proposing a theory of ontological subjectivity that is newly defined and created by technologies, the chapter tries to question Access as the only trope through which technosocial subjects have been formulated. It pulls together issues raised around the production of subjectivity in the categories of law, regulation and censorship and how they address the new anxieties and crises being produced by new conditions of technologisation.

The fifth and concluding chapter looks at how the theorisation of a contextual, embodied and located Technosocial subjectivity, further highlights the need for revisiting the questions of governance and administration for emerging Technosocial States. It draws attention to the fact that the production of Technosocial subjectivity is also an external signifier of the changes that the Indian State itself is undergoing with globalisation and its technologies of administration and governance. It indicates how, in the formation of these Technosocial identities, there is a new vocabulary of governance which emerges. This vocabulary takes at least two forms. One is in the material practices around the belief that the setting up of particular infrastructure and creation of skill-sets, will produce a global work force that shall be a mobile resource available for building IT Cities. The second form is one by which the

State, which is positing itself as a transparent S.M.A.R.T. State[10]-- also recreates itself through a process of mythification. How this contributes to new forms of Stateness, Citizenship and governance needs to be further examined.

The chapter (and the dissertation) ends by suggesting that the notion of the Technosocial subject, marked as it is by unresolved crises, and fraught with tensions and anxieties, is not merely an imaginary and theoretical concept but has direct bearings on the material practices of socio-political transformation and lived realities in contemporary India. It looks at further research possibilities and the need to push certain other limits – of gender, sexuality, administration, governance, etc. – to get a more comprehensive understanding of the process of technosocialisation, which are a part of this dissertation but also extends beyond the scope of this project.

[10] Renu Buddhiraj and Sameer Sachadeva, in their paper on e-readiness, talk about the aspiration of being a S.M.A.R.T. State - Simple, Moral, Accountable, Responsive and Transparent – that ICTs promise.

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Chapter One | Technosocial Subjects

In this Chapter, I seek to map the debates around the Technosocial to see how it has emerged in Cyberculture discourse. As increasingly Cyberculture becomes a multidisciplinary space with multiple perspectives from different disciplines, it becomes difficult to produce an exhaustive survey of influential literature. Hence, in this chapter, the authors, thinkers and practitioners reviewed, have been strategically selected based on how substantially and uniquely, their interventions have informed the ideas of the Technosocial. I am presenting authors who have fundamentally shaped the landscape of the Technosocial but more importantly, have spoken directly to the concerns of a Technosocial Subject. There are also authors who might not have used the conceptual framework of technosociality but still offer relevant and significant ways of thinking about human-technology relationships and contexts. The material reviewed includes both academic scholarship and grey literature found in popular and self publications in different media. However, discourse which does not help me in building The Technosocial as a conceptual framework, or scholarship which is more application based – borrowing from existing frameworks to account for particular geo-political or socio-cultural contexts - has either been relegated to Bibliography at the end of the dissertation or mentioned in footnotes, where further reading might be of interest.

In the strategic mapping of literature and practice around technosociality, this chapter hopes to identify the knowledge gaps in existing scholarship and discourse on the production of the Technosocial Subject. After looking at the existing models extrapolated from the philosophical theories and science fiction literature popular within Cyberculture discourse, I focus on the debates in studies of youth and technology to bring them in dialogue with mainstream Cyberculture. The introduction of this literature helps in shifting the focus from technology-society which dominates Cyberculture discourse, to technology-subject which is

at the heart of youth and technology scholarship. I map the studies on youth and technology, to look at how the discourse informs and expands our understanding of the Technosocial as it emerges from the theoretical debates.

In the last section, I identify different ways in which Technosocial Subjects and their practices need to be contextualised in order to make meaning and resolve the common anxieties of authenticity, trust, verification, mobilisation and immersion in cyberspace, which remain central in the contemporary understanding of the Technosocial Subject.

In these discussions, I recognise the prevailing trend of defining a universally homogeneous Technosocial Subject as leading to an incomprehension, unintelligibility and counter-productive theorisation. In order to safeguard myself from falling in similar traps, I draw from field work done in three countries – India, China and Taiwan, to show how specificity and context are necessary to make meaning of Technosocial practices and subjectivities. However, I am not interested in making a claim for contextual exclusivity and exceptionalism. Hence, I also try and show, through the debates and discussions in these three instances, how we can extrapolate conditions of technosociality which often resonate across boundaries. The ambition is to make a strong case for a two-fold approach to technosociality, where on the one hand it becomes necessary to place it in the larger global context of the rise of the digital, and on the other, it is also imperative to re-orient it to the legacies and politics of its contexts. This helps initiate the discussion for the next chapter about the physical and technological contexts within which Technosocial Subjects need to be located and understood.

1. THE TECHNOSOCIAL

Scholars from many disciplines argue that the emergence of 'big science', the spread of consciousness about the negative effects of nuclear and industrial technologies and the concomitant rise of appropriate-technology movements, along with the appearance of a class of experts in science and technology policy and assessment led to a new questioning of the traditional view of science and technology as independent of socioeconomic and political contexts (Sanmartin and Lujan, 1992). However, new views began to be articulated within technoscientific communities and in the social sciences to 'help orient our understanding of the place of technology in human affairs' (Winner 1993, 364).

The concept of the Technosocial, has been persistently and persuasively informed by Winner's formulation of locating technology not merely as a causal link to our social reality but as centrally placed in our everyday life and practice. The 'Technosocial' has been at the heart of discourse and scholarship in Cyberculture. Scholars might not always have used the term but the fascination with exploring the 'social world of virtual realities' has informed much of the effort across the different disciplines that seek to investigate the emergence of virtual worlds and the ways in which people experience them. Arturo Escobar, in his formulation of the 'techno-bio-cultural', bringing in the elements of technology, of the human, and of the social structures within which the human-technology interactions happen, was one of the first scholars to talk about the Technosocial. Escobar, in his essay 'Welcome to Cyberia', writes, 'Some researchers... assert that nature and machines have become important actors in the historical processes that determine technological change (1996 212).' However, he disagrees with this formulation that establishes a cause-and-effect relationship between technology and our realities, and instead calls for a new approach to understanding this human-technology relationship. Even in the early years of Cyberculture, Escobar

suggested that the real challenges of studying technosociality will be in re-orienting ourselves to understand the 'constitution of a new order...through the transformation of the range of possibilities for communicating, working, and being (214).'

Escobar's own ideas around the new Technosocial order found resonances in the work of Celso Alvarez (1992), who proposed three different dimensions that would constitute the 'Technosocial' order with the rise of Computer Mediated Communication:

> (a) the relationship between machines and social subjects as producers of discourse at the threshold of the birth of an international "cyberliterate" society; (b) the question of the creation and distribution of and access to the "authorized" or "legitimate" computer-mediated communication codes and languages whose mastery and manipulation grants particular groups of practitioners symbolic authority and control over the circulation of Cyberculture; (c) the role of computer-mediated communication in establishing links between, giving cohesion to, and creating continuities in the interaction history of group members (219).

These '[t]echnosocial Situations as a way of incorporating the insights of theories of practice and social interaction into a framework that takes into account technologically mediated social orders (205)' (Ito and Okabe, 2005) have found a central location in Cyberculture discourse since the 1990s. There has been a growing recognition of the fact that more and more social orders are built through the 'hybrid relation between physically co-located and electronically mediated information systems' (Meyrowitz, 1985). The emphasis on communities and societies and the way in which these newly emerging technologies were going to transform the world, was at the crux of Technosocial discourse.

With the extraordinary rise and adoption of Internet Technologies, and the emergence of the World Wide Web, there have been many different models of the Technosocial that have been evolved and discussed across different disciplines. I look at four foundational debates that have added to the conceptualisation of the Technosocial in the history of computing and Internet.

1.1 The Virtual-Physical Dialectic

The distinction between Virtual Reality (VR) and Real Life (RL) has been central to the early years of Cyberculture discourse. The VR-RL binary suggested that the experiences in the then text based digital spaces of the Internet, were not only external to the Physical Reality within which users exist but also disjointed from any material or 'real' practices. However, in the early 1990's, as a range of scholars (discussed below) started looking at the widely spreading adoption of cyberspace and the possibility of looking at them as entwined and connected rather than disjointed and separated. The abandonment of the VR-RL binary and the acceptance of the Virtual-Physical dialectic was one of the most significant developments within Cyberculture.

Sherry Turkle (1996), in the first exhaustive ethnography of users of cyberspace, *Life on the Screen,* explored this dialectic in her interviews with users immersed in text based virtual reality platforms of the MUDs. Turkle put an end to the Real Life/Virtual Reality dichotomies in her study of users on immersive web platforms. Turkle suggests that the users find metaphorical ways of navigating through both their worlds, rather than compartmentalising them in their everyday practices. She demonstrates how the metaphors and indicators of one system are used to describe the other, thus forming rational, emotional and attributive links between the two domains. Turkle writes,

> …[E]ven the operating system on the computers they use to play games, to draw and to write carries the message [of the medium]. A computer's "windows" have become a potent metaphor for thinking about the self as a multiple and distributed system. The hypertext links have become a metaphor for a multiplicity of perspectives. On the internet, people who participate in virtual communities may be "logged on" to several of them (open as several open-screen windows) as they pursue other activities. In this way, they may come to experience their lives as a… "cycling through" screen worlds in which they may be expressing different aspects of self (1996, 34).

For Turkle, the experience of the users was not 'merely culture' or a fantasy escape into other worlds. In the text based interactions that happened on the MUDs, there wasn't a simple one-way extension of the physical into the virtual. The users' experiences online, in their dynamic interaction infused with gaming, role-playing and stories, were 'a postmodern way of knowing.' Turkle concludes that just as the users recognize that the computer screen is merely a play of surface simulations to be explored, so they come to see reality the same way. She writes,

> If there is no underlying meaning, or a meaning we shall never know, postmodern theorists argue that the privileged way of knowing can only be through an exploration of surfaces...This makes social knowledge into something that we might navigate much as we explore the Macintosh screen and its multiple layers of files and applications (1996, 112).

In the relentless surfaces of cyberspace, which have to be visited only to be deflected on to a new simulation, Turkle proposes that no surface has any more legitimacy than the other. She argues that the 'embodied' life we live on an everyday basis has no more reality than the role-playing games on the Internet. Instead, for the MUD player, reality becomes what is referred

to as ‘Real Life’ which is just another role-playing game. Turkle retains the usage of the VR-RL terminology but instead of perpetuating the binary opposition they posited, she proposed that for the users of RPGs on the Internet, RL is just another surface which is a part of the larger reality within which they exist. Continuing with her ‘Windows’ metaphor, she writes, ‘...MUD players can develop a way of thinking in which life is made up of many windows and RL is only one of them (42).’

Turkle’s work is especially important to the understanding of the Technosocial self because she does not split the self into the real (material, physical, core) and the digital (ethereal, transient, distributed). Going against the grain of her contemporary theorists who had suggested that the virtual self is ‘an alternative model of identity’, Turkle proposed the idea of a ‘Postmodern Self’ that is perceived of and conceived through the experiences in VR. In looking at the human-technology interactions, Turkle eschews the old-fashioned unitary self that maintains its oneness by repressing all that does not fit. She is more interested in the postmodern self, with which ‘We do not feel compelled to rank or judge the elements of our multiplicity. We do not feel compelled to exclude what does not fit (128).’

In effect, Turkle is describing how someone becomes an enthusiastic participant in the ‘symbolic arenas of contemporary culture’ People can then devote themselves to indulging their fantasies without guilt or discomfort, since what they do via simulation has the same status as what they do in the rest of life. Nor is any of it a form of transgression, since the judging self that might label some fantasies off limits has been conveniently eliminated. Like ‘Stewart’[11], one of her most prolific subjects, we can spend many hours reconstructing our sense of self and reality through the internet. She carries on this argument further in *The Second Self* (2005), where she looks at the computer not as a ‘tool’, but as a part of our social

[11] Turkle describes ‘Stewart’ as "logged on to one MUD or another for at least forty hours a week. It seems misleading to call what he does there playing. He spends his time constructing a life that is more expansive than the one he lives in physical reality." (2005, 18)

and psychological lives. In interviews with children and observing their interactions with technologies, she looks beyond how we use computer games and spreadsheets to explore how the computer affects our awareness of ourselves, of each other, and of our perception of the external world. She suggests that 'technology catalyzes changes not only in what we do but in how we think (14).' While her specific interest in this book is in how we perceive the machines that we intimately interact with, as on the borders of the animate and the inanimate, she also furthers the case for locating the Technosocial, not in either of the VR-RL realms, plugging into the other, but in the dialectic interaction between the two.

This model of technosociality, has found resonances in scholars (Reid, 1994; Hussinger, 2003; Balsamo, 1996; Clark, 2003) who have explored different platforms online in order to make sense of the social world of technology as well as the technologised form of the new social order. It managed to escape the either-or choices of the virtual or the real that early Cyberculture had offered and opened up new ways of thinking about a Technosocial that reflects Winner's (1993) formulation about the 'place of technology in human affairs'.

1.2 Internet and Everyday Practices

The second model of the Technosocial has some resonances with Turkle's formulations but has a strong departure from the fantasies and symbolic worlds that Turkle places her users in. Turkle's subjects, even though they have material lives and consequences, are studied only as digital presences. They remain embedded in digital networks engaged in solipsistic environments and virtual reality. As a response to the highly fantastic and intangible postmodern selves that Turkle creates, a rising scholarship started locating the Technosocial in very material practices of the self on an everyday basis.

With the massive adoption and increasing spread of the internet, along with the Web 2.0 explosion that promotes interactivity, collaboration and mobilisation, there have been many theoretical interventions that seek to look at the actions and transactions online within online social networks, discussion forums, blogs and micro blogs, news feeds, push and pull gadgets for information exchange, p2p networks etc. All these different forms of socio-cultural and information exchange spaces seem to add to the 'sum total of all Human Knowledge' (Wales, 2000). The Technosocial, grounded in this particular interest in information and knowledge production helps to rescue it from otherwise narrow focus of technology escape and usage. For Turkle, the Technosocial is mediated by technologies in a very obvious sort of a way – it was about particular users of technology who learn and know through their interactions with and within cyberspaces. Her idea of how technologies become metaphors of human experience offer a way of understanding that aesthetics, processes and mechanics of online experiences translate and inform our activities in RL even when we are not connected.

Jeff Howe, in his book on *Crowdsourcing* (2008), posits this idea of technosociality as a principle rather than a phenomenon. He charts out a history of wise decisions and predictions based not on expert reports but on common-sense knowledges of a collection of people. He suggests that the Internet is one of the most powerful tools that harnesses the knowledge of groups to gather and produce information and knowledge in unprecedented ways. Howe writes,

> The amount of knowledge and talent dispersed among the human race has always outstripped our capacity to harness it. Crowdsourcing corrects that – but in doing so, it also unleashes the forces of creative destruction. The rise of user content sites like Wikipedia and Youtube are testimonies to the power of the young to create collaborative environments for learning and sharing (2008, 4).

Howe locates the Technosocial in harnessing the potentials and embracing the modes of knowing that technologies produce rather than in the access to the internet through different interfaces. For him, the powers of technology are not in the virtual worlds that they create but in how they make us transform the world that we already occupy. Howe explores this principle in looking at a particular anecdote around Facebook.

In 2009, when Facebook, one of the largest Social Networking Systems, changed its privacy policy to give more control to third party applications and less transparency about the usage of user data within the system, more than a million users started a campaign to revoke this change and demanded better privacy control for themselves. This case has been looked upon many as an example of digital activism that has significant impact in the users' self governance and community formation.

However, Howe would suggest that such a campaign organised by a community on a virtual platform (In this case, the Facebook community that contested Facebook's privacy policies by mobilising on Facebook) is not significant because of the results it achieved (a change in Facebook's privacy policies) or that it was conducted online. Its significance is in the fact that it allowed people to discuss, negotiate, challenge, debate, question and caucus, in modes which were not otherwise available to them. He also goes on to suggest that the policy change thus affected by the campaign is not merely because of the online conversations that ensued. In fact, the larger geo-physical contexts and experiences that users brought to the discussions were effective in producing knowledge that led to the change. While Howe's book concentrates more on the rise of User Content Sites and seeks to dispel the anxieties around this phenomenon (explored further in this chapter in the section titled 'Of Authenticity and Trust'), he manages to build a model of technosociality that doesn't just straddle two worlds but also creates new sites of understanding the human-technology

relationship. It reorients Cyberculture discourse to looking at people not merely as ‘users’ but actively engaged in producing Technosocial contexts and modes of engagement within their digital ecosystems.

Howard Rheingold, in his seminal work on *Smart Mobs* (2002) pushes the argument further as he looks at how the wisdom does not only reside in the collective consensus building but also in the shared computing devices that help to process almost unthinkable data in quest for new knowledge and information. The central dissertation of *Smart Mobs* is that wireless communication technologies offer a new way for folks to combine their knowledge and energy. As Rheingold writes in the introduction,

> If the transition period we are entering in the first decade of the twenty-first century resembles the advent of PCs and the Internet, the new technology regime will turn out to be an entirely new medium, not simply a means of receiving stock quotes or email on the train or surfing the Web while walking down the street. Mobile Internet, when it really arrives, will not be just a way to do old things while moving. It will be a way to do things that couldn't be done before *(xiv).*

Rheingold argues that the young people are orchestrating new economies, values, currencies and businesses that are radically restructuring earlier post-industrial forms of employment and production, replacing them with new sources of cultural wealth and engagement that lead to the creation of new livelihoods, agencies and economies. For Rheingold, the Smart Mob, a collection of individually motivated like-minded people who use the powers of the Internet to pool their resources, knowledges, experiences and ideas are the “...new mine-fields of information and data of the kind that no individual can ever uncover (188)” on his/her own. He believes that “the right kinds of online social networks know more than the sum of their parts: connected and communicating in the right ways, populations of humans can exhibit a

kind of collective intelligence" (192). The "thumb tribes" of the future that Rheingold forecasts, are located thus, in their knowledge and their capacity to disseminate, share and mobilise that knowledge through the networks (largely digital but not necessarily so) with the use of technologies at their fingertips.

Yochai Benkler (2006) expands upon Rheingold's Smart Mobs to look at networks which are not merely contained within the digital worlds but developing as new units of governance and labour in emerging economies. He suggests that these new networks which are wired towards a free and open exchange of information, the new currency of the Internet Age, are the new wealth of a nation. For Benkler, the rise of the public spheres of the Internet are a "response to the extremely consumerist imagination of cyberspace by active corporate actors who seek to establish their regimes over information" (29) which they had not looked upon as important earlier. Boyd and Ellison (2007) add to this discussion by proposing that clusters and collaborations lead to new kinds of community and social knowledge and memory that translates into new models of business and interaction. They posit the immortality of a cluster formed online by showing how 'forking' or division across different battle lines only seeks to strengthen these clusters and lead to innovative collaborations online.

The modes of collaboration and mobilisation are enhanced by the ease of participation and uncensored self-publishing that allow the Technosocial Subjects to contextualise the use of their gadgets and platforms for their own needs. Hence, generic structures like flash-mobs, for example, become nuanced and adapt to changing contexts, thus initialising the dialectic between the digital and the physical, leveraging the strengths of one space to augment the efforts in the other.[12]

[12] In Chapter 2, I shall take up the history of flash-mobs in India and explore the synergies they create in locating the Technosocial, space and time, between the digital and the physical.

1.3 The social order of Technology

The third model that informs the discussions around the Technosocial, is the one that Julian Dibbell devoted his attention to, in talking about "How a Rape Happened in Cyberspace"[13] in an essay by that name. This is a model where we are no longer looking only at the hierarchies and structures within the digital but also the social structures which grow in the online worlds.Like Turkle, Dibbell also talks about the worlds of MUDs, but focuses on one particular community called LambdaMoo and how a crisis in the community led to the first instances of self-governance within cyberspace. I shall discuss Dibbell's account of the 'virtual rape' in Chapter 2, in the discussions of Ecology of Fear and technosociality. However, I want to extrapolate the structure of the Technosocial that Dibbell works with in his book.

I am reconstructing the case both from Dibell's own essay and the conversations recorded on the LambdaMoo portal. In 1993 in a virtual room in the community of LambdaMoo, a social interaction MUD, a character called Mr. Bungle, created a voodoo doll which allowed him to take possession and control of two characters within the MUD – exu and Moondreamer. With the use of this subprogram, he was able to attribute actions and words to these characters and submitted them to a series of sexual and violent actions, while the users who had authored the characters on the MUD, protested, initially in shock, then in rage, as others helplessly witnessed the 'rape' that happened in cyberspace that night. While these facts remain unambiguous, they are hardly simple, because, as Dibbell writes,

> ...every set of facts in virtual reality (or VR, as the locals abbreviate it) is shadowed by a second, complicating set: the "real-life" facts. And while a certain tension invariably

[13] Dibbell first published this essay in *The Village Voice*, available online at http://www.juliandibbell.com/texts/bungle_vv.html

> buzzes in the gap between the hard, prosaic RL facts and their more fluid, dreamy VR counterparts, the dissonance in the Bungle case is striking (Dibbell, 1993).

Dibbell's further interest in the case is actually to look at the production of communities online, but in the process he developed a model of the Technosocial which has been influential in informing the discourse around technosociality. Dibbell, as he examined the sheer irony and the 'dissonant buzzing gap' between the RL perception and the VR experience of this particularly traumatic incident, tries to make meaning of the relationship between the VR and RL. Dibbell's account is lyrical, but the lyricism seems to be a way for him to examine the 'genuine historical novelty in VR's slippery social and philosophical dynamics' where the technological was forgotten, and what remained was the experience of being human in different contexts and surroundings.

The particular idea of being human as shaped by technological contexts but not contained within it, is a fascinating way of looking at the Technosocial Subject. We are no longer talking about the mind-body or body-self distinctions that have emerged along with the VR-RL binaries. Instead, Dibbell, gives us a way of re-examining the human-technology relationship where technology is not merely a tool or an instrument to perform certain actions[14]. He offers to us, the virtualities, the fantasies, the magics and the surfaces of digital cyberspace and technology as the very context which defines, shapes and makes us understand what it means to be human. Dibell argues that we cannot take the being human, often separated from technologies, as taken for granted. Instead, we need to look at it as a process that is constantly being informed by the new experiences of which many are mediated by the ubiquitous technologies around us. This argument challenges the earlier perceptions of the social order of technology, which have firmly located them in questions of

[14] As is imagined in the case of a cyborg – explored further in Chapter 3 on 'Beyond Cyborgs'

development, access and regulation. Instead it recognises technologies as blurring the boundaries between the Symbolic and the Real, building structures of fantasy and enchantment, not as fictive narratives but as embodied realities and practices. As Dibbell writes towards the conclusion,

> ...the commands you type into a computer are a kind of speech that doesn't so much communicate as *make things happen*, directly and ineluctably, the same way pulling a trigger does. They are incantations, in other words, and anyone at all attuned to the Technosocial megatrends of the moment — from the growing dependence of economies on the global flow of intensely fetishized words and numbers to the burgeoning ability of bioengineers to speak the spells written in the four-letter text of DNA — knows that the logic of the incantation is rapidly permeating the fabric of our lives.

Dibbell's Technosocial is thus in the conflation of speech and act, the buzzing space between the VR and RL, the blurring of boundaries between the Symbolic and the Real, and in the gaps between logic and fantasy. However, this notion of technosociality runs the risk of remaining so cleverly in the grey liminal zones of meaning making and intelligibility that it can never really be located in the specific contexts of law, regulation, infrastructure and development which are an essential part of the Technosocial. He recognises the emergence of a new paradigm of operation and survival but does not look at the physical manifestations and transformations; Dibbell's Technosocial, despite its attempts at escaping the binaries, privileges the Social Order of Technology over the Technologies of Social order.

1.4 Technologies of social order

The last model of the Technosocial, derives more from practices of people using internet and digital technologies than it does from scholarship. Material practices of users who not only spend a lot of time on the internet but also contribute significantly to how it is imagined and perceived, because of the ways in which they use the tools and platforms available to them, also add to the understanding of technosociality. In order to plot this model of the Technosocial, I want to look at a particular story about blogging and read it symptomatically of much larger cyberspace and internet usage trends and how they add to the notion of the Technosocial.

On December 30th, 2004, Merriam-Webster announced their annual word of the year as 'blog' while ABC News announced their 'people of the year' awards, and named 'Bloggers' as the people who have made the most significant impact in the world that year (Travers, 2006). This naming of the anonymous collective of Bloggers as the 'people of the year', followed in the wake of bloggers using the platform of public information dissemination and collaboration to aid the victims who suffered loss of life, family and property, in the Tsunami waves that struck several parts of South and North-East Asia, at the end of the year. Bloggers from and around the region, became the most reliable source of information, ensuring timely help and rehabilitation to various areas and people who were struck by the natural disaster. It was the extraordinary ability of blogging as a platform to coordinate, collaborate and orchestrate the dissemination of information and the collection of resources, that led to 'Bloggers' being declared as the people of the year for the year 2004. The acknowledgement was both a signal that we are witnessing the rise of a generation that is engaging with a new process of socio-political participation and mobilisation, and that the paranoia and anxieties that have surrounded blogging now need to come to a rest.

Neither blogging, nor bloggers, have had a comfortable history, in emerging ICT contexts. Blogging, as a self publishing and authoring space has received high attention and interest from mainstream media as well as academic scholarship and practice (Miller and Shepherd 2004[15], Graham 2002, Weinberger 2002). The battle-lines are clearly drawn and the camps are neatly divided when it comes to discussing blogs. The camp of detractors indignantly lament the loss of authorial processes for establishing rigour[16], for the amount of unverified material that gets published without being linked to stable structures of identifying the author[17], and the uncensored nature of information that gets published on the blogosphere[18]. The camp that endorses blogging, celebrates the free nature of information[19], the availability and representation of alternative voices and non-mainstream minorities[20], and the abilities to produce knowledge[21] and create networks via blogging. However, both these camps remain united in their focus on producing a Technosocial structure that is defined through usage and intention. In all the other 3 models discussed earlier, the use that the users put the cyberspaces to and their intentions were not a part of the Technosocial. With the interactive nature of Web 2.0 technologies and the new platforms of mobilisation and networking, seem to locate the

[15] Available at http://blog.lib.umn.edu/blogosphere/blogging_as_social_action_a_genre_analysis_of_the_weblog.html

[16] Ryan Healey (2009) on his blog available at http://www.ryanhealy.com/does-frequent-blogging-encourage-bad-writing/ discusses how blogs have paved the way to bad writing

[17] Steven Krause (2008) in his essay titled "When Blogging Goes Bad" available at http://english.ttu.edu/kairos/9.1/praxis/krause/ explores the role of blogging and verification of information in schools and universities

[18] Tools like the TOR Project available at http://www.torproject.org/ have developed as a response to the strong calls for censorship and banning on blogging across many countries with closed information policies around the world.

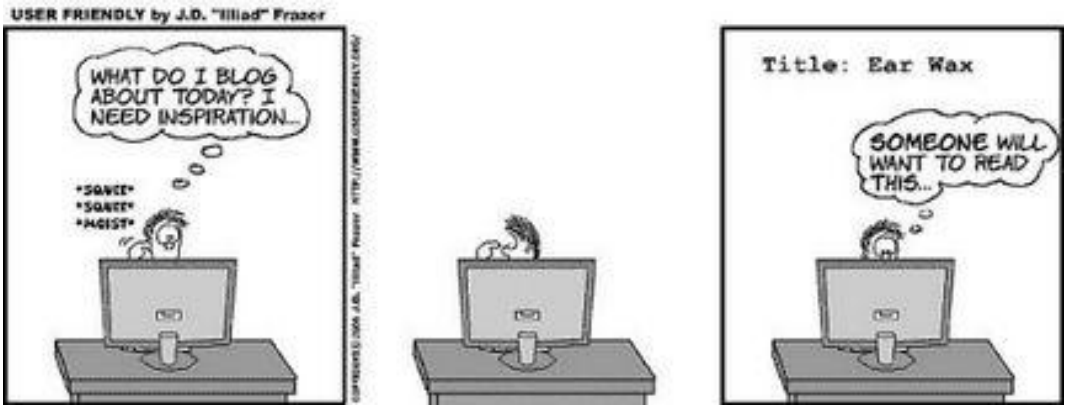
[19] Michelle Rodino (1997), in her study of gender and technology communications argues that "being 'virtual' allows more freedom and flexibility".

[20] Sophie Foster (2007) makes a case for how the freedom of information becomes a strong political tool in the hands of the masses, in her essay 'Who Let the Blogs Out?: Media and Free Speech in Post-coup Fiji'. Daniel Drezner and Henry Ferell, in their essay "The Power and Politics of Blog" argue "blogs can socially construct an agenda or interpretive frame that acts as a focal point for mainstream media, shaping and constraining the larger political debate."

[21] Blog pundit John Hiler has described the blog as 'the latest disruptive technology', the 'killer app' that has the capacity to engage people in collaborative activity, knowledge sharing, reflection and debate, where complex and expensive technology has failed (Hiler, 2003).

Technosocial, not merely in the use of technology but a certain transformative element which is associated with it.

This recognition is very different from the earlier ideas of blogging as an extension of the personal diary or as severely indulgent in nature. The 'Ear Wax Syndrome', made popular by J.D. in his cartoon strip[22] (below) has been replaced by blogging as producing a transformative technosociality, one that is shaped by the user's intentions to make a change in the immediate environment. The Technosocial also seems to be now not restricted to the content of users' practices online but resides in the potentials and possibilities of their interactions and engagement with these technologies.



The case of the Tsunami bloggers, shifted attention from the content that was being produced to the sheer ability of a network to emerge and operate without centralisation of efforts or mobilisation of State sponsored resources. However, in many ways, the Miriam Webster's acknowledgement of Bloggers as People of the year is extremely telling of these kinds of expectations articulated in popular discourse and media reportage. The acknowledgement while it was indeed well deserved, presumes then that the only use of blogging should be for crises management or citizen journalism. It delegitimizes the millions of other blogs which are personal, which are not transformative and often not even bordering on the 'creative' or

[22] Available on his comic strip website http://www.userfriendly.org/

the ‘cultural’. It needs the crutches of blogs being used for a conventional understanding of the transformative or the political in order to produce a defence or celebrate the blogosphere which more often than not, is dedicated to personal observations, comments, ideas and documentation of practices for a limited set of people. Not all blogs mobilise large communities for efficient distribution of resources. Not all blogs provide alternative voices and non-mainstream stories. Not all blogs perform brilliant cultural subversions to make political commentary.

In some ways, the bloggers are being done a disservice, when they are acknowledged as ‘People of the Year’ because it seems to suggest that unless they are doing something productive that the authorities and the mainstream press approve of or demand, they are wasting the resources and potentials that blogging contains in itself. It fails to recognise that the bloggers need to be acknowledged not for the once in a while transformative intervention but for creating conditions and sustaining them through their ‘frivolous’ activities, so that different kinds of transformative potentials exist. It is in this transformative potential that the Technosocial as informed by everyday practices of the Internet, seem to reside.

While the models differ from each other in how they locate technosociality and establish the relationship between the virtual and the physical, there is a common set of presumptions which all of them are premised upon. These presumptions, taken for granted, often create blindsides or knowledge gaps when it comes to talking of the Technosocial. There is a certain privileging of the social dynamics of cyberspace over the technologisation of existing social orders (as in the case of Turkle and Dibbell). At other times, the material practices inflected by technology are neglected and emphasis is given to the human-technology coupling (as in Escobar’s work). Moreover, the notion of human-technology coupling is rather narrow and limited to either a prosthetic implantation or a use case scenario. Because of the origins of

Cyberculture in literary and communication studies, there has been an emphasis on the content that is produced in these spaces, which leads to thick descriptions of new spaces and practices which disappear at an alarmingly accelerated rate within cyberspaces. All the models are heavily focused on the human-technology relationship as rooted in agency, and presume that the Technosocial Subject is one who always has choice, conscious decision making abilities and the agency to craft such subjectivity.

Hence, the focus has been on power users of technology, when looking at Technosocial Subjects. Even within the extremely insightful instances provided by theorists like Turkle, Dibbell and Escobar, there is a presumption of a college educated, affluent user of technology, whose interaction with technology is a part of everyday recreation and leisure activities. These are subjects who have chosen to engage with technologies through a mode of consumption, consciously and have the privilege and the opportunity to make these choices. However, the literature is very sparse when it comes to talking about people who produce these technologies, whose livelihoods depend upon these and often their lives are significantly restructured because of the presence of these technologies. The large invisible labour force that supports the ICT zones of economic production, the migrant workers who support the reconstruction of IT cities, the small service providers and internet access providers who form the Cyber-publics in emerging information societies never form a part of this discussion. Similarly, people who stumble upon the internet or have digital skills forced upon them due to change in their socio-cultural and economic environments are never at the centre of this discourse. Questions of phobia, reluctance and adoption are also ignored.

In the process, the larger socio-cultural structures within which the subject operates is excluded from the conversations. The technosociality debates posit the Subject as rooted in technologies and universally homogenous in all contexts.

This discourse on the Technosocial is important in understanding the philosophical debates around the adoption, internalisation and deployment of technologies in our contemporary world. However, most of them imagine the Technosocial Subject as more virtual than physical, and often betray a bias towards the earlier binaries of human-machine, biology-technology, science-culture, etc. which have been a part of early Cyberculture imagination and scholarship. Running throughout all these debates is a common focus on the technologies under consideration rather than the crafting of subjectivity. While the structures do look at the users' experiences and interactions with technology, their focus is primarily on understanding the place of technology in our social reality rather than looking at the Technosocial subject; The user of technology, actually remains unquestioned, uncontested and unchallenged in all the discourse mapped so far.

In order to add to these debates I open up the dialogues within Cyberculture to an area that has remained outside of it – Youth and Technology Studies. Despite the similarity of interest and commonality of concerns, Cyberculture has never engaged with Youth and Technology debates. Youth and Technology studies still remain on the peripheries of Cyberculture and do not always get integrated in the canon of the field. Even though, the primary subjects of debate within Cyberculture are the young who are the power users of technology and play a significant role in the shaping of these new digital technologies and platforms. I am positing the youth and technology discourse as offering inroads into pushing the boundaries of Technosocial imagination. This focus on the practices and the everyday nature of things allows for the production of an embedded, material and tangible technosociality that is missing from the literature already discussed.

2. TECHNOSOCIAL SUBJECTS AS DIGITAL NATIVES

The World Bank report on *Youth and Employment in Africa* (2010) reports that by 2010the global youth population between the ages of 15 – 24 is expected to reach 1.2 billion, with more than 85% of them residing in emerging and developing information societies where the spread of digital technologies is rapid and imminent. A growing number of these young people are in intimate interaction with digital and internet technologies. They are already flooding universities, work forces and governments and their close connections with new technologies are subtly but significantly changing the ways in which our contemporary world is shaped.

These young users of technology, who consume, produce, influence and determine the new technologised spaces are often referred to, in academic scholarship and youth and technology practice, in short hand, as Digital Natives. Coined by Mark Prensky (2001), Digital Natives is a term that suggests that 'anybody born after 1980s' is growing up with digital technologies, rather than transitioning to them from analogue paradigms. As Prensky writes,

> Today's students have not just changed *incrementally* from those of the past, nor simply changed their slang, clothes, body adornments, or styles, as has happened between generations previously. A really big *discontinuity* has taken place... It is now clear that as a result of this ubiquitous environment and the sheer volume of their interaction with it, today's students *think and process information fundamentally differently* from their predecessors. (Prensky 2001, 1)

Prensky's own interest is in trying to make a claim for a student 'fluent in the language of the digital' (4) as radically different and the need to change our patterns of education and teaching to fit their changing universe. He writes for 'Digital Immigrants' who have an

analogue ‘accent’ and hence are in a state of permanent transition into the digital world, not very comfortable with the new conditions of technology (2). Prensky pushes for a dramatic change in infrastructure, methodology and content of teaching and learning within formal institutions so that the teachers can actually teach this allegedly new generation. His writing and recommendations are based more upon personal instinct (or observations) rather than research, but his coinage has gained currency in the recent years.

John Palfrey and Urs Gasser, in their book *Born Digital* (2008), produce a much more nuanced understanding of a digital native identity. They note the ways in which the Digital Natives interact with the world around them and the way in which they negotiate their own sense of self. It is a term used to make us aware of the fact that these people are everywhere: They are on the roads, taking photos on their mobile phones and uploading them to blogs and photo-streams and in public transport, using personal music players and text messaging to create a private virtual island. We find them in schools and universities, multitasking, preparing a classroom presentation while chatting with friends and keeping track of their online gaming avatars. They are in offices, glued with equal passion to dating or social networking sites and the geek mailing lists that they moderate. Digital Natives inhabit homes and sharing the most private and intimate details of their lives (or having their lives created by other peoples’ referencing and linking to them), using live cam feeds and audio and video podcasts. Digital Natives is a phrase that is rapidly becoming ubiquitous among scholars and practitioners working with youth-technology. They remind us that even by Prensky’s cursory marking of people born after the 1980s as Digital Natives, the oldest Digital Native turned 30 in 2010 and ‘the youngest is yet to be born[23]‘ (Turkle 1998, 192). It is possible to use the

[23] Sherry Turkle, in her essay on “Cydoughplasm and Cybertots” explores the phenomenon of Digital Natives as genetically and biologically born with technologies. She explores the intersections of medical and reproductive technologies with digital technologies to see how we are already in the process of building ‘designer babies’ who, in their very conception (sometimes through genetic coding, sometimes through advanced reproductive technologies) are Born Digital.

phrase Digital Natives ‘as a metaphor, as a hermeneutic tool’ to look at the ‘promises and limitation, opportunities and challenges, potential benefits and possible downsides of the evolving global network’ (Palfrey and Gasser 2008, 290) and the subjects that inhabit these networks.

The discourse around Digital Natives takes on the expected tones of euphoria and paranoia that have historically accompanied the rise of new technologies. Some unabashedly celebrate this new digital identity and the possibilities and potentials it offers; others express concern and alarm about the lack of structures that can impart meaning or shape these identities in ways that can contribute to democracy, equality, community-building and freedom I shall map the literature around Digital Natives through these anxieties and expectations in order to see how they further our understanding of the Technosocial Subject.

Palfrey and Gasser acknowledge that the Digital Settlers – people who grew up in an analogue age and shifted to the use and production of sophisticated technologies – have played a significant role in shaping the contours of the digital world, but emphasise that it is the Digital Natives who are at the heart of new technology usage discourse. In the “Introduction” to the book, they write,

> Digital Natives live much of their lives online, without distinguishing between the online and the offline. Instead of thinking of their digital identity and their real-space identity as separate things, they just have an identity’ (Palfrey and Gasser 2008, 3).

This focus on the identity and experience, subjectivity and social interaction is directly related to and adds to the ideas around the Technosocial that have been discussing. Gasser and Palfrey are not interested in the changes that technologies bring in merely looking at the new hierarchies and modes of connections in the social lives of Digital Natives. Instead, they

focus on the ways in which the presence of digital technologies is 'transforming human relationship in a fundamental way'. The 'hybrid lives' that these Digital Natives live also significantly shape their understanding of who they are as they live 'a life connected to one another, and to the world of bits' (4). This focus on technology-human interactions (as opposed to the interest in interactions using technologies, which is at the centre of the Cyberculture discourse) is a new dimension that this book but also a larger discourse on Digital Natives brings to our discussion of the Technosocial. This formulation is further nuanced because it recognises that the Digital Natives' Technosocial identities are not completely under their own control.

> In the process of spending so much time in this digitally connected environment, Digital Natives are leaving more traces of themselves in public places online. At their best, they show off who they aspire to be and put their most creative selves before the world. At their worst, they put information online that may put them in danger, or that could humiliate them in years to come (2008, 7).

While *Born Digital* remains one of the most balanced accounts of Digital Natives and their Technosocial practices, it creates a certain duality of processes within which the Digital Natives are defined and understood. Gasser and Palfrey call these 'two paths' where on the one hand are the 'cultures of fear' (9) that Technosocial Subjects are understood within by those who do not occupy the 'global culture in-making'. As they very succinctly argue,

> Fear, in many cases, is leading to overreaction, which in turn could give rise to greater problems as young people take detours around the roadblocks we think we are erecting. Instead of emphasizing education and giving young people the tools and skills they need to keep themselves safe, our lawmakers talk about banning certain websites or keeping kids under eighteen out of social networks. Instead of trying to

> figure out what's going on with kids and digital media, the entertainment industry has gone to war against them, suing its young customers by the tens of thousands. Instead of preparing kids to manage a complex and exploding information environment, governments around the world are passing laws against certain kinds of publications, making the banning of books look like a quaint, harmless activity. At the same time, we do next to nothing in terms of taking the kinds of steps that need to be taken if we are to address the real concerns facing kids. (Palfrey and Gasser 2008, 9)

On the other hand, there is an overwhelming expectation of creativity and innovation, where the 'Digital Natives are increasingly engaged in creating information, knowledge, and entertainment in online environments' even though their creations are often 'limited to the thoroughly unspectacular' (112). The double binds of expectations of constant creativity and innovation and anxieties which form the 'cultures of fear' offer a way of understanding the Digital Natives' Technosocial Identities.

2.1 Technosocial Practices: Cultures of Fear

Every technological innovation, but particularly innovation affecting cultural consumption, social networking and knowledge production, brings with it a new set of anxieties and concerns. Historically, the emergence of technologies which have significantly affected human relationships and skills have always faced public paranoia and suspicion in their initial years. It has been through expert speak, popular media and strategic reportage that the public fear has been overcome. As Carolyn Marvin, in her book *When Old Technologies were New* (1990), looking at a material history of electric communication in the 19th Century, writes, '[n]ew electric media were sources of endless fascination and fear, and provided constant fodder for social experimentation' (4). Marvin further traces, how, on the one hand, it was necessary for the experts to 'sought to instil ... reasonable fears ... in laymen to keep them

physically and intellectually at arm's length from electricity' (45) while they also had to diffuse the fear of electricity from the minds of the general public by writing about its goodness and potentials in popular media. She writes,

> [e]xperts lamented that popular science writing did not take seriously its responsibility to enlighten its readership... Experts who complained that popular lightheartedness toward electrical science was either ill-concealed arrogance or exaggerated expectation were confronted with a predicament, since it was essential for experts to court the public in order to achieve a status based in public perceptions of merit and to secure popular acquiescence to expert judgement in matters of electrical interest (Marvin 1990, 44).

Echoing Marvin's research about the times when old technologies were new, is Lynn Truss, who, in her entertaining book on the history of manners, talks about how, in the early years of telephone, there were guidelines issued which said, 'When you speak to the person on the other end, keep the receiver at a distance of two inches from your ear, lest the other person, if he suffers from germs, transfer them to you' (cited in Truss, 2007, 49). She subsequently goes to illustrate how, the anxieties about the physical and moral well being in the public and academic discourse of that time, around the object of telephone, were symptomatic anxiety about coping with conversation which was not face to face, and sometimes indeed, with strangers.

While Truss' own writing is about how, with the emergence of new technologies of communication, older forms of social behaviour get changed, often read as being rude, what it offers through its anecdotes is a growing sense of anxiety around mobile computing and communication devices. Truss is interesting for this argument because she betrays the cultures of fears and expectations that older generations often have for Digital Natives. There

are two sets of debates that speak directly to the production of the Technosocial Subject which are laid out here: The first is the debate around production of knowledge and the legitimacy and authenticity of knowledge practices within collaborative online environments. The second is the heated argument about the global disconnect of Technosocial Subjects from their contexts and the consequent quest for self gratification and entertainment. And these are both instances of how the fear-expectation double bind permeates the literature around Technosocial Subjects.

2.2 Of Authenticity and Trust

One of the most recurring anxieties in different formulations of the Technosocial in Digital Natives' practices is one about the new subjects who form themselves on the interfaces of their digital devices, slipping under the radar of traditional forms of knowledge production and consumption. The interface that Turkle celebrated as leading to new ways of expressions and understanding self, has come under a severe critique as producing subjects who are shallow, fractured and scattered, much like the technologies they embrace. Mark Bauerlein, in his book *The Dumbest Generation* (2008), looks at the recreational, leisure, learning and consumption patterns of the Generation Y in USA to proclaim that the dumbest generation in the history of mankind is the one that is growing up on the interface. He begins his lament by questioning the very forms and ways of accessing knowledge and information that the digital technologies have ushered in. Bauerlein writes, 'to replace the book with the screen is to remove a 2,500-year-old cornerstone of civilization and insert an altogether dissimilar building block (23).' He looks at the screen as responsible for a decline in reading habits, for a disinterest in history, for producing self contained bubbles of infotainment which leave the Technosocial users disconnected from their immediate environments and contexts. Producing

statistics and numbers to suggest that the Digital Natives are essentially ignorant and uncaring, Bauerlein observes that

> [their] ignorance is hard to believe... It isn't enough to say that these young people are uninterested in world realities. They are actively cut off from them...They are encased in more immediate realities that shout out conditions beyond – friends, work, clothes, cars, pop music, sitcoms, Facebook.(55)

Bauerlein's lament, however betrays his own preference for 'high culture' and his inability to realise the potentials and the creative cultures that are a part of the pedagogy and learning processes online. He reduces all online communication to an exercise in self gratification, where 'in an average young person's online experience, the senses may be stimulated and the ego touched, but vocabulary doesn't expand, memory doesn't improve, analytic talents don't develop, and erudition doesn't ensue (109).' He looks at different technologies of documentation, archiving and knowledge production as producing relevant Technosocial Subjects of their times, who used these technologies to further the cause of human civilization. Bauerlein is of the opinion that every technology of mass production and dissemination has created new Technosocial Subjects who have emerged as sharp thinkers, responsible citizens and careful consumers in their interactions with those technologies. Furthering this romantic vision (comparing the reading habits of teenagers in American schools with those of John Stuart Mill and Walt Whitman when they were young readers), he concludes, 'for most young users, it is clear, the Web hasn't made them better writers and readers, sharper interpreters and more discerning critics, more knowledgeable citizens and tasteful consumers (110).'

While Bauerlein's work is more to be seen as a lament from a generation that is not yet ready to accommodate the rapid changes that the digital era has brought in, he is not the only one to denounce the activities of the Digital Natives. There is an outcry and a growing amount of anxiety of literature that understands Digital Natives as being in a state of constant distraction, powered by multitasking and gadgets that demand their attention. Teachers, parents, policy makers and practitioners produce narratives of the 'Generation Wii' as lazy, interested only in entertainment oriented consumption and de-skilled at core competence that is required to run the world. Psychiatrist Edward Hallowell (2009) has suggested that an increasing number of young users of technology, because of their scattered engagement with multi-tasking gadgets, exhibit symptoms similar to patients suffering from Attention Deficit Disorder. Within the academia, teachers have long voiced the anxiety about 'Copy-Paste Cultures' where students refuse to read, write or even think on their own (Bennett et al, 2008). The 'Wikipedia Culture' of ready information access and lack of traditional research practice and dialogue seems to put these Technosocial Subjects in conditions of what Bauerlein calls 'indiscriminate ignorance' (115).

Almost in response to Bauerlein's scathing critique of the digital natives, Dan Tapscott (2008) identifies the 'Net Generation' as changing the world and producing exuberant transformations in the process. Tapscott describes eight characteristics ('norms')[24] of the Net Generation in the book to argue that the despair and the lament that marks the Bauerlein line of thinking are misplaced. He writes, that 'as the first global generation ever, the Net Geners are smarter, quicker and more tolerant of diversity than their predecessors (6).' Tapscott forwards a line of thinking that different technologies have produced life styles, learning patterns and subjects which go through a transition every few generations and that we are

[24]Tapscott identifies the following norms as the distinguishing factors of his Net Genners: they want freedom; they love to personalize; they scrutinize; demand corporate integrity and openness as customers and employees; they want entertainment and play in work life and everything they do; they are collaboration and relationship-oriented; they need speed; they innovate.

witnessing this transition with the Net Generation for whom 'using the new technology is as natural as breathing (18).' In order to build his case, he brings in scholarship from neuro-science and cognitive psychology to proclaim, 'Evidence is mounting that Net Geners process information and behave differently because they have indeed developed brains that are functionally different from those of their parents (29).' From there on, Tapscott paints a rosy picture where all that is good and wonderful is attributed to this new generation that live their life their own way, which is not subject to the expectations or the protocols established by their predecessors. He argues that these 'Screenagers' are far from being dumb consumers. Tapscott observes that they 'want to learn, but they want to learn only when they have to learn, and they want to learn in a style that is best for them (130).'

The debates between Bauerlein and Tapscott have led to the formation of warring camps that are clearly drawn and very vocal, but have a few common threads that bind them together. To begin with, for both the camps, the Technosocial Subject (Digital Native, Generation Y, Net Generation et al) is essentially a subject that is deeply implicated in the production and consumption of information and knowledge. Thus Bauerlein will treat them as 'plagiarists' who remain ignorant whereas Tapscott will glorify them as 'remixers' who produce new cultural objects. On both sides of the debate, the common anxiety of trust and authenticity runs as an undercurrent in the dialogue. For Bauerlein and his supporters, online sources and processes of knowledge production are inherently flawed and cannot compare with the long standing traditions of the publishing industry. Bauerlein's call for concern at the loss of 'cornerstones of ancient civilization' is also a concern about veracity of information and the legitimacy of the people authoring that information. Similarly, while Tapscott, who devoted an entire book to the 'Wiki Way' of producing knowledge through collaborations, also explores the question of authenticity online. Immersed in the celebratory approaches of Wiki-

like digital spaces, Tapscott is unable to find a resolution and instead celebrates the loss of indicators that belonged to an' older generation of trust design (178).'

These concerns get compounded by the fact that the Technosocial Subjects live in conditions of an 'information overload' (Gasser, 2008, 12). The Web 2.0 explosion which uses the availability of easy-to-use, inexpensive and personally owned digital modes of production and participation to provide immersive and interactive environments to users has resulted in an unprecedented increase in the amount of information that is documented and disseminated in digital worlds. A report conducted by the research firm at International Data Corporation (IDC)[25] concludes that in 2007, alone, 161 billion gigabytes of data was created, shared and distributed online; websites, personal home pages, social networking systems, file sharing networks, peer to peer groups, blogs, news portals, podcasts, online financial transactions, news sites, etc. contributed to data, which, if it were in books, would have led to a creation of 12 stacks of books reaching from the Earth to the Sun. The report, to put the information into perspective, records that this data

> is six tons of books for every living person on the planet. It is 3 million times the amount of information in all the books ever written in all the languages in time. It would require 2 billion of the highest-capacity iPods to store all of that information. In 2003, researchers estimated the world's information production to be around 5 billion gigabytes. Current reports predict that the world will generate 988 billion gigabytes of information in 2010 (2007)

Every year, the mount of digital information grows even more rapidly than in the year before.

[25] The report is available for a free download at http://www.emc.com/collateral/analyst-reports/expanding-digital-idc-white-paper.pdf

These gigabytes are a product of the billions of webpages and sites run by millions of companies, nongovernmental organisations, governments, universities, groups and ordinary people. Google, for instance, had indexed more than 6 billion items on the Web by 2006, including over 2.5 billion Web pages, 1.3 billion images, and over 1 Billion Usenet messages[26]. Blog search engine Technorati[27] is currently tracking 105.6 million blogs – roughly 120,000 new ones are created worldwide each day – and more than 2.50 million pieces of tagged social media on platforms such as Flickr and Youtube. The amount of information available on the World Wide Web is staggering, and potentially debilitating. It is almost impossible to sift through all the information, and even more difficult to actually determine what constitutes knowledge, who are the legitimate producers of knowledge, and how indeed, do we determine the quality, the accuracy or authenticity of such an information explosion. As we move from an information revolution to an information overload, there are certain anxieties of authenticity and trust that repeatedly resurface.

The questions of who gets to produce knowledge, who has access to it, what are the technological and social politics of visibility of such knowledge, and at the end of the day, what are the filters through which we approach knowledge online, are raging in contemporary discourse about the Technosocial Subject. Perhaps, one of the most influential and telling examples is that of Wikipedia. The massive growth of Wikipedia as a collaborative encyclopaedia, which can be edited by anyone, has been at the centre of many discussions. These range from teachers who feel that it has become far easier for their students to do assignments via the helpful tool of copy and paste, to scholars and academics who are worried about the accuracy and reliability of the information available on Wikipedia, to users who have doubts about the authority of knowledge in a collaborative encyclopaedia, to

[26] Data available at http://www.seas.upenn.edu/~zives/cis555/slides/I-Crawlers-Sync.ppt
[27] Data available at http://www.Technorati.com

people who have complained of a lack of control over their own representations and identity laundering.

Lawrence Liang (2010), in his essay exploring questions of authenticity, authority and knowledge on Wikipedia, points out that the world of cyberspace can be roughly divided into two camps: "those who swear by Wikipedia and those who swear at it (2010, 51)." The camps have arisen, mainly because of differences of opinion on the trustworthiness of Wikipedia. The critics of Wikipedia argue that the task of creating an encyclopaedia should be left to experts, and that Wikipedia is nothing more than a collection of articles written by amateurs, which at its best can be informative, and at its worst, dangerous. The most commonly invoked comparison is the comparison between the sacred cow of knowledge, the Encyclopaedia Britannica and the Wikipedia. Critics argue that while the encyclopaedia Britannica is a source that has developed over centuries, with various experts contributing to it, the Wikipedia is a new kid on the knowledge block, which should be immediately punished.

The critics of Wikipedia often invoke the now popular case of the hoax biography of the well-known U.S. writer and journalist John Seigenthaler, Sr. On May 26, 2005, someone added the following text to Seigenthaler's biography on the Wikipedia:

> John Seigenthaler Sr. was the assistant to Attorney General Robert Kennedy in the early 1960s. For a short time, he was thought to have been directly involved in the Kennedy assassinations of both John, and his brother Bobby Nothing was ever proven.

> John Seigenthaler moved to the Soviet Union in 1972, and returned to the United States in 1984. He started one of the country's largest public relations firm shortly thereafter.
>
> (as quoted in Gasser and Palfrey, 2007, 155)

For four months, these paragraphs remained on the Wikipedia until one of his friends discovered the entry. Seigenthaler was outraged to read that someone had accused him of possibly being involved in the Kennedy assassinations and decided to fight back, using the mainstream media that he understood so well, as a means of repairing his damaged reputation. In doing so, he started an avalanche. While the false accusations were quickly removed from Wikipedia, following his complaint, a long public controversy ensued. The author of that false information was located and he later apologised for posting the information as 'a sort of a joke'. However, the controversy continued, and it was not about Seigenthaler but about the accuracy of Wikipedia. The online encyclopaedia could inform or misinform; it allowed anybody who wanted to, to tell the stories of their choice, even if they were falsehoods. After this incident, Wikipedia has undertaken many steps to prevent a recurrence of such nature, including barring unregistered users from creating new pages and introducing the Neutral Point of View (NPOV) as the only accepted tone of the entries.

The strident criticism of Wikipedia and other such user generated content sites, was quickly snipped when the well respected scientific journal *Nature* conducted an experiment in 2005 to answer the questions of which of the two modes – adopted differently by the Wikipedia that relies on the wisdom of crowds and the Encyclopaedia Britannica that puts its trust in a small body of renowned experts – produces more accurate results. The researchers assembled a team of people considered as experts in their own areas and had them examine entries on

science-related topics in both Wikipedia and the online version of the Encyclopedia Britannica.

Nature's team found inaccuracies in both encyclopaedias. Although the *Encyclopaedia Britannica*'s entries tended to have fewer errors than those of Wikipedia, the difference was not as significant as many had expected. In fact, the experiment suggested that the E*ncyclopaedia Britannica* had almost as many errors as Wikipedia. Of 42 entries checked, the investigators deemed that the average entry in Wikipedia contained about 4 errors, whereas the average *Encyclopaedia Britannica* article had about 3[28]. The team also found that there were only 8 'serious errors' among the 42 articles, 4 within each encyclopaedia. As for factual misrepresentations, 'omissions', or 'misleading statements', the examiners determined that the Wikipedia entries contained 162 such errors, whereas the *Encyclopaedia Britannica* articles contained 123 (Giles, 2005).

While this particular experiment might have increased the faith of users in an online peer reviewed and produced content generation site like Wikipedia or indeed, increased the anxiety of the zealous defenders of the monopoly of the *Encyclopaedia Britannica* over knowledge production[29], there is one thing that remains constant and unresolved – the idea that there is a sacred Authentic which remains fixed and can be objectively verified. Throughout these discussions and debates, there is a set of inherent assumptions about the

[28] Available at http://www.nature.com/nature/journal/v438/n7070/full/438900a.html Jim Giles, 'Special Report: Internet Encyclopaedias Go Head to Head', *Nature*, 438, n. 7070 (December 15, 2005), 900-901.

[29] Britannica contested the findings of the experiment conducted by *Nature*,and suggested that the experiment was poorly carried out and highly inaccurate in its findings. In an essay titled 'Fatally Flawed', they claimed that 'Almost everything about the journal's investigation, from the criteria for identifying inaccuracies to the discrepancy between the article text and its headline, was wrong and misleading... Dozens of inaccuracies attributed to the *Britannica* were not inaccuracies at all, and a number of the articles *Nature* examined were not even in the *Encyclopædia Britannica*.' This article, available at http://corporate.britannica.com/britannica_nature_response.pdf was further responded to by *Nature* and published online at http://www.nature.com/nature/britannica/eb_advert_response_final.pdf . The discussions and the arguments about which one is more accurate as a model of knowledge production, continue. However, as the arguments in this chapter suggest, the notion of what is authentic and who we trust online remains uncontested in any of these debates.

stability of the book as an object of knowledge, the authority of knowledge production as a neutral and a-historical condition, and the author as singular, identifiable body, outside of the industries of knowledge production. However, a brief look at the history of reading and the emergence of the book as we understand it today – the bearer of unconditional and absolute knowledge – tells us that the concerns around Wikipedia, are more to do with the role of the author, the text of cyberspace and the participative processes of the readers in a Web 2.0 revolution. It would hence be useful to locate authenticity and verification, not 'as inherent qualities but as transitive ones (64)' (Liang, 2010), and additionally located in specific technological changes.

When we postulate the question of authenticity in absolute terms, we tend to flatten out many distinguishing factors that are inherent to the debate; and one of them is the temporal framework. A positing of the *Encyclopaedia Britannica* and the Wikipedia as mutual contenders for the monopoly of knowledge production, for example, makes us forget that the domain of collaborative online production of knowledge is a relatively young field. It may be more useful to think of the contemporary as an extremely fluid and ambiguous period, undoubtedly marked by immense possibilities, but we have not reached any settled phase yet. So if we are to make comparisons, then it is more useful to compare the contemporary period with another moment in history, which was marked by an equal fluidity.

The question of the text and the role of the authors (disguised, I would posit, as concerns of authenticity and knowledge production), had emerged in a much earlier history of print. It is my contention, that a brief examination of the conditions under which authenticity came to be established, and text became identified as bound within a book, may help us locate the anxieties that Cyberculture theory is concerned about, as symptomatic of emergence of

technology mediated identity which goes un-addressed because it does not get articulated in the heated debates that surround objects like Wikipedia.

In the introduction to his essay, Liang writes,

> There is a certain self assuredness in the claim that the book makes upon the domain of knowledge. Most of us for instance know what a book is and can recognize its attributes when we see one, and we generally see it as an object of knowledge. We may disagree with specific books, and whether they satisfy the criteria of qualifying as knowledge but as an artifact, there is no disagreement on the idea of the book as a stable object of knowledge per se (2010, 66)

Liang further points out how this was not always the case and certainly not the case that books were considered to be naturally reliable sources of authority. He reconstructs the various contest and battles over the emergence of the book as a reliable source of knowledge, so that we get a glimpse into the historical contours of the debate on the authority of knowledge. The pre print period and the mode of reproduction of manuscripts are usually characterized as being full of mistakes and incredibly unreliable. This absence of certainty in early history of the book was attributed to the mistakes made by scribes who had to copy by hand over many hours and were prone to making mistakes, since there was no fool proof method of ensuring the accuracy of the scribes methods.

Dennis Brachter, in his essay ‘Sacred Words? Or Words of the Sacred?’, goes on to suggest

> ‘Scribal errors’ are generically used to describe mistakes that are common to human beings, the same kinds of mistakes that we all make in writing or typing. Given the tediousness of copying thousands of words and lines of texts over periods of years, we

> should not be surprised that some mistakes would creep into the copying process in spite of the best intentions of the scribes (2005, 8)

Brachter's dissertation supports the fact that the typographical fixity that is attributed to the books was not always there. In the first 100 years of print culture, errors were rife in printed books, Papal edicts against 'faulty bibles' were issued, forgeries were rampant, and manuscripts were pirated or counterfeited. Print, in fact, opened up the floodgates of diversity and conflict and at the same time threw up questions of authority of knowledge which could not easily be addressed.

A look at the history of print also makes us aware that the notion of a bound text was closely related to the question of authority and what kind of roles and identities emerge in the peoples' relationship with the text. Schoff Rebecca Lynn (2004) in her remarkable history of forms of reading and writing practices in medieval England argues that

> [T]he benefits readers derived from the press, in terms of better access to authorized texts, were countered by a profound loss of opportunity for inventive forms of reception. Before the growth of the printing industry, medieval readers enjoyed the liberties they were free to take with the texts they recopied. Manuscript culture encouraged readers to edit or adapt freely any text they wrote out, or to re-shape the texts they read with annotations that would take the same form as the scribe's initial work on the manuscript. The assumption that texts are mutable and available for adaptation by anyone is the basis, not only for this quotidian functioning of the average reader, but also for the composition of the great canonical works of the period. (2004, 95)

Lynn's observations could be directly transplanted to the Wikipedia and they would more or less hold true.

According to Mark Rose (1995), in his book *Authors and Owners: The invention of Copyright*, where he traces the history of the manuscript culture, in the Middle Ages, the owner of a manuscript was understood to possess the right to grant permission to copy it, and this was a right that could be exploited, as it was, for example, by those monasteries that regularly charged a fee for permission to copy one of their books (Puntham in Rose 1995, 10). This was somewhat similar to copyright royalty with the crucial difference that the book owner's property was not a right in the text as such but in the manuscript as a physical object made of ink and parchment. The value provided by the monastery and the reason for their charging for their copy fee did not emerge just from the existence of the copy alone, but also in the fact that each monastery also had their unique elements in the form of the annotations, the commentary, corrections, which only the particular monastery's copy might contain (21). The very act of copying and possession made you the author of that text and also the owner of the book. The notion of the author was not only as a reclusive solitary figure that coins the first word but the various scribes, writers, annotators and litterateurs who offered changes, and responded to it, as well as helped in distribution and copying. Rose writes,

> In the seventeenth century, then, there may have been some feeling that authors should have the right to control the first publications of their writing. But in England, at any rate, no clearly defined set of authorial rights existed, and English authors had no obvious form of redress if books were published without their permission. Indeed, the very concept of 'author' was still incompletely developed. Not only was the modern notion of the author as an autonomous creator, the producer and first

> proprietor of original works, not yet formed, but even the Renaissance notion of the author as an individuated authority was often problematic. (Rose 1995, 25)

So, while the popular account of preprint cultures is of slavish copying by scribes, the story turns out to be slightly more complicated. Acting as annotators, compilers, and correctors, medieval book owners and scribes actively shaped the texts they read. Scribes and readers responded to Chaucer, Langland, and others, not by slavishly copying, canonizing, or passively receiving their texts, but by reworking them as creative readers. In doing so, they continue and contribute to the great layers of intertextual conversation that made the work of these now canonical authors relevant, interesting, and, fundamentally, possible. Similarly, the editors, readers, annotators and contributors to the Wikipedia can also be looked upon as existing in these fluid identities which do not look upon knowledge as fixed and are not bound by pre-defined roles that surround earlier forms of knowledge and cultural production like books, movies, paintings etc.

Thus rather than speaking about Authenticity as something that is intrinsic to knowledge production, or inherently available to certain kinds of cultural products, it helps to locate it as a part of the technology apparatus that marks a text, and determines the role of the author and subsequently the scope of reading practices. In the case for the history of the book, it was clear that the establishment of authenticity – both for the text and the author - depended on the arrangements, classifications and kinds of assemblage that make it possible to maintain it as well as critique it. The conventions, for instance, by which the title and author of a work are identified play very specific functions in preparing for knowledge, as do the several kinds of documentation, attribution, citation and copyright.

Accordingly, the history of the technology apparatus includes, in every era, instances of false attribution, misquotation, plagiarism of many kinds, and spurious appeals to authority.

Nevertheless, without the technology apparatus, which constitutes the means by which authenticity is determined, evolved and mutated, there would be no author. The preconditions for authenticity cannot easily be made into the object that we identify as author. It is a matter of making evident (making known) the structures of authenticity which emerge in ways that provide definitive proof of the imperfectability and ambiguity of the authorial position. To speak of the productive nature of conflicts over authenticity and trust is then to recognize that any author – either exalted or dismissed - is constructed in a condition of potential collaboration and revision. Moreover, it is a reiteration of the fact that the authorial positions that we attribute to cultural producers are constructed within technological choices and conditions. With the interactive cyberspaces that transform every person into a potential author, producing information, *the author becomes a Technosocial Subject* and indeed, authorship becomes the most contested condition within which the cultures of fear and expectations operate in discussions of technosociality.

This brings us back to the debates around Wikipedia. What is at stake in the *Nature* experiment is not really whether the Wikipedia or the *Encyclopaedia* Britannica are accurate or not. The concerns are not really about where the expertise lies or who the legitimate producers of knowledge are. More important then, are the unarticulated questions of what kind of identities and subjectivities these new technologised forms are producing. The question of accuracy and expertise invokes, with almost a theological devotion, the perpetuity of an exalted idea of author, without a consideration of the technological apparatus that was established to construct those early print identities, which have, indeed, gained currency across different technologised cultural productions. What the Wikipedia constantly reinforces for us is that the author is a transient person – the 'work' is subject to many changes, and indeed, to many editions. Instead of thinking of the author as the omniscient producer of his or her stories, it is more fruitful to map the author on to a large body of collaborators who,

over time, produce knowledge. This notion of authorship, of course challenges the many questions of ownership, possession, distribution, copyright, fairness etc. All of these issues, and especially the questions of piracy shall be discussed in subsequent chapters, that explore the creation of 'illegal identities' as mediated by technologies.

The further point that user generated and collaborative content websites reinstate, is that even when we do have a single, identifiable author, the way we think of authenticity and verification has to differ quite substantially. When the author is not producing external objective knowledge as in the case of Wikipedia, or producing fictions as in the case of Chaucer; when the content generated by the user is textually as much a cultural product as a means of personal expression, the relationship that we have established between the author and his/her cultural product, also needs a radical rethinking. The author is a technology-mediated subjectivity – even though we no longer think of print or writing as technologies, because they are so integral to our everyday practices. The production of the author is a process of cyborgification by which the individual's interactions with the print technologies, define him/herself as either a producer or a consumer of that technology.

The Wikipedia, and the history of print in progress, show us that the notions of authorship and the authority of knowledge production exist within a much wider ambit of a knowledge apparatus. Rather than taking the claims of authorship and authority at face value – a trap that many discussions of access, accuracy, legitimacy and originality fall into – we should learn from the history of preprint and early print cultures to recognize that there may exist a much wider world of production, and collaborative practices which can neither be contained nor exhausted by the demands of authenticity.

I give this historical analogy and analysis in order to see how the debates around technosociality and the specific anxieties mapped around the emergence of a Technosocial

subject are often misplaced because they are taken out of the larger technology-subject legacies. The need for historicity is something that has to be emphasised in the talk about the Technosocial. In all the Cyberculture debate, there is very little importance or acknowledgement given to the fact that while the digital technologies might be bringing in radical changes, different technologies in human history have produced various instances of the Technosocial Subject. It is necessary, hence, to look at the Technosocial as not entirely a new phenomenon and the Technosocial Subject as not an ontologically new subject. Instead, the digital Technosocial which is at the heart of this dissertation needs to be historically located in order to give it an intelligibility and meaning without falling into the usual trappings provided by cultures of fear and expectations.

History is one of the contextual locations and a historical analysis of technosociality offers a richer potential for dialogue around the emergence of the Technosocial Subject in the digital age. Another context which is less to do with time and more with space, is that of the geo-politics of the Technosocial Subjects' practices. The rhetoric of the internet makes an easy case for the Technosocial Subjects as in a state of apathy and disconnected from their immediate environments. The occasional blogger's drive or tweet initiative towards socially responsible mobilisation of masses stands out because it is in stark contrast to the generally perceived idea of the Technosocial Subjects (as Bauerlein observes) as immersed in worlds of self gratification and entertainment, engaged in (and 'abusing' the technologies at their disposal) playing pranks, being jesters, disseminating information that is abundant with cute cats and dancing children (Zuckerman, 2006).

2.3 The Changing Political: Of Consumption and Piracy

It is in the nature of Digital Natives experiencing the Web 2.0 interactive information explosion that their experience of the Internet is fiercely personal (and customisable) and radically more public than ever before. In the process, they are dismantling the boundaries between the public and the private and often put themselves in grave danger, not only in their immediate present but also in their unsuspecting futures. Sonia Livingstone (2005), in her work on young peoples' interaction with technology, points out how the Mcluhanian argument about the blurring of the public and the private with the rise of broadcast media has now reached a strange inversion where people can create private spaces (enhanced by digital tools and internet connectivity) in public and shape their private spaces as increasingly public – connecting with strangers and opening physical doors for people they have never met, to make friends with, network, date and marry. (Livingstone, 34-37).

While Digital Natives are increasingly getting aware of the dangers of such exposure through experience and education (Prensky, 2004; Jukes et al, 2000; Gasser and Palfrey, 2008), they still end up putting themselves in precarious conditions. David Weinberger, in his book *Everything is Miscellaneous* (2007), suggests that the revelation of sensitive information endangers them way beyond their own imagination because of the 'heavily archival nature of the Internet' (107). The permanency of records of all the information published online often leads to embarrassing stories and public information being laid bare to public scrutiny which might not always be conducted by legitimate authorities. Despite having knowledge and information, the lack of online warning signs, and the absence of older guides who are familiar with this new terrain, often leads to morbid results like 'Orkut Deaths' or 'Youtube Snuff Videos' which can shock the world. Mayer-Schonberger calls this 'the art of forgetting

in the age of ubiquitous computing' (2009, 2). Even now, as companies become more sensitive to data usage and privacy, it is quite alarming how close we are to living in a 'Database Nation' (Garfinkel, 1992) where all our activities leave traces and residues beyond our control.

The new generation as a generation of consumers, chiefly concerned with gratification and without awareness or sense of their political and social environments is an imagination that has fuelled much debate. Chua Beng Huat (2002), in his 'Introduction' to the anthology *Consumption in Asia,* observes how, consumption has become a way of enacting citizenship in an hyper retail space like Singapore. As internet technology aesthetics and lifestyle practices find new avenues in the construction of IT cities and spaces of consumption, there seems to be an increase in younger generations demanding constant entertainment. Digital gadgets and mobile computing devices which are a part of the new internet networks, keep them immersed in virtual lives, making them oblivious of their own socio-political environments. Observing the transformation of 'Daily life' into 'lifestyle' (2) during the economic crisis of 1997 in Asia, Chua looks at 'ubiquitous and indubitable' consumption as a trope by which urban individuals reproduce their everyday life ' through systems of production, distribution, marketing, procurement and, finally, consumption (4)' . He further argues that the 'consumer is in turn reconceptualised as active participants in the creation of social and cultural meanings...consumerism is rendered as the facilitator of spirituality (5 -7)'. Chua critically examines the perceptions that the younger generations are more consumerist than their predecessors, in order to suggest that consumption is not merely an economic practice or transactions but has a notional and ideological value. Consumption as an ideology – where one has to consume in order to realise one's identity, is, for Chua, the point of emergence of a new generation who, especially with their immersion in digital technologies and consumption of online spaces, create their sense of self and where they belong through

consumption. He concludes his Introduction by challenging the ideological formulations across 'generational and national divisions' which have a constituted a contest between 'Asian versus Western values (27). He writes,

> [C]onsumer products sourced from Europe and America were seen as already culturally inscribed...Consumers of such products thus risk being 'infected' by these values, leading to possible moral decline of the Asian population. Such an ideological construction of the politics of consumption as a contest of values was often promoted by the governments in Asia as a veil over the political of class and unequal distribution. (28)

Chua rescues the very negatively charged idea of 'Consumerism' from being reduced to merely showing off or self gratification and posits it as a political practice of subversion and resistance through which the Consuming Citizen can be idealised. Chua's formulation introduces consumption as a complex phenomenon, especially within the digital networks, where individuals consume, information, entertainment, digital representations and their own selves (through avatars) incessantly. As we saw in the Wikipedia debates, the anxiety is as much about what we consume, as it is about what gets produced.

Indrajit Banerjee (2007), in his account of Internet and Governance in Asia, suggests that the digital technologies and internet spaces need to be looked upon as weapons and tools for a younger generation to exercise its discontent with the imperial structures (45), unfair politics and government corruption that has marked emerging information societies across the globe (207). The point is much better explained by Lance Bennett (2008), who, in his report for the Centre for Communications and Civil Engagement, theorises this form of citizenship as an 'Actualising Citizenship' over the preceding generation's 'Dutiful Citizen' (3). Bennett argues that the earlier forms of citizenship as mediated by analogue technologies, demanded

the citizen to perform and enact his/her responsibilities through an adherence to values and ideas promoted by the State. In such a condition of governance, the good citizen was a dutiful citizen who was aware of the rights and responsibilities and judiciously exercised the rights to gain rewards from the State structures. However, with digital technologies and the changing nature of governance structures, 'there is a new form of state-citizen relationship where the onus of goodness or ideal is not on the citizen but on the State (7)'. As human resources become more valuable for the first time after the industrial revolution, Bennett suggests, there is a shift that signals that the goodness of the State or its value is contingent upon the infrastructure and access it can provide its citizens to aid them in becoming good, data production citizens. For him, the 'Actualising Citizens have a consumerist relationship with the state', through which they demand new forms of governance and accountability in place of performing civic duties (9).

Voices like Bennett and Chua remain rare in exploring the practices and politics of the Technosocial Subjects online. As expected, much of the discourse around Technosocial Subjects' interactions with digital technologies and online platforms remains contained in alarmist accounts of the uncontrolled terrains of cyberspace and the shocking activities that these Technosocial Subjects engage in, wasting the time, money, effort and resources that could otherwise have been put into transforming the world in the way the Tsunami bloggers – the people of the year – did. The larger discourse within scholarship as well as practice concentrates on the bizarre, the unintelligible and the incomprehensible, that marks a lot of Technosocial practices as perceived by outsiders who often treat these as universal and produced largely in the digital realm. Unlike with the bloggers who bridged the gap between the digital and the physical, there are a lot of Technosocial practices that remain in the digital universe. These actions and the people behind them are generally looked upon as the same across socio-cultural boundaries and de-contextualised from their geo-politics, thus becoming

easy targets for critics who describe them as 'self involved, solipsist, and self gratuitous' (Bauerlin, 2007, 125).

These kinds of formulations not only do a disservice to the Technosocial Subjects and the worlds they occupy, but they also provide further grounds for regulation, control and censorship by different governing mechanisms on online behaviour. For example, in 2008, China recorded its 100 millionth Internet user and also witnessed the death of a 13-year-old Digital Native, who, after two days of non-stop gaming, jumped off an elevator 'to meet another character from his game[30].' Chinese reports suggest that the gaming environment led him to a state of hypnosis where he could not make a distinction between his physical reality and his digital fantasy. The immersive nature of digital environments and the arguments of the internet as addiction, led to China, announcing announced the opening of its first Internet Rehabilitation clinics in 2009[31]. Internet Addiction Disorder (IAD) is now recognised in emerging ICT contexts as significantly affecting young people's mental growth as well as their social and interpersonal skills.

These anxieties, about the Technosocial Subjects as not actualising their true self and instead preferring to squander away their time and resources in 'futile communication' and 'self-centred entertainment' are best embodied in the debates around collaborative sites like Wikipedia and Youtube. Like the Wikipedia, the fighting factions on Youtube are also firmly divided into two camps. The camps have arisen, mainly because of differences of opinions on who owns a Youtube video and the value of the content therein. The critics of Youtube – largely recording companies, movie studios and distributors – argue that platforms like Youtube are killing their businesses, emptying their coffers and are a direct threat to the livelihood and integrity of the creative artist. They make claims that a site like Youtube

[30] News article reporting the event is available at http://www.shortnews.com/start.cfm?id=54320
[31] News article describing life at the clinics is available at http://www.washingtonpost.com/wp-dyn/content/article/2007/02/21/AR2007022102094.html

infringes upon the copyright regimes because the videos are shared by somebody who has ripped it from another source, generally without any credits. Also that the sales of the music or the movies of TV serials go down because of such activities. This lobby has been very vocal and over the last few years has launched a series of legal actions against Youtube as well as the different people they find engaging in copyright infringement or piracy.

One of the most recent infamous examples that can be cited is the case of the Let's Go Crazy Dancing video case that caught a lot of public attention. In early February 2007, Stephanie Lenz's 13-month-old son started dancing. Pushing a walker across her kitchen floor, Holden Lenz started moving to the distinctive beat of a song by Prince, "Let's Go Crazy." [32] Lenz wanted her mother to see the film so she did what any citizen of the 21st century would do: She uploaded the file to Youtube and sent her relatives and friends the link. They watched the video scores of times. It was a perfect Youtube moment: a community of laughs around a homemade video, readily shared with anyone who wanted to watch.

Sometime over the next four months, however, someone from Universal Music Group also watched Holden dance. Universal manages the copyrights of Prince. It fired off a letter to Youtube demanding that it remove the unauthorized "performance" of Prince's music[33]. Youtube, to avoid liability itself, complied. Youtube sent Lenz a notice that it was removing her video. She wondered, "Why?" What had she done wrong? Her questions reached the Electronic Frontier Foundation and then started the battle, where on Lenz's behalf, the EFF

[32] Holden Lenz's Youtube debut, that probably made him the most popular baby on the Internet is still available for viewing at http://www.Youtube.com/watch?v=N1KfJHFWlhQ retrieved 12:14 a.m. 22nd January 2010.
[33] News report for this controversy is available at http://abcnews.go.com/TheLaw/home-video-prince/story?id=3777651

lawyers sent a ‘counter-notice’ to Youtube, that no rights of Universal were violated by Holden’s dancing video[34].

Lenz as the author of the video was concentrating on her son’s dancing and that the presence of Prince’s song was negligible and definitely fair use. Yet Universal's lawyers insist to this day that sharing this home movie is wilful copyright infringement under the laws of the United States. On their view of the law, she is liable to a fine of up to $150,000 for sharing 29 seconds of Holden dancing. They specifically state that Lenz is not the ‘original’ artist who made the music and thus she is appropriating authorship and violating the rights of the artist – Prince, to be identified as the creator of the song. The notice also informed her that they were unhappy with the ‘clowning’ around of Prince’s music which might offend his fan-base.

As Lawrence Lessig (2008) very eloquently points out in his essay on the ‘Defence of Piracy’,

> How is it that sensible people, people no doubt educated at some of the best universities and law schools in the country, would come to think it a sane use of corporate resources to threaten the mother of a dancing 13-month-old? What is it that allows these lawyers and executives to take a case like this seriously, to believe there's some important social or corporate reason to deploy the federal scheme of regulation called copyright to stop the spread of these images and music? "Let's Go Crazy" indeed! (Lessig, 2008)

The people in the other camp who celebrate the creative potentials of this mass production of videos and look at the possibilities of story-telling, creative representations and alternative perspectives that these platforms offer to a wide range of people who no longer need to

[34] Lawrence Lessig, in his blog post “In Defense of Piracy” recounts the entire incident giving legal perspective on the copyright issues involved. Available on the Wall Street Journal blog at http://online.wsj.com/article/SB122367645363324303.html

depend on mainstream media or even literacy to get their voices heard, also lead to strange activities which sound as crazy enough as Universal's persecution of a 13 month old and his mother.

In another instance, which is a competition on Youtube between two videos to reach the coveted "first video to be seen 1 million times" status, brings up again these question of the author and the pranksters or the fans. Avril Lavigne fans, on the release of her recent Single 'Girlfriend', started campaigning to make that video the first to be viewed 1 million times on Youtube. They put it in direct competition with the then most viewed video – History of Dance – and started a lot of activities that violated the Terms of Service for Youtube. They embedded the videos in many sites and started websites which played the videos automatically. They even created a website which auto reloaded the video every fifteen minutes and encouraged fans to keep the website opened, abusing the power of broad band, while they are browsing, surfing, or even sleeping.

The efforts paid off and Avril Lavigne's *Girlfriend*, in July 2008, became the first video to be watched 1 million times in the history of Youtube. Just after the video reached the 1 million mark and entered the heights of popularity, Youtube received a notice from Times Warner, to remove the video because it was a copyright violation. They also demanded that all the other compilations and samplings which included the song be removed from Youtube. The supporters of the move, condemned the Lavigne fans as 'pranksters' or 'jesters' who were in for the cheap publicity, because they were not really creators of the video or the authors. In a startling Op-Ed titled 'How Avril Lavigne Killed Youtube'[35], in the New York Times, a spokesperson for Times Warner suggested

[35] The Op-Ed is available at http://www.webtvwire.com/*how-avril-lavigne-killed-Youtube*-girlfriend-music-video-is-first-to-top-100-million-views/. Retrieved on 2008-09-10.

> This is not respectable fan behaviour. A fan is somebody who loves and worships the author and not somebody who pretends to be the author. The avrilelavignebandaid group just turned out to be a group of pirates who passed off Lavigne's video as their own and went on to promote it, forgetting the fact that they were using a democratic platform like Youtube for activities which can only be called theft! (2008)

Such debates continue around online collaboration platforms like Youtube and Wikipedia. Wikipedia gets more attention from the industries of knowledge production because it is so obviously involved in the processes of production of knowledge and challenging traditional conceptions of knowledge. The debates when they are mapped around sites of 'creative cultural production' like Youtube become heated and shrill, accusing the Technosocial Subjects (in the case of Holden, the creator, in the case of the Avril Lavigne case, the consumers) of being nothing more than pranksters and jesters. They also imagine these Technosocial Subjects as contained within the digital realms and removed from their contexts because their actions don't have direct geo-political implications.

I look at two specific stories on collaborative sites from Asia, to make a case for why contextualisation – a geo-political and physical context – is necessary to make sense of these Technosocial practices and subjects. Siva Vaidhyanathan (2008), in his social anthropology of Google, looks at how in China, where the government exerts great control over regulating online information, Wikipedia had a different set of debates which would not feature in the more liberal countries – the debates were around what would be made accessible to a Wikipedia user from China and what information would be blanked out to fit China's policy of making information that is 'seditious 'and disrespectful', invisible (25-34).. After the skirmishes with Google, where the search engine company gave in to China's demands and offered a more censored search engine that filtered away results based on sensitive key-words

and issues, Wikipedia was the next in line to offer a controlled internet knowledge base to users in China (52-58).

However, another user-generated knowledge site, more popular locally and with more stringent self-regulating rules than Wikipedia, became the space for political commentary, satire, protest and demonstration against the draconian censorship regimes that China is trying to impose on its young users. The website Baidu Baike (pinyin for Baidu Encyclopaedia), became popular in 2005 and was offered by the Chinese internet search company Baidu. With more than 1.5 million Chinese language articles, Baidu has become a space for much debate and discussion with the Digital Natives in China. Offered as a home-grown response to Wikipedia, Baidu implements heavy 'self-censorship to avoid displeasing the Chinese Government' (BBC; 2006) and remains dedicated to removing 'offensive' material (with a special emphasis on pornographic and political events) from its shared space.

It is in this restrictive regime of information sharing and knowledge production, that the Digital Natives in China, introduced the "10 legendary obscene beasts" meme which became extremely popular on Baidu. Manipulating the Baidu Baike's potential for users to share their knowledge, protestors of China's censorship policy and Baidu's compliance to it, vandalised contributions by creating humorous pages describing fictitious creatures, with names vaguely referring to Chinese profanities, with homophones and characters using different tones.

The most famous of these creations was Cao Ni Ma (Chinese: **草泥**马), literally "Grass Mud Horse", which uses the same consonants and vowels with different tones for the Chinese language profanity which translates into "Fuck Your Mother" cào nǐ mā (肏你妈) . This mythical animal belonging to the Alpaca race had dire enemies called héxiè (**河蟹**), literally translated as "river crabs", very close to the word héxié (**和**谐) meaning harmony, referring to

the government's declared ambition of creating a "harmonious society" through censorship. As Steven Lesser (2008) points out, the Cao Ni Ma, has now become a popular icon appearing in videos distributed on Youtube, in fake documentaries, in popular Chinese internet productions, and even in themed toys and plushies which all serve as mobilising points against censorship and control that the Chinese government is trying to control.

However, the reaction from those who do not understand the entire context is, predictably, bordering on the incredulous. Most respondents on different blogs and meme sites, think of these as mere puns and word-plays and juvenile acts of vandalism (Webster, 2009)[36]. The Chinese monitoring agencies themselves failed to recognise the profane and the political intent of these productions and hence they survived on Baidupedia, to become inspiring and iconic symbols of the slow and steady protest against censorship in China.

What is discarded or overlooked as jest or harmless pranks, are actually symptomatic of a new generation using digital tools and spaces to revisit what it means to be politically active and engaged. The 10 obscene legendary creatures, can be easily read as juvenile fun and the actions of a youth that is quickly losing its connection with the immediate contemporary questions. However, as can be seen from the comments on Webster's blog, a contextual reading can lead to a better understanding of the new aesthetic of social transformation and political participation – one which is embed 'Comeonbibi' says, 'hah, nowadays almost every chinese netizen knows the meaning of the foreigners' comments ,but few of the foreigners knows chinese comments, say nothing of the traditional chinese or the classical chinese language...'

[36] The comments following Webster's reporting of the meme reflect this and can be accessed at http://www.danwei.org/humor/baidu_baike_fake_entries.php

The point is driven home more strongly when we look at another story that is not as political as the '10 Obscene Legendary Beasts' which was, at the end of the day, dealing with the very treacherous landscape of information censorship, governance, and political subversion. The second story starts in China and ends in Taiwan. It is about a group of young university students who shot into great fame and acclaim as the 'Backdorm Boys'. BackDorm Boys were three graduate students, two of whom – Huang Yi Xin and Wei Wei - from the Guangzhu Academy of Fine Arts in China, shot to instant fame when, in a state of boredom, they made a lip-sync cover version of popular Backstreet Boys singles, using nothing more than cheap digital cameras on their computers, in the restrictive space of their dormitories, and distributing them through video sharing spaces like Youtube, MySpace and other blogs (*The Full Plate*, 2008). These weren't, at a first glance, very different from the 'funny' videos that one encounters online all the time – cheaply produced, shot with a webcam mounted on the screen, an almost unedited, uninterrupted full frontal frame, and an exaggerated attempt creating a certain Kitsch video that have gained popularity in the past.

The three students in the videos were not the hyper eroticised masculinities that the boy bands like Backstreet Boys have embodied in popular cultures. These were also not students who were particularly talented at singing. In fact, they were not singing at all, they were lip synching the songs in their videos. The videos did not involve any attempts at shooting but were in the full-frontal, almost pornographic frames of spectacle where the camera was mounted over the screen and the two performers were being caught in that frame. Dressed in identical clothes, the two main performers sang with extraordinary histrionics, the otherwise mellow and slightly cliché ridden love ballads that the Backstreet Boys had made their

signature. In the background, one of their other dorm mates, played a video game[37] called Quaker throughout the video He occasionally simulated the actions of a music mixer or a DJ or sometimes helped them with props.[38]

Figure 1Backdorm boys in their most famous 'As Long As you Love Me' video

Figure 2Backdorm boys in their Motorola phones advertisement

There was, at the first glance, nothing spectacular about the Backdorm Boys. As one of the responders on a blog dedicated to the Backdorm Boys very succinctly puts it

> Let's face it: it doesn't take a lot of talent to make faces. They didn't write the song, didn't sing the song, didn't play any musical instructions, etc. Their sole accomplishment is they made faces at a camera. That's not talent, man!!! And if they weren't Chinese—i.e., didn't have the freak factor of Chinese boys lip-synching to Backstreet Boys songs—NOBODY will notice this. (*Da Xiangchang*, 2005)

And yet, the Backdorm Boys, apart from cults developing around them and various internet memes devoted to them[39], were featured live on NBC and both dropped out of their academic

[37] Quaker belongs to a growing genre of Japanese gaming where it is impossible to go beyond a certain level in the game and the users celebrate the impossible and failure built into it.
[38] A full list of their videos is available to view and download at http://twochineseboys.blogspot.com/
[39] A quick glimpse of their popularity can be obtained on fan and internet monitoring sites like http://www.milkandcookies.com/tag/backdormboys/ and http://www.tian.cc/2005/10/asian-backstreet-boys.html

programmes to become hugely successful brand ambassadors and spokespersons for some of the largest mass media brands in China. They have both acquired a celebrity status and are role models and now popular media persons on TV channels, hosting their own shows. The question of quality and value keep on resurfacing in the question: where is the talent? Several respondents, including Da Xiangchang pointed out that 'it takes very little talent to make a fool out of yourselves.'

This making a 'fool out of yourself' is something that a lot of internet production is categorised as. However, in the case of the Backdorm Boys, it becomes a certain political position embodied in the aesthetic called 'Kuso'. Kuso, a relatively new term, is highly popular in describing the new cybercultural forms that emerged with the proliferation of the internet/s. Anime fans are familiar with Kuso as an expletive or an interjection, used as the English equivalent of 'Shit!' Though Japanese in origin, it was made popular as a word, an aesthetic and a lifestyle in Taiwan around 2000, subsequently spreading to Hong Kong and China. Now, Kuso, along with other North East. Asian products like Hentai[40], and Manga, is a popular way of identifying cybercultural forms. The Wikipedia entry on Kuso mentions that

> [t]he roots of Taiwanese "Kuso' was *Kuso-ge's* from Japan. The word Kuso-ge is a portmanteau of *Kuso* and *game*, which means, quite literally, "shitty games." The introduction of such a category is to teach gamers how to appreciate and enjoy a game of poor quality – such as appreciating the games' outrageous flaws instead of getting

[40] In *A short History of Hentai,* Marc Mclelland, defines Hentai as follows: "*Hentai* is a Sino-Japanese compound term widely used in modern Japanese to designate a person, action or state that is considered queer or perverse, particularly in a sexual sense. Unlike the English term 'queer', however, *hentai* does not have predominantly homosexual connotations but can be used to describe any sexual acts or motivations other than what might be termed 'normal' sexual relations. Indeed the loanword *nōmaru* (normal) is sometimes used as an antonym for *hentai*. Apart from this general use of the term *hentai*, it can also be used to designate a specific genre of Japanese manga and animation that features extreme or perverse sexual content and it is in this sense that *hentai* has become well-known among western fans of Japanese popular culture."

> frustrated at them. (Wikipedia, http://en.wikipedia.org/wiki/Kuso, retrieved 4th June, 2006)

It was an attempt to not only identify or locate flaws but to celebrate them and encourage an active production of them. Kuso, for the younger generation in Taiwan (and the thousands of fans all around the world, who subscribe to Kuso Bulletin Boards and discussion forums) is not just a cursory form of parody but a lifestyle. A Taiwanese artist, Yeh Yi-Li, in her solo exhibition, seems to suggest that as well. Her introduction to her exhibition titled 'KUSO – Red, Spring Snow, Orange Flower' says

> In Taiwan's pop culture, internet subculture and video gamers' communities, it (Kuso) became a trendy term that suggests "making fun of anything, playing practical jokes on everything." KUSO subverts conventional values and turns things into garbage. It has no limits, history, agendas or logic. Like an amoeba, it is a subculture phenomenon that has no rules. (Yi-Li, 2006)

Making a list of characteristics of what might be Kuso is futile. As Yi-Li seems to suggest, on the surface, Kuso is located in the pretext of fun and hilarity of an object. It started as a subculture phenomenon but is now highly popular in mainstream cultures – on reality TV on youth oriented channels like MTV and Channel V, in local performances and spectacles, and in Stephen Chow movies. While Yi-Li might look upon Kuso as without 'limits, history, agendas or logic', she forgets that Kuso has been the way for organising political protests, flash mobs and social awareness collectives in many part of Asia

In her *Kuso* exhibition, Yi-Li created the 'Worm-man' that

> drags its body and slithers in the ever-changing world. In different kinds of worlds, the Worm-man develops into different phases. As phenomena are happening, it is also

> transforming. The Worm-man has multiple possibilities, multiple personalities and multiple identities. (Yi-Li, 2006)

While Kuso is often understood as parody, trash culture or camp humour, and is even attributed to MTV style movies by enthusiasts, for the large section of Kuso consumers, it is the governing principle for social interaction, dressing and appearance, hair and accessories, consumption of products and modes of expression. Kuso seems to be a way in which they produce themselves as parodic forms of themselves – producing themselves in conditions of constant transformation with 'multiple possibilities, multiple personalities and multiple identities.' Kuso, as Ye-Li understands it, actually resides in the processes of subversion and resistance. Kuso not only makes 'things into garbage' but also, by logical corollary, turns 'garbage into things'.

In this context, the interesting question to ask of the Backdorm Boys would be the question that Yi-Li asked in her exhibition: 'How does Kuso manage to make garbage out of things?' and further, is it possible to read into Kuso, a new politics which guises itself in pranks and jests. An uncontextualised reading of the Backdorm Boys videos – a reading that would treat it as trivial and a prank – thus fails to understand why these slightly clownish characters would become imitable heroes for a particular generation. I propose, in my reading of the Backdorm Boys through the tropes of Kusothat a revisiting of the Technosocial is necessary in order to look at the questions of geo-politics and the physical contexts while talking about Techosocial Subjects. In the discourse of technosociality so far, there has been a lack of attention given to the physical space that the users of technologies occupy. This physical location - the space - not only provides the context but also offers ways of making meaning when it comes to understanding the Technosocial Subject and their practices.

Given the highly polarized nature of political orientations in Taiwan, it has been the despair of many educators and practitioners that the young users, which are the largest subscriber base to Kuso, has no apparent interest in politics. In Taiwan, this young generation of digital natives born between 1981 and 1991 is also called The Strawberry Generation. Despite its suggestions in English, carries negative connotations with it. The two most popular characteristics of the Strawberry generation – a phrase that has huge currency in popular media – have been severally explained. Rachel, who writes on the National Central University's (Taiwan) website, explains:

> In Taiwan, the Strawberry Generation refers to those who were born between 1981 and 1991, ranging from the 22-year-old university students to the 12-year-old junior high school students. This generation is labeled as "strawberry" due to two reasons: first, this generation of youth was raised in a better environment, as strawberries grown and nourished in a greenhouse, than the earlier generation. Second, strawberries are known for their beauty, delicacy and high price, suggesting that the young people can not withstand pressure, difficulties, and frustration as they grew up in a nice and comfortable environment and are able to get almost whatever they ask for. (Rachel, 2008).

Henrry (sic) (2006), a student who also belongs to the Strawberry Generation, writes in his classroom assignment, 'People of this generation are said to be fragile when facing pressure, just like the strawberries.' He further goes on to suggest that the problems of the Strawberry Generation are largely economic in nature and might lead to serious problems for Taiwan's economy. Myr Lim (2006) also looks at the economic and political instability of this generation and describes them as 'Like the fruit, they look extremely good and sinfully juicy,

who wouldn't want one? But they have a very limited shelf life.' Built into this criticism is also the understanding that the Strawberry Generation is also in a state of political disavowal.

And it is to answer this question that we go back to the Technosocial Subjects in Taiwan. The Strawberry Generation in Taiwan was not merely marked by economic transitions and infidelity. It is also a generation that has seen a severely politicised state of nationalism and national identity in Taiwan. The younger generation that grew up after the removal of the martial law has engaged in serious consumerism as a part of their national identity. As Kuan Hsing Chen (1998) points out, 'From 1994 onwards…the cultural atmosphere was mediated through commodity structures (47).' Chen further goes on to explain how the political economy and the question of the national are intrinsically linked. Given the hegemonic presence of the West in the cultural galaxy of Taiwan and the constant negotiations between the political position vis-à-vis China as well as the cultural imperialism of Japan, the Taiwanese Strawberry Generation finds itself without a particular model of national identity to follow. Along with these are the allegations of widespread corruption and the complete disinterest of the current political parties in the ill-effects of liberalisation (*Asian Economic News*, 2007) which contribute to a high rate of mental ill-health and suicides in the Strawberry Generation (*The China Post*, 2008). Given such a murky situation, the Strawberry Generation has indeed withdrawn from active political participation of fighting in the streets and has taken to new forms of expression, which, outside of the context, appear as solipsistic or merely for fun.

Kuso, thus emerges as a set of practices that can celebrate flawed heroism, simultaneously mocking the ubiquitous presence of the pop-culture from the West and inability of the local context to produce spaces for political negotiation for the younger generations. This is

different from making a claim about how the internet creates a new public sphere. Instead, it is about understanding that the digital is deeply rooted in the local contexts and needs to be understood within those spaces. Which is why, even the attacks and defence of these Kuso videos remain contained in a vocabulary of talent and creativity, rather than understanding them as cultural and political artefacts. On the discussions on the Sinosplice blog, one of the most vocal defenders, John, who starts with calling this condition, a 'rare talent' goes on to say,

> Have you ever tried to make a funny video? It's much harder than you give these boys credit for. The fact that they were able to do it merely by lip synching is testament to their talent. If they're using certain cultural expectations for humorous effect, then that's further evidence of talent. (John, *Sinosplice,* 2005)

However, John's idea of 'playing with cultural expectation' remains a solitary voice. The other discussants go on to talk about how this particular series is only interesting because of the 'freak value' of the videos. Karen, another participant who introduces herself as a student in the West, writes

> I have to reluctantly admit, as politically incorrect and offensive (sic) some of the comments may be, they are mostly valid in my opinion. I'm not saying that the "Back Dormitory Boys'" talent doesn't play a part in why it's so funny but the fact that the they're Chinese with no doubt plays a huge role in the humour that that you could easily find elsewhere. How hard is it to find a few college students making goofball videos and putting them on the internet? (Karen, *Sinosplice,* 2005)

The opinions that Karen and XiangChang express, resonate with the general perception of the BackDorm boys on many different discussion groups and media talks around the world. As they gained more popularity and exposure, there were more and more people exclaiming at why these antics were being heralded as heroic.

For me, a rich way of thinking about Kuso is to make a connection with what Josephine Ho, in her presentation at the Annual Cultural Studies Conference in HongKong, 2010 calls Shanzai – the art of counterfeit re-production of high end technology gadgets that Chinese markets specialise in For Ho, the usual criticism of parody, piracy and imitation, which accompanies this particular art of producing value-for-money gadgets that dominate markets by sucking on the aura of the original branded gadget, while maintaining a creative economic and cultural process of production, goes hand in hand with the Kuso antics that the Backdorm Boys embody. She translates Shanzai as 'innovative copy-catting' as not merely economic pragmatism but as constructing a Chinese psyche of 'rebellious heroism' of building up 'rivalling alternatives to the establishment'. Like in the case of Kuso, Ho offers Shanzai as more than mere copying or a space of cultural production. She suggests that this is a space for re-appropriating globalisation and challenging the existing tastes, dominant aesthetics and economic trends through non-conformation and resistance. Both Kuso and Shanzai, when taken out of their original-imitation framework that the proponents of Intellectual Property Rights and canonical cultural production reduce them to, offer new ways by which the interactions of technology and subject can be explored.

This is the first step in thinking about ways in which one can formulate a Technosocial identity which does not presume a homogenised community online. It takes into account the physical bodies and their locations and contexts as integral to the production of these narratives. It allows to shift the focus from discussions that confine them to the realms of performance or solipsism and look at the larger potential they have in creating new conditions of political engagement. For Taiwan's Strawberry Generation, Kuso is a lifestyle, by which they are able to establish discursive and subversive relationships with the very actions and

practices which subject them to sever criticism. And they provide us with a way of looking at pranksters and jesters online as contextual interlocutors in their politics and their contexts.

3. TYING THINGS TOGETHER

It was the intention of this chapter to map the literature around technosociality and see the different models and ideas of the Technosocial that can help in understanding the emergence of the Technosocial Subject. The theoretical formulations within Cyberculture debate in concordance with the everyday case studies of Technosocial practices have produced a complex and nuanced idea of the Technosocial which hasn't been posited hitherto. The notion of contexts – both historical and geo-political has not been proposed in existing literature around Technosocial Subjects. In this chapter, even as I extrapolated different conditions and structures of the Technosocial from different disciplines, I have also shown the blindside where the lack of contextualisation through legacies of human-technology interactions often leads to misplaced anxieties about the emergence of new digital technologies. Similarly, the location of the Technosocial subject in only 'techno-bio-cultural' environments, thus neglecting the bodies and the locations within which Technosocial environments are structured, leads to incomprehensibility and unintelligibility in inquiring into these subjects and their practices. Contextualised understanding of their environments, histories, and engagement help us to realise that Technosocial Subjects are not the same everywhere. Even though the technologies that they use are often global in nature, and the tools and gadgets they employ are shared across borders, the way a Technosocial Subjectivity is constructed and experienced is different with different contexts.

The political might not always be in the intention of the cultural producer or distributor, but the very condition within which these forms are produced and shared, renders them political

and opens up a discursive space for the creation of new Technosocial Subjectivities, which was hitherto not available. Though often written off as pranks or jests the innovative approaches of negotiation, mobilisation and intervention that are possible with new technologies, afford numerous possibilities for understanding technosociality as situated in the practice and politics of new subjects. To think of the Technosocial as limited to human-technology interaction or contain it within the traditionally cultural, is to ignore the immense productivity as well as possibilities of understanding the recalibrated spaces of interaction and cultural production. The use value of technology (the function and the effect) and how technology infrastructure needs to be developed, has received more than adequate attention in scholarship, policy and practice. However, the differently conceived human-technoloogy relationship that this chapter has mapped, suggests a new terrain upon which the Technosocial has to be examined. The presence and usage of such technologies disrupts the mainstream narratives and expectations of Internet technologies which focus only on the economic and the instrumental use of technology.

The Technosocial Subject especially when it comes to social transformation and political participation, is a fiercely local and context based identity. The idea of a context based Technosocial Subjects also leads me to suggest two things to conclude this chapter and explain the rationale for the subsequent chapters: The first, that Technosocial Subjects are not merely people who are using new tools and technologies to augment the ideas of change and participation that an earlier, development-centric generation has grown up with. By introducing and experimenting with their aesthetic of fun, playfulness and irreverence, they are re-visiting the terrain of what it means to be political and often embedding their politics into seemingly inane or fruitless cultural productions, which create sustainable conditions of change. The second that the Technosocial Subjects, while they seem to be a different

generation and having a unique technology-human relationship, are not really different from preceding generations of users who also used technologies that were new then, in order to create different changes in their immediate environments. However, what is different is that there is a shift in how the Technosocial Subjects envision their own role, mediated by digital technologies, in producing change in society.

What is really different, with Technosocial Subjects, is that their local movements and actions are globally shared and accessed, thus forging, perhaps in unprecedented ways, international and cross-cultural communities of support, help and interest. Moreover, these communities subscribe to a new paradigm and vocabulary of socio-political change which is often tied to their every-day actions of entertainment, leisure, networking and cultural production. It is in the light of these conclusions that the dissertation sets out to explore the Technosocial Subject through three different perspectives and specifically in the location of India as an emerging Information Society.

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Chapter Two | Technosocial Spaces

Following the anxieties mapped around the Technosocial Subjects, in Chapter One, the second chapter looks at the anxieties which have emerged in the discourse around Technosocial Spaces. There has been a wide array of literature which looks at the intersections between the emergence of digital technologies and the consequent reorientation of physical spaces. In this chapter I shall look at the main points of debate in the existing scholarship to show, how, like with the Technosocial Subject, Technosocial Spaces are also inadequately understood and taken for granted. I seek to move away from the cause-and-effect relationships that reiterate the real-virtual divides within Cyberculture theory, thus excluding a more nuanced notion of Technosocial Space – space that is produced by a dialectic bleeding of the virtual into the physical and vice-versa.

Like the Technosocial subject, Technosocial space refers to a hybrid imagination of space where the physical and the digital coincide. Technosocial spaces have been imagined in many different forms – as digital overlays on physical maps, as digital cartographic practices mapping the world around us, as digital spaces that simulate physical reality, and as physical spaces that mould themselves around the digital ideas of transparency, traffic, movement, connection, lifestyle etc.

I propose the idea of Technosocial Space to forward the argument about a contextual technology mediated identity as was discussed in the first chapter, where the two concepts are inextricably linked together. In the discussion of Technosocial Space I stay away from the space-place debates mapped in the *Introduction* that have informed much of the debates in Cyberculture discourse, but do not productively contribute to understanding either the technology-space relationships or the materiality of technology mediated practices. Instead, I

focus on Technosocial Space as a ‘space-in-making’ that is tenuous, transactional and tentative; a site upon which the contestations, conflicts and anxieties around Technosocial Subjects unfold and are the most visible. I do this by looking at the internet information ecology - specifically at the ‘Ecology of Fear’, a term coined by Michael Davis (1999) but not in the same way - as shaped by users, state governments, internet authorities and regulators, as well as market forces to understand the complex mechanics of Technosocial Subjectivity.

1. TECHNOLOGY AND THE CITY

Technological revolutions have always been central to the formulation and imagination of the city. Political boundaries, historical reconstructions, social analyses, economic evaluations or spatial surveys of the city have implicated the proliferation and spread of technological infrastructure in their unfolding. Be it the nostalgia for the ‘agorae’ of the past or the hope for the ‘cities of the mind’ (Jones, 1999); be it ‘cities not in the accepted sense’ (Walcott, 1992) or the ‘unintended city’ (Sen, 1976); be it the ‘information superbahn’ (Mitchell, 1996) or ‘societies of information’ (Roszak, 1994); technologised conditions of production, consumption, and interaction have featured prominently in the imagination of the city as a space. The technologised nature of the city has also led to the recognition of the city as in a tentative state of transition from ‘geo-to-chrono-politics’ (Virilio, 1986).

Before I go into a detailed discussion of Internet technologies, fear and city spaces and the way in which certain phenomena have shaped the internet landscape in India (to further talk about Technosocial spaces and subjects) it is necessary to look at some of the more influential views and scholarship around technology-cities across different fields like radical geography, urban planning, architecture and design, communications and technology studies.

Many of the theoreticians of urbanisation and globalisation have already pointed out that the city is not a coherent homogenised entity and that the infrastructural development and the scope of technology, especially in Asian cities, are not uniform. Different models of technologised production have been influential in imagining the city in various different ways. Marshall McLuhan's idea of 'the Global Village' (1964) referred to the technological reshaping of a social space implied by the shrinkage of distance in the 'new galaxy' of communication. In the introduction to *Understanding Media,* he writes, 'after more than a century of electronic technology, we have extended our nervous systems in a global embrace, abolishing space and time as far as our planet is concerned' (3,4). He concentrates upon telecommunication technologies to talk of the global village. The basic precepts of his view are that the rapidity of communication through electronic media has overcome the limitation of geography and lifestyles. This 'shrinkage' connects all our senses in a constant flow of sensory reception and transmission of information. He imagines spaces – even physical spaces – as nodes in a network, facilitating this incessant performance and interaction (19).

This is also the model that Stephen Doheny-Farina identifies as the 'Network Neighbourhood' (1996), where the individuals become agential in creation and transmission of meanings that form the community as envisioned by McLuhan (1964). The city thus imagined, as a digital node on a seemingly seamless global communication circuit realigns itself – the scaffoldings and facades of culture, markets, houses, roads, etc. – to suit the interactive design as framed within the technological neural circuits. The other model is that of social-sharing and bonding. Jonathan Carey in his work on *Communication as Culture,* writes, 'here communication is linked to such terms as 'sharing', 'participation', 'association', 'fellowship, and 'the possession of common faith'' (1989, 34). While within the transmission model, communication technologies are viewed as a product of transactions,

creating new networks that help construct the experience of the urban, within the social-bonding model, communication is viewed as a process which shapes social relations which in turn shape the imaginations and material practices that constitute the city.

These concepts and the production of the city and technology are persuasively worked out by Michael Sorkin (1992) in his engrossing book, *See you in Disneyland.* Sorkin traces the production of the city and the end of the public sphere in an unusual and insightful reading of the production of the fantasy land of Disneyland. Sorkin suggests that Disneyland 'invokes an urbanism without producing a city…it produces a kind of aura stripped hypercity, a city with billions of citizens…but no residents' (1992, 112). Sorkin's marked reference to the urbanism of Disneyland, makes it sound like a hyperspace which straddles the two worlds of the virtual and the real. He looks at Disneyland as the production of a never-never land which is defined entirely by the technology on the one hand and the promises of cultural entertainment and meaning making on the other. For Sorkin, Disneyland is a self contained unit that houses urbanity of a different sort. He further goes on to make the argument that the Disneyfication of the world – the recreation of the world as a land of fantasy – is one of the tasks of globalised technologies like digital transnational cinema and cyberspaces.[41] While it might be an exaggerated claim that the world gets slowly and surely converted into a fantasy theme park, with consumerism, we have witnessed the creation of these fantasy pockets in the shape of the lifestyle spaces like malls and multiplexes that emerge as the masthead of the postmodern urban space in India.

[41] Arjun Appadurai (1996) turns this notion upside down to formulate that 'the whole world is a Disneyland' and that there is no outside, in the new globalised worlds being created; the conditions of production, the free and easy flow of labour and the global expanse of brand and value, have shrunk the world to become an extensive pleasure ground, Appadurai argues, where the outside is only an imagined space.

Sorkin asks the extremely difficult question of whether the Disneyland exists before the users, as a pre-given space which invites the user, or does the Disneyland get produced and sustained through the practices and the participation of the user. He looks at the design of Disneyland – a network of directions leading nowhere and everywhere, creating a linked navigation system – to define it as a space that is a self contained that allows the users to continually forget the world outside. It is in fact necessary, for the hallucination and the illusion of Disneyland, that the user willingly suspends all notions of reality and immerses in this new space to bear the responsibility of reproducing it. Sorkin identifies the user as caught in a paradox where the illusion is supposed to be pure and untainted but is caught in consumption practices that incessantly evoke symbols and objects which refer to the very world that they are trying to erase[42]. Sorkin looks at the consumption practices in Disneyland where the imaginary and 'pure' world of the illusion – the movies, the fairy tales, etc. – is surrounded by the souvenirs, collectibles, rides, economic transactions that remind the user that there is a world outside, without which the illusion of Disneyland would not survive. He concludes that at Disneyland one is always poised in a condition of becoming, always someplace that is 'like' someplace else. The simulation's reference is ever elsewhere; the 'authenticity' of the substitution always depends on the knowledge, however faded, of some absent genuine... The urbanism of Disneyland is precisely the urbanism of universal equivalence. In this new city, the idea of distinct places is dispersed into a 'sea of universal placelessness as everyplace becomes destination and any destination can be anyplace' (1992, 217).

The City and technology link also finds place in David Harvey's work on urban geography and planning. Harvey established the idea of 'Time space compression' to describe the ways in which the cities – in space and in time – have come to be reconfigured in current times.

[42].

Harvey recognises ‘Postmodernism’ and global capitalism as the fundamental forces that produce this compression of time and space. He suggests that ‘The general effect, then, is for capitalist modernization to be very much about speed-up and acceleration in the pace of economic processes and, hence, in social life. But that trend is discontinuous, punctuated by periodic crises, because fixed investments in plant and machinery, as well as in organizational forms and labour skills, cannot easily be changed’ (1989, 230). The goal of this speed-up is to accelerate ‘the turnover time of capital’ which is composed of the ‘time of production together with the time of circulation of exchange’ (1989, 229). In this process, the rapidity of time annihilates the barriers of space. As Harvey puts it, ‘innovations dedicated to the removal of spatial barriers...have been of immense significance in the history of capitalism, turning that history into a very geographical affair--the railroad and the telegraph, the automobile, radio and telephone, the jet aircraft and television, and the recent telecommunications revolution are cases in point’ (1989, 232). All these modernizations have served to make the world a smaller place, and have in the last quarter of the twentieth century connected disparate markets together in the creation of a world market with global producers and global consumers.

For Harvey, the new cities of the world are created in a state of ‘shrinkage’, where the rapid networking of the markets all around the world, has led to the imagination of the city as a paradoxical space – at once stretched across transnational boundaries and painfully shrunk as a local community; a space that transcends the spatial bottlenecks like the nation and simultaneously contained in the small waterholes of network neighbourhoods. It is in this paradox that Harvey locates a global production and cultural circulation that creates new communities and spaces with interact with each other over lifestyles, time-zones and

geographies. Analysing the effects of Satellite Television, Harvey documents the rise of the Information Systems and the distributed production of the City:

> TV news gives us in one half-hour, images, coupled with sound bites of processed information, of Palestinians throwing rocks down sun bleached streets in the middle-east, of Hutus and Tutsis swinging axes in the green southern valleys of Africa, of a face of a tupac amaru guerilla in Peru, of a Parisian drinking wine in an outdoor dinery, and of a mid-western town drowned by a flood; while the *Discovery Channel* takes us to the Himalayas on our couch; and grocery stores are filled with "Kenyan haricot beans, Californian celery and avocados, North African potatoes, Canadian apples, and Chilean grapes (Harvey, 1989, 300)

For Harvey, this mode of production and circulation of cultural forms and goods informs the space of the City, so that each city is uniquely a producer of such cultural iconography and the consumer of images and signs that emerge out of an eroded space of the urban, creating, what Sorkin calls the 'universal placelessness' (216-17).

The one thing that all these different models share in common – even though they have different disciplinary moorings is that they propose a certain cause-and-effect relationship between cities and technology, where each is independently available, and leads to a transformation when they interact. In MacLuhan's work, for instance, the city simply becomes a neutral site which does not seem to affect or shape the technological advents and the media in any form. Harvey understands the city as being produced through an economic flow of labour, capital and conditions of production. Sorkin presumes that the city is an empty form which can be shaped by the dominant technologies of the time.

Two dominant strains emerge in this discussion – One, where the city is looked upon as a physical entity, mapped, plotted, available through material practices and thus traced in its transitions with technology; Second, where the city is not confined only to its material existence but resides in the imaginations, representations, the realms of experience and the intangible flows that traverse through the city.. Both these ways of talking about the city, only reinforce the Real-Virtual, Physical-Digital binaries that the first four decades of Cyberculture studies had made popular in talking of ICT enabled forms. Instead of adding to this self-perpetuating binary, I intend to look at the space-place-technology triad in order to understand the processes that go into the crafting of a Technosocial Subject.

1.1 UNPACKING SPACE-PLACE-TECHNOLOGY TRIAD

The last few years of the emergence of ICTs in India has garnered great academic interest from various academic disciplines. Questions of the new-working class, urban restructuration, ownership, piracy, etc. have found many different approaches and analyses. However, there is a dearth of scholarship that looks at the complex relationships between spaces and technology. Despite the very central presence of spatial metaphors in the imagination and language of Cyberspace, most research falls in the strains identified above, when talking about this relationship.

The emergence of Graphical User Interface that simulates the physical places has significantly affected Computer Human Interaction and blurred the lines between physical places and digital spaces. Platforms like Second Life or the digital universes of MMORPGs have led to an easy idea of cyberspace imitating physical spaces and adding a creative re-rendering of the law of Physics in the process. Whenever the question of Technosociality is discussed, it is easily assumed that it means the creation of imitative space within digital

networks. The most visible of Web 2.0 spaces are the Social Networking Sites (SNS) like Facebook and Orkut that serve as a consolidation platform for a range of activities that people perform within and outside of technologised circuits (Boyd and Ellison, 2007). However, the SNSs share the anxieties that we have discussed in Chapter One – about questions of authenticity – and the ones that we are dealing with right now – about concerns of geography and technology. The questions of authenticity manifest themselves (and indeed serve as the fuel for peoples' incessant production of information) in the need to prove that the user persona or avatar on the SNS is genuine or authentic. Through a series of protocols like testimonials, public sharing of private pictures, of displaying friends' networks, affiliation with 'Real Life' validating structures like schools, universities, work places, belonging to groups and adherence to causes, all come into play in the production of authenticity.

The questions of geography become crucial because they serve as crucial filters for the contextualisation of data and the localisation of information as well as finding relevant and sensitive processes within the networks exploding with data streams. There is a demand upon the user to produce strong meta-data and geo-tags which reinforce the physical spaces which the user occupies and inhabits. Within the 'blogosphere' there is a certain premium on the users' geo-political location that marks them as unique or authentic[43]. The entire argument of 'alternative voices' or the political power of blogging is premised on a notion that the first hand experience of a user, documented as reportage is more authentic, less mediated and more valuable. The infusion of contextual data and the need to produce a perspective or an idea which makes a strong departure from mainstream media which operate in a certain 'universal placelessness' is a part of the excitement of citizen journalism and blogging.

[43] See the emergence of citizen journalism platforms like Global Voices (available at http://www.globalvoicesonline.org) which are predicated on this idea.

The emergence of geo-data applications like Google Maps or Yahoo Streets foreground the metadata of geographical tags to reconceptualise the internet as a space that is firmly anchored in physical geographies and terrains (Miller, 1996). Questions of privacy and surveillance also concentrate on the geographical territory and the detailed physical location of the individual. Triangulation technologies used in Cell Phones or the correlation between ISP addresses and the physical location of the user are central to the laws and regulations being developed by different State Authorities in order to fight cybercrime. These examples only bring into focus the fact that there is a way by which the notion of space and physical geographies is extremely important to the production of a Technosocial Subjectivity online. And yet, the debate is palpably missing from the existing discourse that focuses on technology mediated identities. The physical location is only invoked to reinforce the idea of universality when it comes to dealing with questions of technology mediated subjectivities. An engagement with this body of literature, especially within Cyberculture does not offer any fruitful dialogue. Hence, instead of focusing on the more traditional literature around questions of technology and space, I engage with literature about technology and subjectivity to show how the neglect of acknowledging Technosocial space undermines the otherwise sophisticated and seminal formulations.

Julian Dibbell (1994) in his landmark essay 'A Rape Happened in Cyberspace' produces an extremely cogent and useful theorisation of the 'quotidian identities' that get shaped in the virtual worlds. Dibbell analyses a particular incident that occurred one night in a special kind of MUD – LambdaMOO (MUD, Object-Oriented) – which was run by the Xerox Research Corporations. A MUD, as has been described earlier, is a text-based virtual reality space of fluid dimensions and purposes, where users could create avatars of themselves in textual representations. Actions and interactions within the MUD are also in long running scripts of

texts. Of course, technically all this means that a specially designed database gives users the vivid impression of their own presence and the impression of moving through physical spaces that actually exists as descriptive data on some remotely located servers.

When users log into LambdaMoo, the program presents them with a brief textual description of one of the rooms (the coat closet) in the fictional database mansion. If the user wants to navigate, s/he can enter a command to move in a particular direction and the database replaces the original description with new ones, corresponding to the room located in the direction s/he chose. When the new description scrolls across the user's screen, it lists not only the fixed features of the room but all its contents at that moment – including things (tools, toys, weapons), as well as other avatars (each character over which s/he has sole control). For the database program that powers the MOO, all of these entities are simply subprograms or data structures which are allowed to interact according to rules very roughly mimicking the laws of the physical world. Characters may leave the rooms in particular directions. If a character says or does something (as directed by its user), then the other users who are located in the same 'geographical' region within the MOO, see the output describing the utterance or action. As the different players create their own fantasy worlds, interacting and socialising, a steady script of text scrolls up a computer screen and narratives are produced. The avatars, as in Second Life or even on Social Networking Sites like Orkut, have the full freedom to define themselves, often declining the usual referents of gender, sexuality, and context to produce fantastical apparitions. It is in such an environment of free-floating fantasy and role-playing, of gaming and social interaction mediated by digital text-based avatars, that a 'crime' happened.

Dibell goes on to give an account of events that unfolded that night. In the social lounge of LambdaMoo, which is generally the most populated of all the different nooks, corners, dimensions and rooms that users might have created for themselves, there appeared an avatar called Dr. Bungle. Dr. Bungle had created a particular program called Vodoo Doll, which allowed the creator to control avatars which were not his own, attributing to them involuntary actions for all the other players to watch, while the targeted avatars themselves remained helpless and unable to resist any of these moves. This Dr. Bungle, through his evil Vodoo Doll, took hold of two avatars – legba and Starsinger and started controlling them. He further proceeded to forcefully engage them in sexually violent, abusive, perverted and reluctant actions upon these two avatars. As the users behind both the avatars sent a series of invective and a desperate plea for help, even as other users in the room (# 17) watched, the Vodoo Doll made them enter into sexually degrading and extremely violent set of activities without their consent. The peals of his laughter were silenced only when a player with higher powers came and evicted Dr. Bungle from the Room # 17. As an eye-witness of the crime and a further interpolator with the different users then present, Dibbell affirms that most of the users were convinced that a crime had happened in the Virtual World of the digital Mansion. That a 'virtual rape' happened and was traumatic to the two users was not questioned (Dibbell, 1994). However, what this particular incident brought back into focus was the question of space.

Dibbell suggests that what we had was a set of conflicting approaches to understand the particular phenomenon:

> Where virtual reality and its conventions would have us believe that legba and Starsinger were brutally raped in their own living room, here was the victim legba scolding Mr. Bungle for a breach of *civility* … [R]eal life, on the other hand, insists

> the incident was only an episode in a free-form version of Dungeons and Dragons, confined to the realm of the symbolic and at no point threatening any players life, limb, or material well-being… (1994)

The meaning and the understanding of this particular incident and the responses that it elicited, lie in the 'buzzing, dissonant gap' between the perceived and experienced notion of Technosocial Space. The discussions that were initiated within the community asked many questions: If a crime had happened, where had the crime happened? Was the crime recognised by law? Are we responsible for our actions performed through a digital character on the cyberspaces? Is it an assault if it is just role playing? Many of these questions are discussed in the further chapters in the dissertation. However, the crucial question of 'where' the crime was committed is of the utmost significance here.

The lack of 'whereness' of the crime, or rather the placelessness of the crime made it especially more difficult to pin it to a particular body. The users who termed the event as rape had necessarily inverted the expected notion of digital space as predicated upon and imitative of physical space; they had in fact done the exact opposite and exposed digital spaces as not only 'bleeding into reality' but also a constitutive part of the physical spaces. Their Technosocial Space was not the space of the LambdaMoo Room # 17 but the physical locations (and thus the bodies, rather than the avatars) of the players involved. However, this blurring was not to make an easy resolution of complex metaphysical questions. This blurring was to demonstrate, more than ever, that the actions and pseudonymous performances or narratives which are produced in the digital world are not as dissociated from the 'Real' as we had always imagined. More importantly, the notional simulation of place or a reference to

the physical place is not just a symbolic gesture but has material ramifications and practices. As Dibell notes in his lyrical style,

> Months later, the woman in Seattle would confide to me that as she wrote those words posttraumatic tears were streaming down her face -- a real-life fact that should suffice to prove that the words' emotional content was no mere playacting. The precise tenor of that content, however, its mingling of murderous rage and eyeball-rolling annoyance, was a curious amalgam that neither the RL nor the VL facts alone can quite account for (Dibbell, 1994).

The eventual decision to 'toad' Dr. Bungle – to condemn him to a digital death (a death only as notional as his crime) and his reappearance as another character take up the rest of Dibbell's argument. Dibbell is more interested in looking at how a civil society emerged, formed its own ways of governance and established the space of LamdaMOO as more than just an emotional experience or extension; as a legitimate place which is almost as much, if not more real, than the physical places that we occupy in our daily material practices. Dibbell's moving account of the entire incident and the following events leading the final 'death' and 'reincarnation' has now been extrapolated to make some very significant and insightful theorisations of the notions of the body and its representations online. Indeed, in the already proliferated world of cyberspaces, actions of misogyny, hatred, or dissemination of offensive material is now punishable by different laws depending upon the country of origin of the persons involved. There is an over-determination of the individual's physical presence and location which is linked to the physical location and being. Further discussions on these are taken up in Chapter 3 in the formulation of a Technosocial subject.

What is perhaps more interesting is to see how the successive theorists, and indeed Dibbell himself, could not see that these theorisations and formulations, remain unresolved and produce responses rooted in surprise because they have always avoided the idea of Technosocial Spaces when talking about Technosocial Subjectivities. Dibbell perpetuates the VR-RL dichotomies and is taken aback when the two blur. He remains, like many other cyber-theorists, rooted in the idea that the material world remains the original and the primary whereas the virtual or digital experiences are 'Technosocial'. In fact the biggest flaw in Dibbell's extraordinary account is that he looks upon the material presence and responses of the two people behind the victimised avatars as the only valid and real response. He needed to see the post-traumatic tears running down the subject's cheeks. Her cries when the act was happening, her testimonies online, her discussions and arguments were merely words or just digital acts. This leads to Dibbell and his followers not being able to account for technology mediated practices in the physical world. So deeply rooted is this bias of the physical being the primal, that they can only conceive of Technosocial Subjectivities as digital extensions of the physical self, where the physical self's actions are legitimate and valid, whereas those of the digital avatar are always only in the realms of the performative. This blindside which disallows Dibbell from examining the intricate nature of technology mediated relationships is also the root for much anxiety, fear and alarm in the contemporary unfolding of Web 2.0 practices[44].

In a very different vein, in his Science Fiction work, William Gibson draws upon this anxiety between the virtual and the real as a source of great creative tension in his narrative as well in his concepts. In his novel, *Neuromancer,* Gibson coins the portmanteau 'Cyberspace' and gives a definition that is now cult and classic:

[44] The section on 'Technology and Ecology of Fear' in this chapter focuses on this particular relationship.

> Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts...A graphical representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the non-space of the mind, clusters and constellations of data. Like city lights, receding...(Gibson, 1984, 22).

Gibson, in his imagination of cyberspace, and coining the digital matrices formed by the imagination of the networks, through the metaphor of space, fore-grounded one of the most crucial characteristics of cyberspace. For Gibson, the cyberspace does not exist *ex-nihilo*. We have been trained to look upon physical spaces as existing, as empty receptacles which can be occupied by the people who have knowledge of it or rights of access to it. While Gibson is often attributed with making the new relationships between the biological and technological not many theorists notice that even for Gibson, the division between 'meat' and 'machine' is an anxiety which is located within the tensions of the virtual and the physical spaces. In the description of cyberspace, Gibson is already falling into the trap of defining it through physical places. In Gibson's post-biological world, the virtual and the physical have become so intrinsically fused that instead of being replaceable each becomes the referent by which the other is defined. Thus, while the material practices of the body produce the place, if only to prove its inferiority, the processes of meaning making and experiences within the 'consensual hallucination' of cyberspace, are always notionally and symbolically referring to the physical place. The dialectic relationship between digital spaces and physical places continues as a crisis for the techno-narratives of our times.

However, Gibson doesn't formulate a benign, feminised cyberspace which can be moulded into whatever the users want it to become. Instead, he manages to make a distinction between the internet and cyberspaces. The internet is a technology, a common access protocol which binds together several distributed networks and allows them to talk to each other, enabling the users to travel from one network into another, treating the users as simultaneously a database of practices and a network node of transmission (Black 2010, 14). The packet switching technology that the internet uses, in fact has emerged as one of the biggest strengths of the internet. It is largely a technological feature, where the data can be now disassembled into various tiny pieces and remade, without apparent distortion at the other end. It is interesting to note that in this data-set reading of the web, the users are also reduced to a set of data streams that completely disregard their physical presence and posit them as highly mobile within these networks and databases (Black 2000, 56). The technological limitations and possibilities of the internet have their own set of transactions with the different users who engage with them. These technologies determine the architecture of the spaces that can be built using these aesthetics. These technologies also play a crucial role in containing, monitoring and storing the kind of transactions that take place within the digital matrices. The internet technologies (or ICTs, as they are more popularly known) are central to the defining of the data type, the modes and methods of transmission and the intentions that are accrued as meta-data (Schewik 2010, 97).

Cyberspace is a constitutive, though probably the most visible face of ICTs. Cyberspace is a technologised form that emerges out of the deployment of several internet technologies, for specific reasons of sharing, collaboration, networking and storage. The first generation users who have seen the emergence and evolution of ICTs and the arrival of cyberspace, still remember the pre-web days where the internet was only a series of protocols and machine

languages which were used to manipulate the computational devices to hook-up over the existing telecommunication networks (Hafner and Lyon, 1998). Cyberspace, in the history of ICTs, is a young phenomenon and is still in the process of being created, hence annually spurring new and interesting phrases like Deep Web, Web 2.0, Interactive Web, Digital cyberspace, etc. in trying to incorporate the changing face of cyberspaces and the transactions it entails. Cyberspace evolves through various different applications of ICTs, starting from email and then subsequently emerging as a tool of networking, information dissemination, archiving and narrativisation, thus realising Gibson's notion of 'consensual hallucination.' It is in this polymorphous nature of cyberspace, in the fluid range of its applications and the centrality of the users' activities to the definition of what cyberspace means, that this chapter finds the need to talk about the production of technologised spaces and Technosocial cities. In the process, it will also try to refrain from looking at the obvious spaces of technology production and access – cybercafés, IT Parks, Special Economy Zones, etc.

This section sought to unpack the space-place-technology triad as it plays out in different ways of studying technology and its infrastructure, as well as those that explore globalised lifestyles and the processes of consumption and identity formation. In the next section, I start looking at the emergence of 'Ecology of fear' in popular discourse and everyday practices of the Internet technologies, in order to look at how Technosocial Spaces are closely interrelated to Technosocial Subjects. Through three case-studies, that have been at the centre of public discourse in their own times but have garnered no academic attention or scholarship so far. In all the cases where different kinds of Technosocial Subjectivities are involved, I shall try and show how the absence of Spatial discourse and the irresolution of the anxiety between physical and virtual spaces, precludes a detailed and nuanced understanding of incidents which are otherwise deeply circumscribed in their contexts.

1.2 Technology and the Ecology of Fear

Kevin Robins, in his essay 'Cyberspace and the world we live in' (1992), looks upon the atmosphere of war and tension that new technologies of war and surveillance have produced in our daily lives. Robins further makes an argument that there has been such an explosion of technology enabled warfare and its representations – the pictures of the Iraq war, the fiction enabled by the cold war struggle for technological supremacy, the expeditions by NASA to search for life and life enabling conditions on other planets – that we have internalized and trivialized the ecology of fear within which we exist. Kevin's main point is, even as a global fight against terror seeks to fight terror and create spaces of safety, also sustain the imagination of terror in our everyday lives.

However, the imagination of the city as steeped in an 'ecology of fear' as proposed by Mike Davis in his exploration of the city of Los Angeles and how the cinematic production of disaster reinforces it, as powerful and influential ways of looking at the production of Technosocial Space. Davis's argument is useful to understand how the regiment of surveillance and security gets shaped due to such cinematic interventions. He also further demonstrates very effectively, the links between technologies and the related politics of understanding, realizing and experiencing the city. I find Mike Davis' formulation of 'the ecology of fear' particularly productive because he maps the apparatus of the state and its processes of surveillance and regulation as a necessary part of the 'cinema effect'. The model is interesting because the government, despite being a stakeholder in the infrastructure development and regulation of cyberspaces, has never featured very actively or prominently in discussions of Technosocialiy. So strong is the rhetoric of agency and choice when it comes to looking at technology mediated subjectivity, that very little attention is paid to the

different actors who are centrally important to the shaping of Technosocial spaces and subjectivities.

The anxiety of the irresolution between physical and virtual space and the complex ways in which Technosocial Spaces are created differently from the kind of assumptions that inform Dibbell's analyses, are better demonstrated in a particular series of incidents that have unfolded in the recent past in India. I focus on two specific cases, both of them, incidentally associated with the Social Neworking System web portal Orkut that has found huge popularity in the country. In both the cases, I hope to show, how without factoring in the notion of a Technosocial Space, neither the incidents nor the way they were received and interpreted, can be accounted for, both in the unfolding of the events as well as the media reportage that followed. Moreover, I hope to show that the idea of the physical, the spatial and the technological are necessary contexts within which the Technosocial Subjects can be conceived of and various interested stakeholders can be made visible.

The first of the cases resembles the 'Rape' that Dibbell discusses, in that it was a 'crime' that was committed within the realms of cyberspace with symbolic or notional references to the RL outside of it. The processes by which the 'crime' was detected, reported, recognised (and determined as crime) and the subsequent steps that were taken by various authorities are the elements that make this case of interest. In October 2006, following a petition filed by Aurangabad based Advocate Yugant R Marlapalle, the Aurungabad branch of The Bombay High Court sued Google for the alleged spread and dissemination of material that was categorically and unequivocally 'anti-Indian' and promoted hate-speech against 'Indian ideology' and governance, through its Social Networking Site Orkut (The Times of India,

2006)[45]. Marlapalle had come across many different groups within Orkut which professed to be Anti-Indian. One particular community which was called 'We Hate India' and had the picture of a burning Indian National Flag, drove him to filing a PIL which demanded that such material be censored and that the person(s) responsible be located and punished for their 'crime' against the country.

The formation of such a group and the members who were affiliated to it (even though there was no confirmation that either the creator of the group or the members who joined it were Indian) was looked at as a specific act of terrorism and proper actions were demanded to be taken against them. The same article dated 10th October 2006, further reports that '[t]he petition has also appealed to the government to appoint a `controller' under the Information Technology Act-2000 to regulate all such communities being in operation on the internet' (The Times of India, 2006). Under legal attack, Google immediately agreed to comply with the Government's 'request' to aid them in locating the miscreants who were responsible for these actions. Following the legal case, Google issued a notice which stated that Google was not responsible for the dissemination of material or the quality of the content that was posted on its sites. The statement that Google issued, further added

> When dealing with requests from authorities, we are very careful to balance the interests of our users while still being as cooperative in the investigation and prosecution of crimes as possible. Authorities, including those in India, are required to provide appropriate legal process in order to get user-identifying information. Google has very high standards for user privacy and a clear privacy policy (The Times of India TOI, 2006a).

[45] The short article can be found here http://articles.timesofindia.indiatimes.com/2006-10-10/india/27793827_1_networking-orkut-google

Whether or not Google was right in thus giving access to the authorities to look beyond the pseudonymous structures of the cyberspace, is a secondary question. The important and more immediate concern is Google's recognition of a particularly jurisprudent authority over the international social networking community of Orkut. Instead of attempting to resolve the question of virtual and physical space which is crucial to the understanding of terrorism or particular kind of hate-crime, it immediately dislocated the anxiety of place on to the body of the user; the Technosocial Space became a question of the Technosocial Subject; the question of 'Where' became a question of 'Who'. The lack of resolution for the relationship between the notional space India and the Sovereign Geo-Political State could not be resolved. Immediate questions which have been asked of the body and digital cyberspaces were to be asked here as well: How do we determine that the India that is referred to, largely symbolically and in a larger context of role-playing and performance, is the same India that demanded for a blocking and curbing of these impulses? If the user is not located within the sovereign India, can his/her actions still be contained by the Indian State?

These questions very clearly demanded a certain resolution or at least addressing of the anxieties around virtual and physical spaces and their relationship with technology. Since then Google faced similar confrontations in China, where, as Siva Vaidhyanathan (2011) shows in his book *The Googlization of Everything*, it was asked to present certain material about history and historical accounts in their censored, State approved form. Since early 2010, it has withdrawn its services from China and the domain name google.cn now takes you to the google.hk servers residing in Hong Kong. Google was able to make this transition and put up resistance to demands of State censorship in China, and portray itself as a hyper-spatial structure that guards the privacy and rights of its users (Vaidhyanthan, 192).

Google was faced with a problem that threatened to affect, both its credibility as the world's largest information company and its stake in the emerging markets of China (Lovink and Reimens, 2010). Favouring the physical location of data would have reflected in a steep decrease in the number of users who would be concerned about the ownership of their own data, transactions and privacy. A decision that defied the State's sovereignty and insisted on holding back data or assistance would have resulted in decrease of privileges and befits that the Indian government has been offering to ICT Multinationals investing in India. At the same time, it was necessary to reach a resolution which would untangle the legal proceedings. Unlike in China, where it acknowledged the hyper-territorial nature of cyberspace, Google eventually accepted the sovereignty of the Indian State. However, it did so to map the anxieties and the tensions on to the body of the user and accepted the sovereignty of the State, not on the geographical location but the physical bodies – the Technosocial subjects – inhabiting that location.

The laws that were unable to transcend the geographical limitation of their jurisdiction, eventually led to regulation of the body of the user which was considered more mobile and subject to better control. New directives were established so that the Internet Service Provider (ISP) as well as the hosting websites, were asked to provide with the personal information of the user(s) who might be involved in 'activities that were anti-India (The Hindu, 25th November, 2006). The anxieties of virtual and physical space re-emerged as an anxiety about cyber terrorism or technology enhanced violence at the hands of a potentially harmful individual who posits a threat to the geographical space s/he lives in. According to this formulation, 'a person who 'performs' a narrative event in the cyberspace becomes at par with the person(s) who might actually perform the action' (IT Act, 2008). The easy conflation that cyberspaces provide – that of blending action and speech; something that resonates

Dibbell's argument around the 'performance' of rape in LambdaMOO – the performative elements of the users were overdetermined into being the realised act, thus including such activities into the ever widening sphere of the ecology of fear that ICTs have inspired.

The other cases, now notoriously dubbed as 'Orkut Death' perhaps complicate these questions even further to demonstrate how the emergence of a Technosocial Space forced the bodies of the Technosocial Subjects into the processes of regulation and containment. The first of the cases I discuss is chronologically second but demands immediate attention for the exact corollary it provides to the 'I Hate India' case. It is the tragic and unfortunate death of a young teenager Adnan Patrawala, who was abducted and strangulated to death in Mumbai in 2007. The events that led to the death of Adnan Patrawala are now the stuff that urban legends are made of. Conflicting multiple reports, misrepresentations by the popular media and irresponsible journalism coupled with technophobia, have obscured the exact details of this 'Orkut Death.'[46] However, a reconstruction from popular media reports gives us some information which can be deemed as facts.

We know that sixteen year old Adnan Patrawala, a resident of Mumbai, had a profile on Google's Social Networking System, Orkut. We also know that in one of the many random encounters that are characteristic of social web, Adnan was approached by a female avatar who went by the name 'Angel', and that she expressed her desire to meet him after declaring that she found him attractive[47] . We know that Adnan, after some initial hesitation, agreed to meet 'her' on a blind date. These facts are available from the publicly visible scraps that

[46] Contrary to what the name suggests, the case did not refer to an incident of death that occurred on Orkut in the manner of the snuff-videos that had gained cult status on video sharing social networks like Youtube or even the notional death that the toading of Dr. Bungle indicated in the LamdaMoo community.
[47] As reported on Rediff news, available at http://www.rediff.com/news/2007/aug/21teen.htm

Adnan and 'Angel' had exchanged. What happens hereafter has many different stories[48]. However, almost all the stories coincide on a few points. It is known that the night Adnan went to meet Angel, August 18th 2007, somebody deleted all the scraps between the two of them (Indiatime, August 23, 2007). It is known that on the same night Adnan called his parents from his cell-phone to tell them that he was out with his friends and was going to be out all night. The parents confirm that on the next morning, they received another call from Adnan's cell-phone, by a caller who refused to identify himself and demanded two crore rupees as ransom for their alleged kidnapping of their son. The Police confirm that Adnan's parents, who first thought it was a prank, soon got repeated calls from the same number and hence sought the help of the police, registering a case with them. After the registration of the case, Adnan still got an opportunity to talk to his parents, assuring them that he was not hurt (TOI, 25th August, 2007).

On the same day that the parents registered the complaint about the kidnapping of their son, television news channels caught on to the story, made it their feature and announced to the entire world about how Adnan had been seduced via Orkut and kidnapped by his 'friends' on Orkut. The news was aired on almost all the major news channels in the country and was reported on different websites and the National daily newspapers. The stories ranged from mildly fantastic to wildly speculative, all insisting that the Police had a clue about the abductors. Once the news became public, Adnan's parents received no more phone calls from the kidnappers. The police was still working on revealing the identity of the kidnappers. On the 20th of August, the police finally recovered Adnan's body, strangulated to death and left

[48] The report on LiveIndia webportal (available at http://www.liveindia.com/news/21aug07.html) suggests that Orkut had no role to play but that the first interaction happened in a gaming centre in suburban Mumbai. The local news site Merinews, (available at http://www.merinews.com/article/orkut-brought-death-for-adnan/126031.shtml) ran an article titled "Orkut brought death for Adnan". Several other news articles and TV channels produced different versions of this event. The reconstruction has been done through looking at the reports in the English daily newspapers, internet sites and TV channels in India, over a period of three weeks

in his own car. The tragic story got channelled into yet another round of media fetishisation and was immediately dubbed as an 'Orkut Death'. Further statements from Adnan's friends and family accused the mainstream media and the police of prematurely releasing the news of his abduction, thus creating a panic attack for his kidnappers and forcing them to murder Adnan without waiting for the ransom. Four of Adnan's online friends were eventually nabbed and put to trial. The news shocked the country and Adnan's Orkut profile, which was cleaned of all his earlier conversations, was flooded with people expressing disbelief, comfort, condolences and shock at the tragic story of a young boy who 'died on the internet'[49].

There are many significant areas of discussion and speculation that the Adnan Patrawala case threw open for public debates. One of the most talked about questions was the one of safety and caution on the internet[50] Different stakeholders from conservative political parties and local leaders appeared on thirty second television capsules either demanding a shutting down of Orkut (and other such social networking systems) or for higher amount of censorship (including proof of birth and documents while registering with Orkut) and supervision online[51]. Orkut itself was filled with many communities that paid Adnan a tribute, offered fond memories of him and also raged with speculation about the identity of the murderers and the punishments that they should be meted with.

The phrase 'Orkut Death' captures my attention because it provides a case in contrast to the narrative that Dibbell was building in his story of how a Rape happened in cyberspace. In the

[49] Adnan's scrapbook and profile remain on Orkut, now manned by his brother who responds to peoples' messages, Available at http://www.orkut.co.in/Main#Scrapbook.aspx?uid=14160249575654797975
[50] For example, the debates on the discussion forum at RxPG on 'How safe is Orkut?" available at http://www.rxpgonline.com/modules.php?name=&file=viewtopic&t=71407&start=60&postdays=0&postorder=asc&highlight=
[51] See for example the story where BJP demands a state ban on Orkut, available at http://www.dnaindia.com/mumbai/report_bjp-demands-state-ban-on-orkut_1118586

case of LamdaMOO, we saw how a 'crime' that was committed on cyberspace was actually linked to the real bodies and the spaces of the people who were behind the abused avatars. Moreover, the lack of placelessness of the space where the crime was created, did not acknowledge either the punishment or the possible emergence of civil structures as anything more than notional or symbolic. In the case of the Orkut Death, the crime was committed and orchestrated entirely outside of the realms of cyberspace. There was never any conclusive evidence that the avatar of Angel was linked to the 4 young men the police finally attributed the crime to. Apart from the fact that Adnan had come into contact with his would-be killers through the social networking system Orkut, there was no other way in which Orkut could be held responsible for what happened.

The crime, both the kidnapping and the subsequent murder, happened in the physical world, in the city of Mumbai, and was definitely a crime. And yet, the mobilisation of the facts and the coverage that this particular case received, always, in all narratives, was attributed to the digital spaces. The tragic and untimely death of Adnan Patrawala, perhaps fuelled by some very irresponsible media behaviour, was labelled as an 'Orkut Death' as if his death happened on cyberspace; as if the real material death had direct reference to his notional or symbolic presence in his avatar on Orkut. Ironically, a few days after his death, another profile, using the same picture that Adnan had on his profile, and using the same name sprouted on Orkut. The digital Adnan continues conversations with people who write to him. Just like Dr. Bungle could reincarnate himself as Mr. Jester, it was possible for a notional reincarnation of Adnan Patrawala, who also found recreation of his quotidian identity in the many different digital shrines and memorials that are set up in his memory[52].

[52] A Universal Search through communities on Orkut reveals at least 25 communities, across different categories like "Religion and Beliefs", "People", "Individuals" etc. devoted to Adnan. The search can be accessed at http://www.orkut.co.in/Main#UniversalSearch?searchFor=C&q=adnan+patrawala

The anxiety about the irresolution of virtual and physical space is also visible in the reception of Adnan's kidnapping and murder. The necessity to bring in Orkut into the picture and attributing the crime to the particular portal is not simply technophobia. It is in fact a symptom of the larger problem at hand – the grey areas and interstices that exist between RL and VR, between the virtual and the physical. The case like the Orkut Death only reminds us of the fact that this anxiety between RL and VR has not really been resolved. It has merely been deflected and emerges in different forms of regulation, control and censorship. I would suggest that for a majority of the communities demanding justice and seeking a sense of closure, the legal resolution of punishing the murderers was inadequate because their experience of the case existed in a grey zone between the virtual and the physical where the actions in one realm do not necessarily foreclose the possibilities in the other. It is this lack of resolution, rather than the fear of the unknown or a lack of understanding of technology, that adds to the cultivation of the ecology of fear around technology and the city.

The Second Case of the death of Koushambi Layek only demonstrates the same pattern of irresolution and anxiety, but even more mystifying in its attributes to Orkut. Koushambi Layek, a 24 year old woman, who was employed with an IT firm, met Manish Thakur on a train when she was travelling for work (TOI, 12th June, 2006). The first interaction led to attraction and then a very public 'affair' which was reflected in their very personal and intimate exchanges on Orkut. After a fairly long period of being in a relationship, Koushambi came to discover that Manish was actually a married man and had children. Heartbroken, she confessed all to her friends and family and tried to sever her relationship with him. However, Manish was not ready to take the rejection and persuaded her to come to meet up with him. They checked into a hotel together and in the middle of the night, Manish strangled Koushambi and shot her with his Navy Service revolver. He left the scene of crime only to be

nabbed by the police who tracked him down from his Orkut profile and his exchanges with Koushambi. In this particular case of 'Crime of Passion' (The Times Of India, 17th June, 2006), Orkut actually became instrumental to the law enforcing agencies in discovering the culprit and nabbing him. As in the other Orkut Death, the crime itself was committed outside of the digital domains. The different systems of interaction and the public nature of the interactions between avatars led to a quick resolution of the case and the mobilising of the mechanisms of justice.

And yet, just like in the other case, the closure still seems to be absent. There are still communities that ask for 'justice' on the behalf of Koushambi. Thousands of users have joined communities that offer condolences and tribute to the young woman's memories. Many still use the particular incident for political purposes – asking for censorship, restricted access and abolition of pseudonymity on online structures. These same protestors do not stage any protests against the railway, where Koushambi and Manish met for the first fateful encounter.

This lack of resolution as well as the attribution of a physical world crime to a virtual world system brings back the questions of Technosocial Space into focus. It helps in strengthening the idea that the anxiety around virtual and physical space contributes significantly to the Ecology of fear that emerges in talking about space-place-technologies. It also goes on to show that the notion of Technosocial Space is not as simple as it has been accepted in popular discourse. Technosocial Spaces are not merely imitations or simulations of RL into VR but are shaped through a series of transactions and practices of the human in its interactions with the Technological.

There are yet other incidents which also follow these patterns, becoming urban legends where the facts of the crime and the reporting or the reception of it and the anxieties it generate are not necessarily about the crime itself. The story of the 'Bangalore Techie' being robbed on his way home[53], the horrific tale of a female call-centre employee raped by the cab-driver who was responsible for dropping her home late in the night[54], the narratives of couples being harassed and mugged in remote areas of the city – have all become a part of the techno-narratives of the city, repeatedly bringing back narratives of the IT industry into central discussions and debates. And while these anxieties have been perceived of, as anxieties of the Technosocial Subject, it is evident that they are primarily anxieties about the Technosocial Space. Technosocial Spaces become the contextual lenses through which the shaping of the Technosocial Subject can be understood and they need to be acknowledged in the discourse around production of a Technosocial Subjectivity.

2. Blurring The Boundaries

We have so far looked at instances where the phenomenon was in the physical world and the attributions were to the digital dimensions. While these go against the popular grain of imagining Technosocial Spaces, I do not want to propose another hierarchy between the virtual and the physical spaces. It has been the ambition of this chapter to think of Technosocial Spaces as spaces in transaction and emerging in the dialectic between the virtual and the physical. The cases we have seen so far have been about the critical role that physical spaces have played in the crises that happened 'online'. We have also looked at how the digital and internet technologies become central to our understanding of urbanism that

[53] Story available at http://www.dnaindia.com/bangalore/report_techie-robbed-by-three-member-gang-in-bangalore_1561813 What I want to foreground is how the fact of his being a 'techie' becomes important.
[54] The story is available at http://www.dnaindia.com/india/report_call-centre-girl-raped-and-killed-by-cabbie-in-b-lore_1002626 and illustrates the ecology of fear that is drawn around IT related businesses and lifestyles as well.

even when we have events that happen in the physical spaces, we attribute them to the virtual spaces augmented by technologies. In these cases we do not have a direct mapping of one space on to another; there are no points of correspondence and equivalence and hence the coupling of the two produce the tensions that help craft the concept of Technosocial Spaces and the imperative to factor them when talking of Technosocial Subjectivities.

When the virtual and the physical do start resembling each other, a new dimension emerges to the Technoscoial Spaces. I want to begin by talking about a phenomenon that did not happen in India but is seminal to understand the blurred boundaries of RL and VR. I treat this story as a pre-cursor to the more contextualised discussion of flashmobs that appears in the later part of the section.

In September 2007, the Rapresentanza Sindacle Unitaria IBM Vimercate (RSU), the official trade union representing IBM's 9,000 workers in Italy, called for a strike against the company's violation of its Corporate Social Responsibility (CSR) and denying the fruits of its massive profits to its employees. The RSU sent a statement to *The Register* that said,

> While IBM is one of the company [sic] with major profits, its employees are receiving very few fruits of this big mountain of money.
>
> The internal climate is below all the IT industries (taking advantages for the famous IBM's competitor: HP), and the drop that overflowed the glass is the long and inconclusive negotiation for the internal agreement.

What made this strike particularly interesting and garnered great attention was the fact that RSU had proposed, in an unprecedented move, a strike on cyberspace rather than in the 'real world.' Instead of demonstrations and physical protests outside the IBM buildings, the RSU

harnessed the powers of social engineering and presence of IBM's employees online, especially in the (MMORPG), Second Life, to call for a virtual strike, where the employees and supporters of the RSU's demands were invited to join the avatars in picketing and protesting outside IBM's presence in Second Life.

Second Life (SL for short) is a Massively Multiple Online Role Playing Game that has taken the virtual world by the storm. More than 25,000 users within Second Life, collective spend about 6,000 hours every day in producing simulations of life, bodies, property and economic transactions. Second Life is a graphic evolution of the MUDs that Sherry Turkle studies to look at, in her eponymous book, *Life on the Screen* (1996). It is one among several virtual worlds that have been inspired by the cyberpunk literary movement and in particular by Neal Stephenson's novel *Snow Crash* (Stephenson, 1993). SL adopted Stephenson's idea of *Metaverse,* a user-defined world in which people can interact, play, do business, and otherwise communicate. Actually, SL was intentionally designed to be an environment completely constructed by its users (Boellstorff 2010). Created in 2001 by Linden Lab and launched in the public in 2003, it registered a skyrocketing diffusion, and in a very short period its users outnumbered those of any other similar environment (at the moment SL counts about 7 millions registered users from all over the world, among them more than half a million are very active (Boellstroff 2010, 4).

SL users are represented by motional avatars, which are the medium used to interact, explore, socialize, participate in individual and group activities, etc. SL users define themselves as "residents": it is noteworthy that this term suggests an idea of "citizenship". As a matter of fact, early residents felt strongly about their belonging to the synthetic world, and they organized in public demonstrations to counteract specific policies or rules adopted by Linden

Lab they did not agree upon (this happened, e.g., when residents were being charged for objects they created in-world: a protest has been set in-world, sending out a Thoreau-style proclamation against Linden Labs (Rymaszewski et al 2007, 282). Since SL was conceived as an empty world, its internal building system is powerful and easy to use (compared to other similar 3D development tools). It allows manipulation of geometric primitives: residents – alone or collaboratively – can mould these "prims" into new shapes, change their texture and physical qualities, link them together for creating objects as complex as they like, add contents (e.g. text, multimedia, etc.) or make them interactive through a scripting language (48). Content creation in SL involves skills like graphic design, three-dimensional modelling and programming. The ability of users to learn the relatively easily programming language and to create objects on their own made *Second Life* particularly popular. Creation and crafting is an intriguing component of SL: it attracts so many users and has played a relevant role in SL success. Actually, it was by engaging its users in the act of creation that SL produced an environment different from others virtual words: residents become producer-consumers (similar to the thousands of people who are mixing their own music, making their own movies or publishing their own art or texts on the Internet).

Many MUDs and MMORPGs have contents that were – and continue to be – built primarily by their users (Lastowka & Hunter, 2004; Turkle, 1996), but they imply at least two major constraints to creativity: objects and contents should often be tuned with the environment (e.g. medieval or science fiction) and the creator does not have any intellectual property right on them. On the contrary, following endorsements by Professor Lawrence Lessig from Stanford University, in the Linden Lab's Press Release (2003) [55], SL residents preserve their intellectual property rights on each object or content they create in-world, and these objects

[55] The Press release by Linden Labs, announcing their growth and success patterns to shareholders, is available at http://lindenlab.com/press/releases/03_11_14

can be sold or bought using a virtual currency (Linden Dollar), that can be traded for US Dollars according to a fluctuating rate of exchange. Lessig argues,

> Linden Lab has taken an important step toward recognizing the rights of content generators in Second Life . . . As history has continually proven, when people share in the value they create, greater value is derived for all. Linden Lab is poised for significant growth as a result of this decision (Lessig, in Linden Lab's Press Release, 2003)

There has also been a reassertion of the fantastic and the 'alternative' nature of Second Life that subscribes to the ideological moorings of Free Software and Open Source movements that have expanded hand-in-hand with the consumerist cyberspaces. Political protests, petitions, communities and discussions on Second Life are analysed more as indicative of crises elsewhere – as if the Secondary nature of Second Life makes it never more than an extension of the Primary Reality within which the physical users behind the avatars are situated – and symptomatic of the changes that happen in the world around us. The discussions, debates, peer-2-peer networking, the viral passing of information and the creation of new nodes and forms of information on Second Life, are all clubbed under what Tim O'Reilly (2007) calls the 'architecture of participation'.

Laura Ripamonti, Ines Loreto and Dario Maggiorini (2008), in their exploration of Multi User Virtual Environments make a case for these activities as not merely disrupting the analogue narratives but also augmenting RL. Quoting gaming theorist and new media practitioner, Edward Castranova they look upon the distinction between the 'synthetic' and the 'virtual' as counterproductive to the understanding of the interactions. They posit that 'as

synthetic and actual worlds overlap, intersect' they interact to 'augment each other, instead of being counterpoised... (through) concepts like *identity, relationship* and *place'* (pg. 3)

While looking at the ways in which identities, spaces and realities overlap and blur, they observe that, (as in the case of the IBM strike) 'people using SL often experience a sort of "double belonging" that mixes together the actual and the synthetic places: for example, residents can interact through avatars present in a synthetic places while sitting in an actual place and discussing with other residents about actual life or work life issues' (pg. 13)

What the IBM[56] strike in Second Life has in common with the Orkut Death or the Rape in LambdaMOO is that all of them produce identities that seem to be constantly straddling the virtual and the real in their conditions of technologisation. Moreover, they encourage an element of role-playing and appropriation of space – physical or otherwise – to use it for unauthorised or deligitimised purposes. The strike in Second Life is obviously a form of protest and what makes the mode of protest interesting is that the employees were going to use the company's own presence and resources on Second Life to protest against it. It also draws our attention to a new playful, almost irreverent trope of political participation that young users of technology seem to develop and embody as a part of their digital engagement. While the contexts differ widely and the strategies are informed by the contextual variables, there seems to be an ethos of playfulness that engagement with cyberspaces seems to shape.

[56] IBM made its presence felt in Second Life as a service and products provider, identifying Second Life as a potential market force. It also encouraged its own employees to spend time on Second Life, exploring the possibilities of virtual marketing and brand placement. It was imagined that the employees spending more time within this simulated world would encourage a strong community building and social networking within the organisation while simultaneously granting more visibility and cultural capital to the organisation. It was this particular availability of the platform, the pseudonymous nature of the avatars who populate the universe of Second Life, and the possibility of picketing and protest as a gaming aesthetic – residing within the interstices of the real and the virtual, the physical and the fantastic – that led to the RSU calling for a strike in Second Life. Unlike the physical strike that would have resulted in only a handful of employees to actually join the demonstrations, the strike in Second Life invited avatars from all around the globe, to come and join the protests as an endorsement to the ideologies and ideas that the RSU was fighting for.

The IBM strike highlights two crucial points that I have been trying to make in this chapter: First, that Technosocial Spaces cannot be understood as cyberspaces and cyberspatial activities that 'overflow' in to the physical world, providing points of disjuncture, and creating conditions of incomprehensibility. Instead, a more nuanced understanding of the relationship between technologised environments and the physical spaces needs to be formulated. Second, cyberspaces cannot be simply read as extensions of earlier forms but crucially developing new methodological and reading tools that force us to revisit earlier sites of technological intervention like space, body and subjectivity.

A growing discourse in urban studies, architecture and geography has also located Technosocial spaces in the physical and material infrastructure that accompanies the rise and growth of Internet technologies in the country. The renewed emphasis is on the significant alteration that these technologies usher in as new market economies open up and IT cities, Mega Cities and Special Economic Zones (SEZ) are brought into being. New physical spaces of consumption – malls, multiplexes, shopping complexes, body shops, cafes, IT parks, etc. – are also under scrutiny and a cause-effect relationship has been established as a popular mode of scholarship over technology and space.

While the emergence of the aforementioned new structures are interesting and signify a particular change that Fredric Jameson (1991) recognises as the arrival of the post-modern, it is necessary to realise that these structures are more the effect of a transition rather than producing the changes. These 'spaces of technology' help in unravelling the politics, aesthetics and mechanics of the technology mediated practices and subjectivities when they are de-contained of the development and infrastructure discourse that surrounds them. It is

the ambition of this chapter to read them as contexts within which Technosocial Subjects craft their sense of belonging, identity and community.

I propose that it might be necessary to revisit the relationship between space/place and technology through the idea of Technosocial Spaces as has developed in this chapter. The last section of this chapter focuses on flashmobs and their short lived but interesting history in India, to wrap up this argument and forward a case about how not only is the dialectic between virtual and physical spaces important in the understanding of Technosocial Subjects and their practices but that they also shape and inform the scholarship, public perception and regulatory processes which are blind to the tensions that they create. In the process I shall also uncover a new aesthetic of digital and Internet technologies- of gaming, playfulness and cultural subversion - that the Technosocial subjects are embodying as a part of their everyday practices.

2.1 The Anatomy of a Flashmob

The flashmobs in India were literally a flash in the pan. They have had a very short lived history and have been generally dismissed as a fad. Bill Wasik, the man who is attributed with starting the first flashmob using digital technologies, himself intended the flashmobs to be an exercise in 'doing something new' to study the 'hipsters' who form this particular form of social collective (Wasik, 2006). The anatomy of a flashmob is simple enough. Different people, who are connected with each other through various technologies and technologised platforms but are not familiar with each other, are invited to participate in a particular activity that is minutely defined and hosted at a public place. A flashmob is a collective of people who organise at a public space, conduct a series of activities that are not in the logic of the space, and then disperse, leaving in their trail, a bewildered audience. Flashmobs trace their

history to the early 18th century industrialisation, when a group of women working in the labour shops in Australia used coded messages to meet and discuss the problems they had in their workplaces. These meetings were organised at random, and the women used the very technologies of production that they engaged with at work on a daily basis to fight the oppression and the injustice of the people at the top (Wasik, 2006). The first modern flashmob, however, is attributed to Bill Wasik, editor of Harper's Magazine, who, after the first failed attempt (May, 2003), managed to pull a successful flashmob where 200 people swarmed over the mezzanine floor of the Manhattan departmental store Macy's, pretending to buy a 'love rug' for their commune where they supposedly all lived together; they left a bewildered audience and a bemused store staff behind them (3rd June, 2003). Till Wasik, in 2006, revealed his experimental design to study flashmobs, they were variously discussed as an art form, as an act of viral community formation, as a physical embodiment of the MMORPGs, and as internet-fads that became appropriated by political processes (Nicholson, 2007)[57]. Wasik's declaration did not really change the reception or the momentum that the flashmobs had gathered internationally but did prove that the way the flashmobs harness the networking powers of cyberspaces, has already exceeded Wasik's own imagination or design.

The protocols and processes that Flashmobs use have now become the mantra for understanding Web 2.0 social platforms and has also been used as a way of harvesting information for different projects. This is what Jeff Howe, as we discussed in the earlier chapter, identifies as 'Crowd Sourcing'. On a similar note but looking in more detail at the ways in which collaboration, co-creation and mobilisation happens online, is James Suroweicki. In his fascinating book *The Wisdom of the Crowds* (2005) explains this way of connecting, mobilising and participating as a new form of viral and social networking which

[57] Available at http://journal.fibreculture.org/issue6/issue6_nicholson.html

leads to people congregating in new virtual or physical spaces as peers who work collectively towards transforming the world. The crowd sourcing model is at the basis of peer-2-peer networks like Thepiratebay[58] and CouchSurfing[59] that have globally overturned the Intellectual Property Rights regimes and formed extraordinary care communities respectively. Collaborative Knowledge production sites like Wikipedia and Adavark serve as strong exemplars of the Wisdom of the Crowds. However, for this dissertation, I shall focus on the Flashmob as offering the most productive engagement with the questions we have been discussing.

2.2 Smart Mobs

Perhaps one of the most interesting studies of such collectives facilitated by technologies, is by Howard Rheingold, who coined the term 'Smart Mobs' (2000) in a book by the same name. While Rheingold's own interest is in studying the effects of community formation and the potential of the digital networks to form collaborative chains of interaction, sharing and computing, his work lends itself to some very interesting formulation about the phenomenon of flashmobs.

Smart Mobs, as Rheingold imagines them, are a range of people who are distributed across various time zones and lifestyles, hooking up their computers to form a network of shared interest. In an earlier formulation, studying the text-based communities emerging out of an increasing population growing up with cell-phones and communicating through interface-to-interface communication in text – text messages, Internet Relay Chat (IRC), MUDs, etc., he posited the notion of 'Real-time Tribes' where

[58] The bittorrent based file sharing website can be accessed at http://www.thepiratebay.org
[59] The online community that seeks to provide free hosting and hospitality to travelers world wide, also relies on a p2p structure for its community building. It can be accessed at http://www.couchsurfing.org

> ‘thousands of people…are joined together at this moment in a cross-cultural grab bag of written conversations known as Internet Relay Chat (IRC). IRC has enabled a global subculture to construct itself from three fundamental elements: artificial but stable identities, quick wit, and the use of words to construct an imagined shared context for conversation’ (23).

In *Smart Mobs,* Rheingold looks at the changing nature of human interaction and community formation, from Finland to Japan, as new generations grow up in the age of mobile computing and fluid social dynamics, living increasingly, on the interfaces of their portable devices of communication and interaction. In a slightly lyrical mode, Rheingold imagines users from around the world, hooking up their computers in a network that emerges out of common interests and needs. He imagines a community of users who are not only capable of intelligently interacting with their digital devices, harnessing the powers of computing to augment their own identities, but also capable of distributing their own efforts across a vast network in order to form new collectives with people they might never physically meet.

Rheingold suggests that the people who make up smart mobs co-operate in ways never before possible because they carry devices that possess both communication and computing capabilities. Their mobile devices connect them with other information devices in the environment as well as with other people's telephones. Dirt-cheap microprocessors embedded in everything from box tops to shoes are beginning to permeate furniture, buildings, neighbourhoods, products with invisible intercommunicating smartifacts. When they connect the tangible objects and places of our daily lives with cyberspace, handheld communication media mutate into wearable remote control devices for the physical world. While Rheingold’s work is more about the future of social technology, and hence often ends up in the realm of

intelligent prediction of what the current trends might lead to, there is one aspect of Smart Mobs which is of particular interest to me.

In his earlier work (1993) , and even in the rest of the book, Rheingold thinks of these 'Real-time Tribes' as residing in the virtual networks of the cyberspace – IRC, Blogs, Text messaging, et al. However, in his study of the text-based interactions in younger users of mobile technologies, Rheingold posits the necessity of certain physical, digital and cultural infrastructure that needs to be in place for these virtual communities to sustain themselves (2003, 45). Rheingold observes that the various forms of open wi-fi devices require wi-fi connections so that the younger users, who often use their shared networks for dating and finding friends, form collectives or cults around the current objects of obsession (52). These networks also work like the 'grapevine' where information is constantly transmitted, back and forth, changing nature with each transmission, often taking the form of 'myth making' (102). Because of the territorial nature of such information and the immediate need to 'hook-up' with other people, these communities are also contained within the immediate localities that the users inhabit (190). More than that Rheingold also speculates that the spaces that the users in the Smart Mobs mark out for themselves, often get produced and recognised as important on having the potential for social collective which otherwise escapes attention (198).

Rheingold himself does not dwell on this production or the marking of the space. His focus is in looking at the material practices of technology and community behaviour and hence the question of space as being produced or inflected by technology, apart from appearing as the backdrop for the staging of digital communities and transactions, escapes his analyses of Smart Mobs. However, it is this very dissonance which has escaped most of the analyses of

these collectives – blogs, IRC[60], smart mobs, flashmobs, social networking systems, MUDs[61], MMORPGs – that I intend to focus in my analysis of flashmobs in India. Most theorists of digital collectives have, while they have celebrated the 'escape from the tyranny of place' (Wilbur, 2000, 44) in the formation of these collectives, have often neglected the paradox of network neighbourhoods or gated communities or the physical architecture that houses and supports these collectives.

While Rheingold is able to locate the mechanics of flashmobs in various local and cultural contexts, providing a layered history for the origins and the proliferations, the implications and ramifications of these phenomena, he is unable to either resolve the virtual-physical space anxiety or to acknowledge that this anxiety remains critical to the understanding of flashmobs. Instead, like a majority of the theorists in Cyberculture studies, Rheingold also takes the resolution as granted, unable to observe, in his own work, how the unresolved (and unacknowledged) tensions of virtual-physical spaces are central to the very politics and aesthetics that he locates in Smart Mobs.

2.3 At the Crossroads: India's First Flashmob

I reconstruct the story of the first flashmob in India to demonstrate the centrality of the virtual-physical space dialectic and to see how it contributes into the shaping of the Technosocial Subjectivity. In the year 2000 a shopping mall in Mumbai created a furore amongst the people. It was the first 'genuine' shopping mall in India. The first all American

[60] Elizabeth Reid's graduate dissertation on *Cultural Formations in Text-Based Virtual Realities* (1994) is one of the few studies that look at the rootedness of space and the relationships that emerge with Internet Relay Chat in a particular geographical context.

[61] Even Sherry Turkle, whose analysis of the aesthetics and dynamics of cyberspatial relationship in the book *Life on the screen* (1996), is probably one of the first accounts of the lives that are lived on the MUDs and the lives that are affected by the MUDs, does not engage with the physical spatiality or the texture of the communities which are thus produced. Like most discourse on Cyberculture in that time, Turkle's work also celebrates the MUDs and the new potentials that they have to offer rather than analyzing the ways in which these potentials are being realized.

Shopping mall – Crossroads, with its promises of unlimited pleasure and brand-tagged shopping opened up in Mumbai in the new millennium and attracted the largest crowd in its first opening week. When the mall was finally opened, there was a strict filtering process by which access was granted to the public desirous of gaining entry. As the director of the mall pointed out in his interview, 'Crossroads is not meant for everybody' (*The Times of India* August 23, 2000). In those days when cell-phones were still a novelty and definitely a curio for the upper classes Crossroads passed a stipulation which restricted entry for people not carrying a cell-phone or a credit card unless they paid an entry fee of Rs. 50.

On October 4, 2003, the mall again came into unexpected public attention. This time it was an email that started it. About 5,000 original mailers went off to people all around Mumbai and even beyond the city, to go and have a look at a new blog for Mumbai flashmobs. The blog had a form which took name, email and mobile phone number. On the 3rd of October several cell phones rang, asking people who had submitted their details in the form, to check their inboxes. The eager expectants received a mail that agonisingly chalked out the time and space for a venue – a Flash site. SMS were also sent to all the members who had volunteered. And then at exactly 5:00 p.m. a group of about 100 participants moved in to Crossroads[62].

As reporter and participant Bijoy Venugopal (2003) documents the event, at the Crossroads Flashmob, the mobsters screamed at the top of their voices and sold imaginary stocks for a large Indian Corporate house. They danced the traditional garba dance that has emerged as one of the largest fads in popular Hindi Cinema. They all froze still in the middle of their actions. And then without as much as a word, after two minutes of historic histrionics, they opened their umbrellas and dispersed, leaving behind them a trail of bewilderment and

[62] Following a Public Interest Litigation, the mall eventually acquiesced to granting entry to the common public, only reserving its rights to admission at a notional level.

confusion. This was India's first recorded flashmob. People who never knew each other, did not have any explicitly suggested political purpose and did not really intend to extend relationships, got together to perform a set of ridiculous actions at Crossroads. They had come together for some serious fun, but they unknowingly marked Crossroads as a space that will be remembered as the site that hosted the first flashmob in India.

This flashmob at Crossroads was the first of many around the nation – most of them marking out spaces like multiplexes, shopping malls, gaming parlours, body shops, large commercial roads and shopping complexes as their flash sites. This similarity in flash-sites, no matter what the motivation for the flashmob, is something that might offer a first clue for the earlier discussions about the relationship between virtual and physical spaces. Is the flash-site a Technosocial Space? Is it possible that the flash-sites are a way of transforming public space into cyberspace? A more detailed reading of the flashmob, the structure of a flashmob and the events that surrounded India's first flashmob at Crossroads in Mumbai, might offer answers to these questions.

While a lot of subsequent flashmobs in India were propelled by specific politics and activism, the first flashmob was looked upon, by the organisers, the participants and the authorities as 'just some fun'. The organisers of the flashmob who started the website and sourced inspiration to the Macy's Flashmob in New York went out of their way to suggest that the particular Crossroads flashmob was an extension of the 'fun and games' aesthetics that the digital technologies bring with them. One of the most celebrated accounts of the flashmob was by Bijoy Venugopal, a serious blogger and writer, who also reiterated the fact that the intention of participation was to have some 'serious fun' (Venugopal, 2003). Subsequent experience-sharing by other members of the flashmobs also endorsed the idea that the

flashmob was like an extension of online gaming or the tenuous digital communities which are a part of the lifestyle choices and social networking for an increasing number of people in the large urban centres of India. The Flashmob seemed to carry with it all the elements that digital cyberspaces have to offer – a sense of tentative belonging, a grouping of people who seek to network with each other despite having nothing in common – a point of departure from the earlier understanding of political groups or social communities which were structured around commonalities and interests. The possibility of forming communities of technologies, gives a growing sense of a need to 'enchant' the otherwise quickly mechanised world around us, and an exciting space of playful interventions. The flashmob also carried with it the anxiety of irresolution of conflicts. It was, simultaneously an MMORPG as well as a physical mobilisation of a group. The flashmob existed, even in the reports of the participants or the subsequent discussions by theorists, as a paradox, not clearly defined or easily made meaning out of.

Flashmobs as emerging out of these technologised platforms, foreground this relationship between space and technology that overrides the earlier formulations of space and its production. I now propose to read the first flashmob in India through this mapping of the production of a Technosocial space and Subject, to see how it produces incomprehensibility for legal and technology studies.

2.4 The flashmob, the flash-site and the legal order of things

The flashmob at Crossroads gained huge media coverage and local buzz and was talked about and debated upon quite furiously in popular media. The organisers of the flashmobs became instant celebrities and were questioned repeatedly about the reasons for organising the flashmob. The answer was always unwavering – the organisers insisted that the flashmobs

were a way for them to instil fun and novelty in the very hurried life in Mumbai. On the website, Rohit Tikmany very passionately argues:

> We are not making any statement here - we are not protesting anything - we are not a revolution, a movement or an agitation. Our purpose (if any) is solely to have fun… None of us is here for anything except fun. We will not have any sponsors (covert or overt) and we will never respond to any commercial/political/religious influences. (Tikmany, 2003)

There was a particular and specific disavowal of the 'political'. The organisers went out of their way to assert that they do not have any political cause that they endorse, that they are not affiliated with any socio-political organisations or parties in the city, and that their actions were guided only by the desire to have some fun and games.

The flashmob presumed that participants were equipped with technological capital; they were informed about the flashmob through the internet, they were all expected to have cell-phones through which the flashmob was orchestrated, they were all expected to be conversant with English and have the cultural capital that enabled them to not only enter but also appropriate the awe-inspiring space of Crossroads for their performance. This was an indication of the rise of the new generation that was augmented not only by the possession of the ICTs but also by a certain lifestyle of consumption and networking that were hand-in-hand with the globalisation in India. In a shade of irony, these were the very people – Americanised, cosmopolitan, with a disposable income geared towards increasing consumption, in possession of cell phones and probably credit cards, in the premium market demography of 18 to 35 years – who were posited as the ideal consumer of the space of Crossroads before it reluctantly threw its door open to the Everybody.

The participants of the flashmobs, in their attempts at having fun, demonstrated how they could harness the power of collaborative technologies and the potential of networking that the ICTs and the corresponding cyberspatial forms had to offer. The blog, the email, the text messaging on the cell-phones – all newly emerging faces of the web and the proliferation of technologies in India – were all involved in the orchestration of the flashmob at Crossroads. In fact, one of the novelties of the flashmob and the coverage by popular media was about how technology is replacing the older public spaces of interaction and conglomeration and producing new channels through which, people otherwise unfamiliar with each other, form networks of commuinication and mobilisation.

This particular strain of argument is well documented in William Mitchell's informed speculations and analyses in his book *Me++* (1996). Mitchell proposes that throughout history, humans have created unique physical spaces in which to live, work and socialise. However, the digital age has transformed the ways we live, think and communicate with others. We don't congregate at the town bank any more for financial transactions. We visit ATMs or bank online. Interactions that once required people to face each other now take place via computer, often across vast distances (48).

Mitchell describes the disappearance of familiar public structures like phone booths, as well as the migration of work from office to just about anywhere a wireless connection is possible. As technology becomes imbedded in our lives and literally disappears into the woodwork, Mitchell sees the possibility for new kinds of extended communities. Network technology has enabled 'discontinuous, asynchronous global agoras' (109), says Mitchell, exemplified by the most recent Gulf War protests. Organizers used digital space (email lists and websites) to help orchestrate public gatherings, which in turn generated images fed back to the Internet,

spurring interest in country after country, time-zone after time-zone. Mitchell believes that such networks open up new methods for human assembly and political organisation, but also increase the risks to individuals of surveillance (132).

David Bell, in his preface to *The Cyberculture Reader* also indicates the recognition of technology replacing and taking over earlier spaces of interaction and communication. Focusing specifically on spaces of Computer-Human Interaction (CHI), where our daily life is often defined by the practices that we perform in relation to the world of machines and the spaces that they are housed in, Bell suggests that there is a certain way in which earlier forms of transaction (largely economic) and interactions (largely interpersonal and social) are inflected heavily by the new technologies that surround us, not only in terms of direct access to the internet or the World Wide Web, but through the earlier technologies themselves – cinema, television, gaming, medicine – which are also increasingly relying on new digital technologies and ICTs in their practices. Bell paints a large canvas to look at several instances which are now under the purview of what Arturo Escobar referred to as 'Cyberculture'. Bell looks at how an individual is in a technologised state of being while

> [t]aking Viagra, or [engagement] with a pacemaker, or riding a bike, or withdrawing cash from an ATM, or acting out their fantasies as Lara Croft in the latest Tomb Raider game or as a Nato bomber pilot blitzing Kosovo, or anyone watching footage from Kosovo live on the late-night news…(ix, 2000)

He does not make a direct argument around the production of these spaces and the rise of ICTs. He does not analyse the relationship that technological forms and the aesthetic that they emerge with the aesthetic and the architecture of these spaces. Bell is more interested and focused in looking at how these different technologies shape human interaction and processes

of realising the self. Bell's elucidation of these crucial mechanics of urban survival, and the inclusion of these spaces in one of the first readers of Cyberculture, is indicative of the need to look at the anxious relationship between technology and space.

In less than a fortnight after the first flashmob in Mumbai, it was banned in the city of Mumbai. The Mumbai police invoked the Bombay Police Act (the Prohibition Orders) Section 37(1), which makes it a criminal offence for any collective of more than four people for a common cause within the city to meet without prior police permission, and specifically relegated the flashmobs, within Mumbai, to the realm of illegality. The Mumbai Flashmob, following the intimation from the police chief to Rohit Tikmany, one of the organisers, was suspended until further notice. Subsequently 14 other cities in India, after witnessing flashmobs, also banned flashmobs as detrimental to the 'safety situation in the city' and the 'sanity and security of public life' (Mid-day, 9th Oct. 2003). In the final reports on the suspension of the flashmobs, Rohit Tikmany mentions how the police authorities in Mumbai asserted that they were not 'anti-fun' but that the flashmobs were 'worsening the security situation of the city' (Mid-day, 12th Oct. 2003). Though a few of the mobsters insisted on flouting the law and still continuing with the flashmobs, there were no concrete actions taken.

The flashmobs, in themselves, had no illegal element to it. Though they followed a certain fantasy filled role-playing gaming aesthetic, the very nature of the flashmob, the people who constituted it and the political disavowal, made them an extension of the cyberspatial aesthetic that the Indian State was inviting and encouraging as a part of its globalisation processes. And yet, they came to be not only recognised as dangerous and threatening but were also subsequently and rapidly banned across the country.

The invocation of the Bombay Police Act to ban flashmobs means that the flashmobs were seen to disrupt the security, safety and everydayness of the places they mark as flash-sites. I suggest that the flashmobs, in their attempt at making the place and its experience incomprehensible, foreground the place/space anxiety and force us to revisit it, thus feeding very strongly, into the ecology of fear. The flashmobs, with their mobile cyberspace networking, their gaming aesthetics and their very immediate, material and physical presence, create 'ordinary' places into those grey zones that exist between the VR and the RL. It is this very incomprehensibility or the ability to transform, even though momentarily, the narrative conditions and the material experiences of public places that the flashmobs embodied in their unfolding. It was then no wonder that they were immediately looked upon as threatening and had to be contained using the judicial powers despite their lack of explicitly stated political agendass Trying to ban flashmobs by rendering them 'illegal' is merely a symptom of how the technology mediated place-space anxiety can once again be differed to the future. It is seeking to resolve the crises of place/space by favouring the physical over the virtual, the place over the space, over-determining the possible meanings, function and usage of places.

The short history of flashmobs in India, clearly demonstrates three different layers of incomprehensibility that the flashmobs bring to the processes of producing and imagining the new urban spaces of globalised consumption. And at the heart of each of these layers are the dialectics and anxieties introduced by the emergence of Technosocial Spaces:

First, that the flashmobs, which are a cyberspatial form that overflow into the physical world and appropriate physical sites into sites of fantasy and gaming, social networking. They reiterate the dialectic between the virtual and the physical and demonstrate, with the use of digital and internet technologies, that Technosocial Spaces are an essential context to making sense of digitally inflected internet practices. It is not only an accidental characteristic of the

flashmob that it produces bewilderment and mis-recognition of the spaces and actions for the audience, and often for the mobsters themselves. It is necessary for the flashmob, even if it is only for fun, to restructure that space, even though for a short period of time, in conditions of utter chaos and lack of meaning. As a product of new digital technologies of information and communication, the flashmobs inherit the ability to produce momentary and fragmented activities that can be immediately archived and layered in the historical narratives and semantic layers of the spaces that they inhabit. Flashmobs are able to highlight the Technosocial space not as the celebrated space of the IBM strikers in Second Life or the pathologised experience of the Okrut Deaths. Instead, they place the Technosocial spaces and practices in a grey, unresolved zone of contestation and negotiation. The threat that is recognised in the unfolding of the flashmobs is not in their ability to mobilise unprecedentedly, large groups of connected people – something that was actually celebrated and applauded in the Tsunami Bloggers – but in their showcasing of the crises that ICTs produce in their interaction with the cities.

The second level of incomprehensibility that the flashmob produces is about the violation of the intent and the abuse of the spaces that they mark as flash-sites. The connections between technology and the circuits of illegality are not new. Even before digital technologies came to the fore, there was an imagination of spaces entrenched in the cultures of copy where copied and pirated material was available for public consumption. The arrival of the photocopying machine and then the emergence of the video cassette culture led to significant marking of spaces that housed, physically, these copies of the originals, that violated the sanctity of the original and the copyright laws that were in place to protect the original. However, these spaces were always contained in small pockets which could regularly be monitored and disciplined. For instance the Palika Bazaar at Connaught Place in Delhi or Burma Bazar at

KG Road in Bangalore, have always been identified as the interfaces where transactions of piracy can be traced. The physical existence of the pirated copies that these spaces housed and the economic acts of buying and selling of the pirated copies immediately marked these sites in conditions of illegality enabled by/premised upon technologies of copying and duplicating. Moreover, these spaces fit into the logic of technology infused illegality that is a part of the urbanism experience. However, with digital technologies and especially the rise of the ICTs, these physical spaces no longer remain the only spaces that can be identified as spaces of theft or piracy. The proliferation of ICTs and the easy access to new technologies has de-territorialised the zones of piracy.

The flashmob at Crossroads brings to focus the nature of Technosocial Spaces and how they are contextually produced with the emergence of internet technologies in India. They challenge the easy rhetoric of lifestyle spaces and make visible the dynamic interaction between the physical and the virtual spaces. The flashmob revisits the anxieties that we have been discussing around Technosocial Spaces by emphasising that the material practices and the embodied Technosocial Subjects need to be located in such spaces. It shows how a certain condition of negotiation and transaction emerges in our interactions with internet technologies on an everyday basis, that produce the contexts for understanding the phenomenon of Technosociality, both in regards to space as well as subjectivity.

3. RECONFIGURING TECHNOSOCIAL SPACES

In this chapter, I have re-mapped Technosocial Spaces in a way different from how they are described or theorised in contemporary literature that focuses on relationship between internet technologies and physical spaces. I began by showing how, in most literature within Cyberculture discourse but also across different disciplines seriously engaging with the emergence of Internet technologies, there has been a bias towards the physical spaces over the virtual ones. There has been a theorisation of the virtual or cyberspaces as extensions or imitations of physical spaces. Technosocial spaces have been generally identified as virtual spaces with referents to a physical reality. I further demonstrated how, this easy presumption of knowledge about Technosocial spaces runs throughout the most influential literature on technology mediated identities and subjectivities. Also, this presumption which is integral to the larger theorisations is contested, challenged and exploded by the practices within the geo-political urban contexts of India. It showed how Technosocial Spaces cannot be taken as universally homogeneous but are shaped by the local contexts and the unique set of circumstances that surround them. By looking at case studies from recent past in India, I examined how the notion of Technosocial Space is invoked in everyday understanding, practices and policies in the country. The section ended by concluding that the Technosocial Spaces are not exclusively in the physical or virtual domains and attempts at producing cause-and-effect relationships are not very fruitful.

The second section made a point of departure from these VR-RL binaries and instead started looking at how Technosocial Spaces are at once physical and virtual and produced in the transactions between the two. The Technosocial Spaces were posited as being made intelligible by looking at the practices of the people who inhabit them. It also made a case for the factoring in of Technosocial Spaces as essential to our understanding of Technosocial

Subjectivity. In looking at the case of the flash-mobs in India, I sought to present an analytical method of approaching technology mediated phenomena by not only looking at the unfolding of the events but in acknowledging the production of the Technosocial Space and the role that different stakeholders have in the shaping of such subjectivities.

Different moments of crises that create the ecology of fear, at the level of the experienced local and the imagined global, also have implications for the production of the cyberspaces and a regulatory mechanism around the access, distribution and proliferation of the related technologies. In identifying the presence of cyberspaces outside of monitors and access screens, PDAs and portable computing devices, this chapter hopes to position technology and technological forms as a constitutive part of our physical world. These Technosocial spaces shall occur in further discussions in different chapters – in debates of censorship and regulation, in discussions of piracy and terrorism, in formulating a cyborg identity, and in looking at the relationship between the State and the Citizen in exploring the processes of e-governance and administration.

This chapter wanted to emphasise that conceptualising Technosocial Spaces allow for a framework that makes a departure from the virtual-physical debates that proliferate in Cyberculture. I proposed a framework of Technosocial Space that helps in providing an account of how the IT Cities and specific spaces of consumption and lifestyle therein are created. Technosocial Spaces additionally, find their meaning not only in their spatial unfolding but in the practices of the Technosocial Subjects who inhabit it in a temporal, historical and embodied context. Technosocial Spaces thus become sites of dynamic interactions where they gather intelligibility and meaning from the Technosocial practices and subjects and also offer They become the grounds upon which the technologised

enablement of specific tasks, bodies, labour markets and nations, particularly how their intersection with city spaces, governmental regulation and lifestyle options, leads to the production of Technosocial subjectivities.

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Chapter Three │Beyond Cyborgs: Technosocial subjects

The literature and scholarship reviewed and analysed in the first two chapters shows the human-technology engagement as one of agency, choice and will. In almost all literature around the technosocial, especially in Cyberculture but also in larger Social Sciences, there is a presumption that the Technosocial subjects have the vocabulary, the choice and the will to engage with and use technologies in their everyday lives. This presumption is facilitated by the imagination of a technosocial subject as a 'user' of technology. Much of the discourse (from looking at practices online to the formulation of a Digital Native identity) is centred on the idea of the technosocial subject as a power user, only interacting with technologies through the Graphical User Interfaces available on various portable computing devices. Literature which focuses on engagement as more than usage and adoption is more an exception rather than the rule. Po Bronson (1999) in his quest to find The Nudist on the Late Shift, in an eponymous book, brings to attention the lack of discursive attention to the people who are producers and often form the support and infrastructure for digital technologies to proliferate. In his book, Bronson uses his journalistic skills to uncover the people who, during the dot com fever in 1999, became legends in the inner circles of the Silicon Valley – people who were not only in intimate relationship with technology but shaped the very platforms and ideas that fuelled the expansion of the Internet. As he lyrically writes in the beginning of his book,

> By car, by plane, they come. They're just showing up. They're giving up their lives elsewhere to come here. They come for the tremendous opportunity, believing that in no other place in the world right now can one person accomplish so much with talent, initiative, and a good idea. It's a region where who-you-know and how-much-money-you-have have never been less relevant to success. They come because it doesn't

> matter that they're young, or left college without a degree, or have dark skin, or speak with an accent. They come even if it's illegal to come. They come because they feel they'll regret it the rest of their lives if they don't at least give it a try. They come to be a part of history, to build the technology that will reshape how people live 5 or 10 years from now. They come for the excitement, just to be a part of it. (3)

Bronson's book finds resonances with the historical work done by Katie Hafner and Matthew Lyon, who, in *Where Wizards Stay up Late* (1998) seek to map the people and ideas that shaped the internet in its early days. However, his work puts greater emphasis on the idea that the unfolding of technology is not merely about the people (consumers / costumers / users) who use it but also about the different circuits of finance, governance, policy, regulation, creativity and ideation, and that there is another kind of technosocial subject who creates the interfaces and mitigates the markets, the public and the personal in the production of these interfaces. While Po's own journey is in looking at the aspirations and desires, dreams and motivations of the people who flocked to Silicon Valley to be 'a part of history', what is interesting to this dissertation is the new dimension it adds to the understanding of the technosocial – the need to de-contain the technosocial subject from the consumption grids s/he is established in and start looking at a more fundamental and philosophical question about the conditions of being human and the technologies of realising the self.

There is an exploration of the technosocial that looks at body-machine, mind-technology engagements to see what the different kinds of technology mediated identities produced are in our socio-political landscape. Though the vocabularies and categories differ from that used in social sciences and Cyberculture discourse, the interests and ambitions are in deep synergy with the growing interest in technosociality. In this chapter, I look at the interventions that come from the disciplines of applied Philosophy and allied social sciences, but also from

Artificial Intelligence, Robotics, Science-Technology Society Studies and Science Fiction and fantasy literature. The attempt is to see how they help in re-configuring the technosocial subject as they deal with the category of The Cyborg.

The emergence and rise of the category of cyborg has captured the public imagination and has been central to the formulation of Technology's presence in our lives. This chapter charts out the debates in these fields to show how it helps in contextualising and conceptualising the Technosocial subject, and in the process, also examine the blind-spots that an overemphasis of the cyborg identity produces in the literature. It is the intention of the chapter to expose the presumptions that inform the approaches to defining a 'technosocial subject' and suggest a new model of exploring it. Subsequently, it seeks to show, through a case-study, how the recalibrated idea of the technosocial offers more insights into the complex nature of human-technology interaction than the more popular emphasis on the cyborg.

1. Of Cyborgs

The cyborg, a combination of hardware, software and wetware, stands as one of the most visible figures of the cybernetic age. A portmanteau of two words: cybernetic and organism, the term cyborg refers to a biological being with a kinetic state that can be transferred with ease from one environment to another, able to adapt to changing environments through technological augmentation. The first living Cyborg that stands at the roots of the technologised genealogies was a rat. Manfred Clynes and Nathan Kline, two astrophysicists, in 1960, thought of a 'hybrid - organism' system (a rat with an osmotic pump) that provided biological stability to an organism in response to its constantly changing environments. In their paper in *Astronautics* they wrote:

> For the exogenously extended organizational complex…we propose the term 'cyborg.' The Cyborg deliberately incorporates exogenous components extending the self - regulating control function of the organism in order to adapt it to new environments.
>
> (Clyne and Kline, 1960:1)

This definition notwithstanding, the cyborg is most commonly thought of in a futuristic vein, escaping the confines of the physical body and recreated through various digital enhancements and imaginations.

While it is not the intention of this chapter to map the ever-growing field of Cyborg Studies, there are a few texts which have helped frame the concepts and ideas that are analysed in my argument. Fiona Hovenden et al in their edited reader on *The Gendered* Cyborg were the first to look at the engendering of everyday bodies through digital technologies. Looking at a range of questions from the site of the female body as an inspiration for feminised representations of monstrous technology to the axes of discrimination that emerge in women's access to technologies of production and reproduction, Hovenden et al help locate the cyborg as a lived reality rather than a conjecture of the future. Robbie Davis-Floyd and Joseph Dumit, in their edited anthology *Cyborg Babies: From Techno-Sex to Techno Tots,* produce a new context for the cyborg. They look at cyborgification, not as an agential interaction between a person and the technology apparatus around them, but as a condition of technologisation which forms the very ideas of our being human. Essays in the collection examine how young children anthropomorphise gadgets they play with and internalise their behaviour as their own; how medical interventions at the level of eugenics and reproductive health shape certain imaginations of life as mediated by technology; and how the very

processes of sexual intercourse and conception are regulated, shaped and proscribed by the technologies that we live with.

In Robert Mitchell and Philip Turtle's edited collection *Data Made Flesh*, are the first explorations of destabilise the human-machine hierarchy by looking at data realities and data subjects – accounts of how the use of data create and mediate our experiences and life. They showed how production, regulation and proliferation of databases inform our understanding of our biological, social, economic and political transactions. Chris Gray's work on *Cyborg Citizen: Politics in the Posthuman Age* is one of the first inquiries into the challenges that the cyborg as a citizen would posit to forms of governance, politics and regulation in the future. In his *Cyborg Handbook* he delineates the various practices of cyborg beings, marking points of departure from earlier accepted forms of behaviour and transactions which get complicated with the emergence of the cybborg. Gregory Benford and Elisabeth Malartre, in their path-breaking work on *Beyond Human: Living with Robots and Cyborgs*, marry some of the concerns within robotics with the questions from Social Sciences, to look at what it means to co-habit spaces with machines and robots. Their work draws from speculative fantasy as well as innovations within Robotics to see how we need to understand our often hidden transactions and relationships with machines and technologies that serve us and facilitate our daily interactions. All these works have added to the debates that this chapter addresses. However, they do not particularly tackle the questions at hand and hence, while I owe intellectual debt to them for understanding cyborg behaviour and contexts, I do not engage in a more detailed dialogue with them.

With the emergence of the World Wide Web, the cyborg has strategically evolved in our imaginations as a metaphor of our times. We are already in the age where the 'first living

cyborg' (Warwick, 2000: 15) has announced his arrival. In his autobiography *I, Cyborg,* Stephen Warwick, a professor of cybernetics and robotics, unveils how he became the first human cyborg through a series of path - breaking experiments. He begins his narrative by saying, 'I was born human. But this was an accident of fate - a condition of time and place. I believe it's something we have the power to change' (Warwick, 2000:5). Cyberculture theorist David Bell, in his preface to *The Cyberculture Reader,* locates the cyborg in 'the crucial mechanics of urban survival' (Bell, 2000: xxi) that produce everyday cyborgs through digital transactions and technologically augmented practices. Sherry Turkle, looking at the experiments in genetic engineering and reproductive practices, traces the processes of 'cyborgification' in the production of 'techno - tots' (Turkle, 1998: 154) - a new generation of designer babies who have been augmented by technology to have the perfect genetic composition. Because of the emphasis of the physical-biological body and its centrality to the process of cyborgification, the disciplines like genetic engineering, artificial intelligence, biotechnology and medical life sciences have contributed greatly to the imagination and formulation of the cyborg. Questions of ethics, patents, medical experiments, and resources to create new forms of organisms – clones, hybrids, cybrids; organisms that are, in their very genetic construction and DNA modification, inflected and designed by technology – have raged across popular and academic discourses in the last three decades.

We have many instances of cyborgs produced at different stages of evolution, ranging from the embryos created through genetic experiments to people with pacemakers installed in their bodies, being theorised as different variants of the imagined cyborg identity. While these interventions have been interesting, I go back to Escobar's understanding of the 'techno-bio-cultural' environments, to examine the lopsided theorisation and emphasis in the discourse around cyborgs, where the technical and the biological are under close and often glorified

scrutiny, while the cultural and the social configurations of the cyborg identity (what we have been exploring as technosocial Subjectivity) are scarce and underrepresented. This section looks at some of the seminal theorists who have managed to rescue the cyborg from the realms of fictional representation and bodily mutations and experiments, and focused on the technosocial identities, cultural practices and material implications of what it means to be a cyborg. As we saw in the discourse around Technosocial Spaces, this chapter shall analyse processes through which everyday cyborg identities are tenuously produced with new digital technologies and technological forms being internalised by a generation that is growing into and with the help of digital and internet technologies. The section draws from academic scholarship, science fiction narratives and physical practices of people in India to look at the ways in which internet technologies and cyberspace platforms become an integral part of peoples' subjectivities, thus locating everyday cyborgs in contemporary times – cyborgs who are available in technosocial contexts rather than as fictional characters existing only in science fiction and futuristic imagination.

1.1 Configuring the Cyborg

The cyborg, as fashioned by science fiction narratives, cinema and cartoons, conjures images of human - machine hybrids and the physical merging of flesh and electronic circuitry. Different representations of the cyborg abound science fiction narratives in print, film, animation and games, from reengineered human bodies showcasing fin de millennia nostalgia for large robotic machines of power and strength to sleek and suave microchip implanted silicon integrated human beings who work in their artificially mutated enhancements. The cyborg has covered a wide imaginative range from looking at a happy human - machine

syndissertation to a degenerate human body made grotesque by machinistic implants[63] to a rise of a potent cyborg community that threatens to overcome the human world of biological certainty and mortality: Some of the most famous instances of cyborgs in popular narratives illustrate this wide spectrum; from anthropomorphised robots like Maria in *Metropolis* (Fritz Lang, 1927) to digital avatars that precede the physical body like Lara Croft in the *The Tomb Raider* series (Toby Gard, 1996); from users craving for the hyper-reality of cyberspace like Case in William Gibson's *Neuromancer* to people awakening to their reality as a fiction produced by technology like Neo in *The Matrix Trilogy* (The Wachowski Brothers, 1999 - 2003)*;* from heroes straddling the digital and the virtual world simultaneously like the cartoon character Johnny Quest (Hannah - Barbara Cartoons, 1996 - 97) in the eponymous animated series to everyday digital avatars created on social networking sites and MMORPGs[64] like Second Life.

The diverse range of subjects identified as 'cyborgs' is demonstrative of the ambiguity and the ambivalence that surrounds this category. While it is possible to identify these different examples as nuanced forms of technology-human interactions like Android, Bionic people, etc. it is interesting that they have severally been looked at as cyborgs within popular and scholarly discourse alike

[63] It is interesting that almost all the imaginations of cyborgs in sci-fi have been imaginations of a broken or a failed cyborg. The cyborg, though heroic in nature, was also tragic in some way. This leads to interesting possibilities of tracing cyborgs in everyday world. Instead of looking at the immediate consumers of internet and globalization – the urban elite, it might be fruitful to also look at the cyborg in unexpected places – in city scapes of slums,in urban rural and underground communities that the city houses, and in the migrant labour populations that get internally dislocated with the building of IT Cities..

[64] MMORPG – Massively Multiple Online Role - Playing Game is a genre of gaming in which a large number of players interact with one another in a virtual world. The MUDs that Sherry Turkle studied can be looked upon as the direct antecedents to MMORPGs like Second Life and War of Warcraft – two of the most popular gaming platforms in current times.

Arjun Appadurai (1996), in his formulation of 'post – electronic' modernity, explores how electronic media offer new everyday resources and disciplines for the imagination of the self and the world. Appadurai writes,

> Thus, to put it summarily, electronic mediation and mass migration mark the world of the present not as technically new forces but as ones that seem to impel (and sometimes compel) the work of the imagination. Together, they create specific irregularities because both viewers and images are in simultaneous circulation. Neither images nor viewers fit into circuits or audiences that are easily bound within local, national, or regional spaces. (Appadura 1996; 4)

He argues that the individual body and its ownership are wedded to the logic of capitalism and the notion of ownership that characterised most of the 20th century. Appadurai suggests that the body becomes a site of critical inquiry and contestation because a capitalist state grants the individual the rights to his/her body and the choice to fashion that body through consumption patterns. Looking at patterns of immigration and the ways in which the mobile and stationary bodies of immigration react to the mass-mediated world, he argues,

> There is growing evidence that the consumption of the mass media throughout the world often provokes resistance, irony, selectivity, and, in general agency. Terrorists modeling themselves on Rambo- like figures (who have themselves generated a host of non-Western counterparts); housewives reading romances and soap operas as part of their efforts to construct their own lives; Muslim family gatherings listening to speeches by Islamic leaders on cassette tapes; domestic servants in South India taking packaged tours to Kashmir: these are all examples of the active way in which media are appropriated by people throughout the world. T-shirts billboards, and graffiti as well as rap music, street dancing, and slum housing all show that the images of the

> media are quickly moved into local repertoires of irony, anger, humor, and resistance (Appadurai 1996, 7).

When talking of Technoscapes, Appadurai suggests that '*Technoscapes* are the landscapes of technology. They refer to technology as both high and low, informational and mechanical, and the speed at which it travels between previously impassible boundaries' (23). Appadurai uses the idea of *Technoscape* to imagine a fluid and transmittable topography of technology, where the 'different transactions and the identities formed online, have material consequences in economic flows and societal formations' (38). In such a landscape, Appadurai suggests that 'identities are no longer solid, but become fractured, in that we no longer have to choose the identities or accept the ideas of the local community. We are actively choosing our programming based on that which is available to us' (49). This becomes an interesting way of dealing with the cyborg in an information technology space. While the cyborg may choose to act in a manner most appropriate or relative to the cultures and geographies it is embedded within, that is no longer the only programming option available to it and thus it can look beyond immediate cultural arenas.

Appadurai posits the idea of a technologically enhanced sphere of activities and identity formation that defy the processes of capitalism and produce new instabilities in our understanding of subjectivity. For Appadurai, life in the 20th Century had become highly deterritorialized due to the increased movement of people, things and information.. Subjectivities thus produced become 'more virtualized as well as schizophrenic in that people are continually jumping across time and space, bound but unbound to any one place, moment, or register' (78).

Cyberspace has become such a site where the individual body, marked in its being (genetically, biologically, socially, and culturally) and circumscribed (by the physical, reluctant, and cumbersome), can free itself from the relentless materiality of a capitalist set of reference points, to create a truly global self and a universally accessible space. Katie Hafner and Matthew Lyon, in their comprehensive history of the origins of the web, mention how, in 1968 Joseph Carl Robnett Licklider and Robert Taylor, who were research directors of the United States of America's Department of Defence's Advanced Research Projects Agency (ARPA) and who also set in place the first online community (ARPANET), prophesied that online interactive communities

> will consist of geographically separated members, sometimes grouped in small clusters and sometimes working individually. They will be communities not of common location but of common interest (Hafner 1996, 44).

This prophesy was realised by the end of the twentieth century, as scholars announced the construction of the 'discontinuous, global agoras' (Mitchell, 1996, 27) and the arrival of 'the new commons' (Liang, 2005) shaped within the technoscapes of the internet. They posited the imagination of the internet as the new public sphere of communication, interaction and collaboration where the cyborg requires different skills to materially exist on the intersections of various domains. With the popularisation and democratisation of new digital technologies of information and communication (ICTs), we see a certain evolutionary production of the cyborg as an increasing number of people interact with digital spaces and sites and adopt mobile gadgets of computation and information dissemination as an extension of their bodies. The cyborg, as it is conceived with the presence of cyberspace in our everyday experience of urban life, is different from the more hyper - real, hyper - visible constructs within the fictional narratives.

1.2 Making Of A Cyborg

The range of human-machine relationships has been diverse and varied. We might not be complete cyborgs but we do deal with 'intimate machines' (Turkle, 1996), we live in 'cyborg societies' (Haraway, 1991, 12). The cities that we live in constantly remind us of the machinations that we are dependent on; sometimes using this to blind us of our dependence on the technology, sometimes to make it starkly visible. Military and space technologies are using new forms of organism-technology to produce unprecedented forms of cyborgs in our daily lives. We deploy technologies that frame our daily survival at the flick of casual buttons and switches, clicks and thoughts.

Such a view of naturalisation of the cyborg as an intricate but simple coupling of organism and machine is where the idea of technosociality comes prominently into play. With the emphasis on the practical production of cyborg bodies, very little attention has been given to the cyborgification of life and the kind of complex and crucial socio-political contexts of cyborg subjectivities. Katherine Hayles, in her essay 'Life of Cyborgs: Writing the Posthuman' in a collection of essays titled *The Cyborg Handbook* (1991), makes an argument about the rampant proliferation of technologisation in the USA. Hayles is particularly interested in the health care practices that increasingly perform corrective surgeries, implanting the human body with prostheses or other accessories that improve the quality of life and are often cosmetic in nature. Hayles treats this condition as a step towards the evolution of a post-human world. For Hayles, the ability of the new medical sciences, to imagine the human body, not as the sacred Renaissance reified structure but as a system that needs to be operated upon, bettered, fighting 'nature' with 'science/culture', is a continuing story of human evolution towards a futuristic world. As she observes,

> Cyborgs actually do exist; about 10% of the current U.S. population are estimated to be cyborgs in the technical sense, including people with electronic pacemakers, artificial joints, drug implant systems, implanted corneal lenses, and artificial skin. A much higher percentage participates in occupations that make them into metaphoric cyborgs, including the computer keyboarder joined in a cybernetic circuit with the screen, the neurosurgeon guided by fiber optic microscopy during an operation, and the teen gameplayer in the local videogame arcarde. "Terminal identity" Scott Bukatman has named this condition, calling it an "unmistakably doubled articulation" that signals the end of traditional concepts of identity even as it points toward the cybernetic loop that generates a new kind of subjectivity. (Hayles, 322)

Hayles' formulation of this kind of cyborg is more nuanced than the list that Bell or Hables produce. She is indicating that the construction of the posthuman (however problematic that category might be) is at least not a solipsistic self-referencing identity but that it is authored by various different players who are often legitimised and enabled by technologised processes, to collaborate in the construction of a cyborg. However, she doesn't recognise the possibility of a technosocial Subjectivity, which would have offered her a cyborg that is more located and embodied. Instead, she she tries to posit the story of the post human but ends up in only re-emphasising the centrality of the human and the biological, ignoring either the material practices or epistemological positions that the cyborg has to offer. The anxiety of resolving the crisis – this time not only mapped on body/mind but also on the binaries of biological/technological – does not allow Hayles to examine the cyborg as residing, as Haraway suggests, 'on the edge' (1991, 15).

This section seeks to moves away from the broad generalisation and application of this cybernetic metaphor which produces a trivial sense of the human-machine syndissertation to

a more nuanced and complex understanding of the mechanics of cyborgification and the crises it entails. The kind of cyborg activities that David Bell formulates in his conception of the cyborg:

> Do we become cyborgs when we board a bus? When we switch on a tube-light? When we wake up to a preset alarm clock that screeches early morning to get us to work? When we absently surf channels through a remote control on TV? (Bell 2000; xxi)

Andy Clark, in his conception of *Natural Born Cyborgs* (2003) would dissuade us from believing so. Clark looks at two forms of technologies – Machine centred technologies and human centred technologies, to start analysing the cyborg figure. For Clark, the human mind is a part of a larger adaptative system of producing knowledge and action. Instead of looking upon the human mind as a an object within which data can be sorted, he looks upon it as data itself, in a much larger pattern of cognition and consciousness Clark suggests that the mind engages with human centred 'transparent' technologies to quickly adapt to them and internalise them as a part of a larger system of thought and behaviour. This produces 'human-centred products (that) wear their functionality on their sleeve and exploit the natural strengths of human brains and bodies' (Clark, 2003, 38). The internalisation of these technologies requires a 'delicate and temporally extended process of co-evolution' (Clark, 2003, 43). He looks upon all dominant technological products as being human-centred and hence leading to a transparency that comes with 'temporal co-evolution.' He considers the matrix of the cyberspace as a similar human-centred technology that allows us to become agents of a larger system. Drawing from popular science fiction, Clark quotes an example from Bradley Rhodes' 'Wearable Rememberance Agent' (RA):

> Say the wearer of the RA system is a student headed to a history class. When she enters the classroom, note files that had previously been entered in that same classroom at the same time of day will start to appear…when she starts to take notes on Egyptian hieroglyphics, the text of her notes will trigger suggestions pointing to other readings and not files…when she later gets out of class and runs into a fellow student, the *identity of the student* is either entered explicitly or conveyed through an active badge system or automatic face recognition. The RA starts to bring up suggestions pointing to notes entered while around this person, including an idea for a project proposal that both students were working on. Finally, the internal clock of the wearable gets close to the time of a calendar entry reminding the wearer of a meeting…' (Rhodes, 1999 in Clark, 2003) Emphasis Mine

Clark is here no longer looking at a cyborg that is simply marked by the insertion of the physical or biological aides into his/her body. He invokes Rhodes' notion of the Rememberance Agent to illustrate how, the immersion of the body in conditions of technology and a seamless syndissertation between the two, produces new forms of identity and practices which reconceptualise radically, our notions of history, time, memory and recollection. The Natural Born Cyborg appears as a response to many other earlier conceptions of cyborgs which were increasingly being located in the realms of man-machine coupling or corrective (often medically prescribed) devices that augment the daily functioning of the individual. Hence, Hayles argues, that the new cyborgs are not 'creatures of fiction and irony' (Haraway, 1991) but people who are just like us, surrounding us, creating a technologised network that is not even often visible.

> This merging of the evolved and the developed, this integration of the constructor and the constructed, these systems of dying flesh and undead circuits, and of living and

> artificial cells have been called many things: bionic systems, vital machines, cyborgs. They are a central figure of the late Twentieth Century ... But the story of cyborgs is not just a tale told around the glow of the televised fire. There are many actual cyborgs among us in society. Anyone with an artificial organ, limb or supplement (like a pacemaker), anyone reprogrammed to resist disease (immunized) or drugged to think/behave/feel better (psychopharmacology) is *technically a cyborg*. The range of these intimate human-machine relationships is mind-boggling. It's not just Robocop, it is our grandmother with a pacemaker (Emphasis Mine) (1995, 322).

While it has been necessary for certain disciplines, especially the disciplines of biotechnology, medical sciences, artificial intelligence, and cognitive theory, to bank upon the proliferation and naturalisation of such a cyborg identity, it is obvious that Clark's notion of a cyborg is more than what is only 'technically a cyborg'. Hayles, in this technically correct positing of the cyborg, 'our grandmother with a pacemaker' as a cyborg, robs the cyborg of any kind of participative value, agency or the ability to evolve with the mechanical prostheses.

Clark emphasises that the Natural Born Cyborg is not the hyper-visible cyborg augmented by prostheses or pacemakers or even gadgets that serve as extensions of the human body. For Clark, the cyborg resides more at a conceptual level where the syndissertation of the mind and technologies that shape our sense of the self, produce new ways of looking at our body and its practices. He looks at the significant change in the material practices of people interacting with new digital technologies; the internalisation of not only the skills but also the aesthetics of memory, of remembrance and most importantly, of comprehension, that the technologies produce. For Clark, the machines that sculpt the bodies in gymnasiums - thus creating what Anne Balsamo (1996, 22) would call 'Hyperactivated bodies' - are on a system

lower than the technologies that shape the consciousness to make it into a part of the process of eroding boundaries and creating universal knowledge systems (Clark, 2001, 242). He suggests that with our capacity and plasticity to adapt to different technologies and to learn to extend them as a part of our neural circuit – the pen and paper, a musician fiddling with her violin, the blind man with his cane, the turning of the wrist watch to get the time – are all example of how we are Natural Born Cyborgs.

Whether or not Clark's response to the frightened reactions against artificial intelligence, post biological trans-human conditions, and mechanistic societies holds true or not is not of importance to the argument in the chapter. Clark's formulation of the Natural Born Cyborg becomes significant because it encompasses the two dominant ways of looking at cyborgs outside of the lens of biological and life sciences. It foregrounds the material and cultural practices of a technologised identity that is neither restricted to the digital circuits nor can be located in the physical bodies of the users. Clark writes,

> As identity becomes fluid, embodiment multiple, and presence negotiable, it is the perfect time to take a new look at who, what, and where we are. New kinds of human-machine symbiosis will, without a doubt, alter the way we see ourselves, our machines, and the world (Clark 2003; 179)

More importantly, it allows the cyborg to emerge as an enabling subjectivity that evolves with technology rather than a latent identity that is forced into new shapes and avatars through the technologised conditions it might be inserted into.

2. THE CASE OF THE CYBORG

The first of the models that Clark reinforces in his imagination of the Natural Born Cyborg is the Gibsonian conception of the cyborg. William Gibson, the man who is most often attributed for the imagination and coining of the word 'cyberspace' was also one of the most influential formulators of a cyborg identity. In the same novel – *Neuromancer* - where he introduces the term cyberspace, Gibson also posits a cyborg identity that Clark re-invokes, in order to rescue the cyborg from the trivialisation that has entered contemporary discourse around the cyborg.

Case, the protagonist in William Gibson's *Neuromancer* is one of the many kinds of cyborgs that appear in the novel. Set in a futuristic trans-continental geography that is mapped only through the digital traffic and regimes of software and biological control, *Neuromancer* paints a picture of dystopia that gets embodied in the sheer meat-machine divide that has emerged with the advent of technologised living conditions. Bodies, in *Neuromancer*, are marked with the easy reshaping and sculpting that new technologies make available; it is an age of affordable beauty, where technology can not only sculpt the perfect body but also intervene successfully in the DNA restructuration and genetic engineering of the living, so that they can live, almost forever. Logging on is not only into the simstim[65] Matrix but also into each others' sensory data, creating new forms of intimacy and knowledge which were otherwise not possible. Prostheses are invoked only as a nostalgic reference to a century old technology and most implants are sleek and looked upon as an extension or an augmentation

[65] The Simstim refers to Stimulation of the brain and nervous system of one person using a recording (or live broadcast) of another person's experience. Case shows how the simstim which focuses on usage is below a cyber-cowboy like him because it doesn't really allow him to engage with technologies in the way he does when he is hacking or surfing. 'Cowboys didn't get into simstim, he thought, because it was basically a meat toy. He knew that ... the cyberspace matrix was actually a drastic simplification of the human sensorium, at least in terms of presentation, but simstim itself struck him as a gratuitous multiplication of flesh input.' (18)

of the existing biological senses[66]. The cyberspace, as the novel explains, is also a simplified imagination of the human sensorium, providing a way of extending beyond the biological or the 'meat' that is held in contempt by almost all the characters in the book.

Case, the protagonist of the novel, is a cyborg. Case exhibits the excess that a cyborg is characteristically marked with - The physical manifestations of cyborgs have always been on the side of the grotesque, the mechanical, the impossible. There is a certain gothic charm to the figure of the human being in synergy with the machines that creates a tension between the two improbable systems. In the case of Case, however, the notion of being a cyborg is inverted. When the novel begins, we actually realise that Case was once a cyborg, a cyber-cowboy surfing the cyberspace, pirating and dealing in expensive information for the big powers. However, in an incident where Case tried to cheat the employers, he was rendered incapable of ever again entering cyberspace by the introduction of neuro-toxins that would kill him if he ever tried to log-in again. The novel begins with Case playing the fallen angel, trying to find his way back to the promised Garden of Eden and is helped in his efforts by Armitage and his hired help Molly, who offer him corrective surgery in return for his old skills. What is interesting about the novel is the model of cyborg that Gibson presents to us in the form of Case and the strains of cyborg identity and practices that we can take from it.

Case is not a cyborg simply because of his interactions with the technological tools and environments that surround him. His presence within conditions of surveillance, the biotechnological implants in his body, his interaction with hallucinogenic drugs or the presence of technological extensions might indeed be looked upon as interesting points where

[66] Case's observations about age and body and the integration of medical science, biotechnology and cyberspace are abundantly scattered throughout the novel. 'He was very beautiful; Case assumed the features were the work of a Chiba surgeon. A subtle job, nothing like Armitage's blandly handsome blend of pop faces. (97)' or 'Case peered at them and saw that their youth was counterfeit, marked by a certain telltale corrugation at the knuckles, something that the surgeons were unable to erase' (152).

the meat-machine syndissertation can be observed. However, Case's cyborg identity is actually within the practices of technological syndissertation that he performs within the matrix of the cyberspace. David Bell's litany of mechanics of urban survival that he looks as practices of the cyborg or Hables' glorification of the grandmother with the pacemaker as the new cyborg are both countered by Gibson's earlier imagination of what it means to be a cyborg. While it would be interesting to study how the engagement with one system – the digital labyrinth of cyberspaces – affects the notion of the body in another – the realm of the physical and the sordid, what is more important is the notion of a participatory consciousness that Gibson invests in the figuring of the cyborg.

For Gibson, the cyborg is intrinsically linked to the spaces which s/he occupies and the way in which the organism deploys the technology in order to create a sense of the self. As Gibson sets out to define Case's activities and his perceptions of his own self, the extraneous implants and prosdissertation only become a certain kind of accessories to mark the familiarity with another system. The cyborg, like Molly – Case's girlfriend in the novel - resides not in the mere prostheses but in the interactive spaces between the human characters and the technologies that they deploy. Gibson allows us to think of cyborgification as located, not in the man-machine syndissertation, but as in a brain-technology symbiosis of sorts. The contempt for the meat or the biological body arises from the fact that despite the advanced technologised couplings, the notion of the self, in *Neuromancer* has the body at its centre. Even though the novel makes a distinction between brain-dead (biological death) and ice-death (death within the matrix of the cyberspace), there is an overwhelming sense of mortality that governs almost all of its characters into different directions.

What Gibson infuses in the notion of the cyborg is the very agency to produce one's self as a cyborg. The mere existence within technologised conditions or syndissertation with technology – like Molly's modified lenses or retractable steel claws in her fingers – does not produce a cyborg identity. Gibson recognises that we have been interacting with several different technologies. Instead of making an argument about the novelty of the new technologies, Gibson looks at the fundamental way in which our engagement with the technology has changed. He doesn't base it on newness but makes a strong case for historical continuity. Both Gibson and Clark are interested in a pre-history of the cyborg, looking at the digital cyborg as one in a long range of human-technology identities and produced in the very transactions with technologies. For both Gibson and Clark, the production of the cyborg identity is in the production of a conscious digitised representation of the self which in turn are mapped on to the physical body that is implicated or invoked in the production of this identity. The text reinforces the idea of the cyborg as an agential being and distributed across multiple systems.

This condition of cyborgification is peculiar; On the one hand, we have a biological body that enters into conditions of technologisation. However, this immersion in technologised conditions does not lead to the cyborgification. It simply provides a platform where the body is extended into different circuits, constructed as a database of objects that can be translated from one system to another[67] imaged as a node within a network, recognised as an archive of several practices through which the extensions and digital representation are created. On the other hand, these imagined identities gain currency and have tactile and material

[67] Lev Manovich in his work on "Database as a Symbolic Form" suggests that the human selves, in the database complex ' do not tell stories; they don't have beginning or end; in fact, they don't have any development, thematically, formally or otherwise which would organize their elements into a sequence. Instead, they are collections of individual items, where every item has the same significance as any other.' Available at http://transcriptions.english.ucsb.edu/archive/courses/warner/english197/Schedule_files/Manovich/Database_as_symbolic_form.htm

consequences which are mapped on to the body of the cyborg. The cyborg, then, resides neither in the biological body nor in the digital representations but in the practices by which these two separate, self-referencing, often overlapping entities are reconciled to exist, each mapped on to the other.

With cyberspaces, where information transactions form the digital world, the cyborg gets formed through the practices of data production which can then interact with different data streams as well as authority structures of regulation and control. It is this notion of the cyborg as the 'subject' that comes into being in the process of data production that I am exploring rather than one characterised by prosthetic couplings. This cyborg as a producer of information and production of its subjectivity in the process of information production, straddling multiple systems of meaning and producing itself in the very processes of authorship and inter-referencing meaning, might be better illustrated through specific examples of contemporary interactions within cyberspaces.

2.1 The Cyborg in Cyberspace

Within cyberspaces, Social Networking Systems, Blogs, MMORPGs, Multiple User Dungeons (MUD), Discussion Boards, Media sharing platforms, p2p networks[68], etc. all create different conditions within which the physical users, through their digital avatars, interact with each other and form complex models of social networking and personal narratives. In this section I look at this cyborg as an information producer, embedded in different cyberspaces, feeding different data streams. Once again, for examples we turn to the social networking sites of Orkut and Facebook to illustrate the discussions in the preceding

[68] P2P Networks – Peer - to - Peer networks inherit the cyberspatial aesthetics of decentralized networks; of nodes being distributed across the circuits of the internet and talking to each other, collaborating in projects, sharing information, and exchanging digital material. The p2p networks have been the focus of scrutiny because they allow for unmonitored piracy and exchange of information.

sections. As is the case with the 'rape' that Dibbell discusses, or the 'Orkut Deaths' we discussed in Chapter 2 chapter, the conflation of the avatar and the person and the dissociation of the two is a constant process within online communities. This section looks at this relationship between the avatar and the person to see the ways in which each informs the construction of the other.

Through a metonymic process, the digital profile – the avatar– comes to stand in for the bodies of the users who not only create the translated self but also mark it with desires and aspirations. The avatar is largely under the control of the physical body. Like in Dibbell's narration, the loss of control of the physical body over the avatar was a new form of violence. Similarly, Turkle demonstrated that the ability of the body to experience the interactions of the avatar is a new way of looking at this relationship. However, it is also now becoming increasingly clear, for anybody who has created digital profiles on networks of social interaction, that the body is not only secondary to the experiences of the avatar, but is in many ways does not have the presumed authorship/ownership of that avatar.

Within Orkut, the profile of the person is bound to the physical body of the user behind the profile. While it is of course necessary to invoke a virtual avatar, because of the nature of social networking with people one already knows or has known, there is a certain disinvestment of fantasy within Orkut. Several users select pseudonyms which allow them to remain totally anonymous, but most of them have a visible face which tries to approximate their real life persona online. Unlike the circuits of blogging or role playing games, Orkut emphasises the need to be a 'real' person, thus validating its unique feature of 'scrapping'. Thus, it is possible, in the case of Adnan Patrawala, for his avatar to not only be resurrected but also continue interactions and even evolutions (by other users' testimony and

narrativisation of him) beyond the user. On the other hand, in the case of Dr. Bungle in LambdaMOO, even 'toading' of the avatar was eventually only symbolic, only to lead to the almost immediate, regeneration of the avatar as the Jester. As William Mitchell points out in *Me ++* (1998), users in virtual worlds generally think of themselves as part of a larger database (45) –transmutable, transferable sets of data which they have authored for themselves - and can mobilise their virtual self across different networks to enhance their sense of social interaction and networking (56).

This dialectic offers an interesting approach to looking at the self-avatar relationship that is central to the discussions both of the technosocial subject as well as the Cyborg. On the one hand, it is the physical body of the user that produces the information which constitutes the digital self and presence, and hence it should be looked upon as the primary or the authentic text. On the other hand, the interactions that happen within the social networking system are interactions of the information rather than the producer of the information; that is to say that the avatar is the point of contact and response and is greater than the information produced by the individual that the avatar is usually attributed to. The responses that the profile receives, the way in which the self is represented, the techniques used to engage with more people or invite strangers to communicate, are all the practices of the digital avatar.

In the processes of simulation that construct the avatar, there is a certain way by which the biological person who claims the avatar is not always in control of or responsible for the actions of the avatar. The most illustrative example is the case of blogging. Within a blog, the person has a certain ownership over the blog and the contents that are published therein. However, the value of a blog post is not only in the original authorship of the content. The comments, the responses, the debates, the cross-references and hyperlinks, the sharing and

dissemination of the content, is visibly beyond the control of the original author. Which is why, the publisher of the blog is never solely and exclusively responsible for the contents of the blog. This loss of control does not have to be necessarily perceived as violent or traumatic, but a necessary condition of the production of this avatar This approach at understanding the avatar as not merely a representation of the authorial will and intent but as shaped by and in conversation with multiple stakeholders and contexts is a valuable contribution to understanding the digital cyborg. In this case, I am proposing that the cyborg is not the avatar, nor the person who is behind it, but is a combination of the two, each augmenting the capacities and the capabilities of the other.

This new form of social design and context within which the Technosocial subject is shaped is examined by Clay Shirky in his book *Here Comes Everybody.* Shirky writes, 'Communications tools don't get socially interesting until they get technologically boring' (Shirky 2008, 105). It is precisely because we are at such a 'boring' moment that it becomes interesting for me to start unravelling the ways in which technosocial Subjectivities are formed. Shirky's book also gives us some important clues as to what are these new kind of changes that are shaping technology mediated practices and identities. Shirky argues that the social hierarchies we associate with large modern corporations emerged as a way to reduce the complexity of large-scale social action. The structure of such hierarchies is reproduced in a typical 'org chart': 'an inverted tree of boxes and arrows' with lines connecting the 'head of the organization' at the top with the various layers of management and workers down below (39). Shirky tells us that such structures emerged with the rise of large railroads in the mid 1800s, spanning the width of the United States. Whereas 'a small railroad could function with ad hoc management,' large-scale networks saw their 'management challenges grow faster than organizational size' resulting in unfortunate accidents (41). The creation of large

management bureaucracies reduced the ‘transaction costs of running a railroad’ by clarifying chains of command and areas of responsibility (42). However, while businesses profit and remain competitive by making small reductions in transaction costs, the necessity of such large management bureaucracies makes it unprofitable to use the power of such structures for activities which generate little profit (46). Traditionally only very strong bonds, such as those of family, church, political ideology, etc. could motivate people to overcome the difficulty of organizing collective action, but Shirky argues that, by reducing the transaction costs to close to zero, the internet makes such social action trivially easy, even for ‘loosely structured groups, operating without managerial direction and outside the profit motive’ (47).

Shirky suggests an ascending scale, or ladder, of group action facilitated by online social tools, ordered in terms of increasing difficulty: ‘sharing, cooperation, and collective action’ (49). Each step up the ladder requires exponentially more effort on the behalf of the participants. Forwarding a joke via e-mail is a good example of sharing. New social tools improve upon this by being able to aggregate millions of individual acts of sharing, whether it is photos, links, or movie ratings, and delivering them back to users in a structured format. In fact, as Shirky points out, Google works by ranking ‘the linking preferences of hundreds of millions of internet users’ (49). Cooperation involves more work as it requires people to coordinate their actions with other users. Wikipedia is famously a collaborative endeavour, although (as we will see) not all users contribute to an equal degree. Finally there is collective action. This is particularly difficult because it requires that even those who might be unhappy with some group decisions to remain committed to the goals and activities of the group as a whole, and to take personal action to further those goals (53). This gets reflected in the production of the avatar as well. Shirky’s work gives us an insight into how, the digital representations that have always been looked upon as agential reproductions are collaborative

in nature and subject to hierarchies which might not always please the individual user behind the avatar. The distance between the ambition and the execution is often great and many avatars can fall prey to the design of others – what in LambdaMOO was recognised as a rape in cyberspace.

The avatar is not constituted solely by the information produced by the physical user. In its very distributed-consolidated mode, it acquires and feeds off information of data streams that are outside of the control of the physical user. For example, Orkut has a feature of testimonials where the people in the networks of the translated self, also author opinions, observations and endorsements for the profile. The public nature of communication and the archiving of this, add to the meaning and the functioning of this translated self. This production of the meta-data introjects the avatar into a circuit of meaning making and producing narratives that is beyond the scope of the physical body. This is a new context within which the avatar acquires 'value' or reputation which is distinctly different from the reputation circuits that the biological body behind the avatar inhabits. The slippage between the avatar and the user is where the cyborg can be located - Neither the physical body nor the translated digital self. It resides in the interface between the two, each constantly referring to the other, creating an interminable loop of dependence. The cyborg, because it is produced by the very technologies of the two systems that it is straddling, makes these techniques or the technologisation of the self synonymous with the processes of producing the narratives or making meaning.

A look at many other similar sites like blogging communities on 'Livejournal', or dating communities like 'Friendster', can give us an idea that the first stage in authoring a cyborg rests in creating these profiles, or avatars. Users spend a lot of time trying to create for

themselves the best avatars, which will be continued projections of the self. These tend to rely mainly on the visual component, as in games like 'Second Life' and chatting platforms like 'Yahoo!', but they can also rely on a combination of visual and verbal elements. This process by which the body and avatar are distilled into data sets is what I understand as a process of cyborgification. The first step of cyborgification – the translation of the physical body into the digital avatar – is already a complex one, where it is not as if the cyborg exists ex - nihilo and then projects from one system to the other but that the cyborg, gets created in this negotiation between the avatar and the self. The texts of the avatar – the narrative that produces the avatar as well as the narratives produced by the avatar - are not the sole authorship of the cyborg. It has other players, who are a part of either of the systems, adding meanings and layers to the text. I shall explore this multi-stakeholder ecology of the digital cyborg in last section of this chapter, trying to look at the different actors involved in the making of this imaginary cyborg figure.

The second step in this process or cyborgification is a reverse mapping or an un-disembodiment. Even within role playing games, where the alienation of the avatar from the body reaches its highest levels, there is an effort on the part of the gamer to provide physical and material contexts to the imagined bodies which they have created. Mizuki Ito (1992), in her work about online gamers, looks at how, with an increased investment in the digital lives, users tend to shape their own physical selves around their projected avatars. Many chronic users of cyberspaces have their language, their social interaction and even the way they dress and behave affected by their practices online. Sherry Turkle, in her analysis of the MUD world in *Life on the Screen* (1996), points out that an increasing number of users start looking upon their screen lives as a constitutive part of their reality rather than an escape from it. She

sees computer technologies as providing us with new 'objects to think with' which become the framework for our perception of ourselves and others.

In "Computational Technologies" (1997), Turkle goes on to say that the 'multiplicity and heterogeniety' of the distributed environments are mapped on to our own notions of the self, thus beginning a process of reverse embodiment where the elements of the virtual world become a part of our constitutive reality. She says,

> What I am saying is that the many manifestations of multiplicity in our culture, including the adoption of multiple on-line personae, are contributing to a general reconsideration of traditional, unitary notions of identity. On-line experiences with 'parallel lives' are part of the cultural context that supports new theorizations about multiple selves. (Turkle, 1997, 64)

Turkle also argues in "Ghosts in the Machine", when she sets up philosophical questions which she does not set out to answer, but definitely hint at the second level of cyborgification where the distinction between the physical body and the virtual self are broken down. Turkle sees the new 'virtual worlds' of electronic communication as giving us new latitudes in theorizing reality itself:

> In a virtual world, where both humans and computer programs adopt personas, where intelligence and personality are reduced to words on a screen, what does it mean to say that one character is more real than another? (Turkle, 1995, 35)

This process of reverse embodiment entails a mapping of the translated avatar on to the physical body of the users, often leading to the users abandoning their avatars, cutting down on their public presence or sometimes actually committing 'digital suicides', killing their own

selves to start new identities and networks. Turkle's work draws attention to the idea that the relationship between the biological self and the avatar is not unilateral. As she writes, 'In sum, MUDs blur the boundaries between self and game, self and role, self and simulation...One player says, 'You are what you pretend to be...you are what you play' (97).

Julian Dibbell re-reinforced the dynamics of this reverse mapping or un-disembodiment as well. Dibbell does not allow for a linear notion of the physical body being translated into a digital avatar but insisted that the translated avatar is always, because of the users' emotional involvement but also because of the practices that the avatar initiates, mapped back on to the body of the physical user. This is a process of reverse embodiment where the presumed 'original' is now re - shaped and re - configured to suit the imaginations and narratives of the avatar. Such a phenomenon is perhaps possible only in the domains of the cyberspace. Also, the cyborg, generally presumed as residing in the physical body, is now relocated in this two-way process, at the borders where it not only facilitates meaning but also realises itself in the process of facilitation. While the metaphor of the flow has often been used to try and describe this relationship, a network, perhaps is a better way of understanding this transactional relationship. The avatar becomes a set of digital attributes – structured as well as unstructured; scripted as well as non-scripted – that can now each travel through different trajectories of personal extension and inter-personal interaction. Different processes, desires or interests of the self draw distributed representations, each mapping back upon the biological body to change and reshape the practices of the body.

The avatar becomes not simply a way of referencing and invoking the original/biological body but also a collaborator in authorship of other avatars that it interacts with. It becomes a position of meaning making not only for itself but also for the other avatars it comes into

contact with. There is a dynamic exchange of information so that the avatar becomes a point of reference for the development and sustenance of the network. The avatar is not simply a projection or a representation but an active partner in the process of cyborgification, where the avatar becomes an epistemological position through which the world – biological as well as the digital – makes new meaning, leading to new material practices. Thus, if the material and cultural practices of the cyborg have to be located, they cannot be in the processes of technologisation – the installation of a pacemaker, the swiping of a credit card, the extensive use of cell-phones and cyberspatial activities – but in the material and cultural consequences of these technologies.

This is a view point that Doheny-Farina (1998) argues for in his book *The Wired Neighbourhood*. Doheny-Farina questions the early euphoria and embracing of digital technologies, especially cyberspace, as building new forms of social and personal interactions and subjectivities. He suggests that we cannot rely on electronic democracy and civility to form merely because computers and computer networks. He acknowledges that a 'wired communitarian movement' (4) that values the people who live in it and is sensitive to their interactions is not an easy thing to create and sustain. He writes,

> I do not doubt that virtual experimentations with the self and with the relations of that self can be liberating. But I can't help feeling that the situations that call for these benefits reflect deficiencies in our geophysical communities. The institutions, the families, and the social relations of our offline lives are unable to include and celebrate those who are different, to care for and heal those who are hurting. If the net becomes the only recourse, then our geophysical communities are lost (32)

Doheny-Farina brings back the question of Technosocial Spaces and Subjectivities, as he indicates how the containment of the cyborg only in fictions or in digital spaces leads to a loss of the Technosocial Space. He argues

> The hope that the incredible powers of global computer networks can create new virtual communities, more useful and healthier than the old geographic ones, is thus misplaced. The net seduces us and further removes us from our localities--unless we take charge of it with specific, community-based, local agendas. These agendas are currently under development in many communities through the community network movement. If we do not, as communities, as a society, support this movement, we risk the further disappearance of local communities within globalized virtual collectives of alienated and entertained individuals (37).

For Doheny-Farina, the community, the context, the geography and the production of the local are essential in understanding the ways in which individual Technosocial subjects are realised. In turn, Technosocial subjects cannot be defined or understood because the only Reality (as Sorkin had pointed out) that these digital spaces allow for is contained in the digital realms. Doheny-Farina insists that 'that the net, in connecting everyone, furthers our isolation by abstracting us from place and virtualizing human relations (123)'. The production of these selves, of these digital avatars, leads to the idea of the cyborg as not simply a syndissertation –a site upon which the syndissertation happens– but as a dynamic situation in which all subjects participate, producing and supporting its own identity. The material cyborg asserts the need for the body as central to their imagination. The bounded cyborg is also subject to the territories that it resides within. This then, is the first notion of the cyborg that leads to the culmination of Clark's model. The cyborg as a willing participatory actor in the syndissertation of organism and technology; the cyborg as an identity that is bound in context by the space and time within which the cyborg is framed the

cyborg as not formulated in the conditions of technologisation but in conditions of cyborgification, produced, not as a fixed definitive identity but in the very processes of authoring of avatars and embracing un-disembodied identities. The cyborgs are not in the matrix, the cyborg is not simply the person behind the keyboard; the cyborg is everyday but it is no longer trivial or natural. It is a producer - agential, participatory, conscious – and a site that becomes central to new practices of meaning making, spatial reorganisation and regulation.

2.2 Cyborg Makers

The second model of cyborg-identity is perhaps best captured in Donna Haraway's work on the production – or, to use her own word, generation – of cyborgs. Gibson and Clark's everyday cyborgs were not concerned with the processes by which the cyborgs came into being. Both in Gibson's character Case and in Clark's reference to the 'first monkey who used a stick for its protection', offer a model where cyborgs are 'naturally born' and transact with their environments through the technologies that they engage with. Haraway's cyborg is more interested in looking at how the cyborg comes into being, unpacking the mechanics and politics of human-technology relationships. Haraway's postulating of the cyborg has animated scholarship in gender and sexuality studies, but my own interest is to look at how she is able to dismantle the taken-for-granted nature of cyborgs in existing discourse and emphasise historical and intellectual legacies of monsters and freaks in understanding cyborgification.

In her essay, "The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others" (1992), Haraway posits the figure of the Monster (also the Coyote and the Trickster), as an allegorical other to the Goddess that has been produced as the mythical proto-woman or the

feminine mystique. The monster, according to Haraway, is an artifactualism – a construct of fictions and facts, straddling both of them together, blurring the boundaries of the biological and the cultural, imploding the boundaries of the masculine and the feminine, thus produced as a 'creature of irony' (295). She writes,

> [A]rtifactualism means that nature for us is made both, as both fiction and fact. If organisms are natural objects, it is crucial to remember that organisms are not born; they are made in world-changing technoscientific practices by particular collective actors in particular times and places. (Haraway, 1992, 297)

Haraway suggests that artifactualism is an effective lens to study the 'effects of connection, of embodiment, and of responsibility for an imagined elsewhere' (298). This 'elsewhere' is not the technologised nowhere – a place that one travels to, like tourists on an excursion, capturing the essence of a space and taking it back with them; the Disneylands of the mind (Appadurai, 1996) – but 'a topos, a place, in the sense of a rhetorician's place or topic for consideration of common themes; nature is, strictly, a commonplace' (296). This notion of the 'Commonplace' resonates with the descriptions of the technosocial spaces discussed in the earlier chapter. The Commonplace serves as the entry point into talking about the relationship between technology and the conditions of producing nature. Haraway argues against the popular imagination of technologised production as denaturing our existence. She suggests that a 'technological decontextualisation' is a common experience for millions of organisms and people around the world and that the demonised technologised denaturing, more than denaturing, is actually a specialised production of nature (301).

Just like the commonplace, the organisms inhabiting the commonplace are also not born but are discursively constructed; 'they are made in world-changing technoscientific practices by

particular collective actors in particular times and places' (297). She explores this process of construction further by looking at the 'apparatus of bodily production' (298) to question the very existence of the body – the biological, the original, the authentic – and the construction of its boundaries. Haraway suggests that just as nature does not pre-exist, bodies do not also pre-exist and are not a given; in fact bodies find their boundaries in social and cultural interactions with other bodies, and that Nature or the Biological only become discursive forces which significantly produce the biological bodies (304).

What the cyberspaces and digital forms of cultural expression have enabled is a protean diversity for the body that we had taken for granted for a significant period of human-technology history. Even within the radical models posited by Gibson, in his science fiction narratives, the body is still the discursive site which produces the imagined or the digital – what we identified as the avatar in the earlier section – rather than being reproduced in its very production of the avatar. For Haraway, this is the beginning point of understanding the cyborg as residing within the technological interactions. It is not restricted to the practices enabled by technologies but inhabits the larger topos of social, cultural and biological expansion of space and identity that the new technologies have to offer. She also suggests, that in looking at processes of cyborgification, we need to move away from the vocabulary of reproduction which reinforces the idea of technology as an invasive practice upon the human self. Instead, the cyborg or the technologised demon – part human, part machine, part imagination, part fantasy – should be defined and traced in conditions and processes of regeneration and embodiment, thus establishing new relationships between the human and the technological.

Haraway moves away from the visions of androids or bionic humans to look at the cyborg as residing in the 'optical illusion between social reality and science fiction' (1991, 141). She makes a relational connection in a quadrant where we have a relationship between the discursively produced nature and the imaginary outer space on the one hand and a transactional relationship between science fiction narratives and the advent of biomedical sciences of reproduction and health care on the other. In each one of these disciplines and approaches, Haraway demonstrates how 'the authorship rests with the representer, even as he claims independent object status for the represented' (1992, 314)

In her more celebrated essay on cyborgs, 'A cyborg manifesto', Haraway (1991) defines her cyborg as a node which extends into the 'system' (the combination of the technological and the physical) to change the system and be changed by it. She writes,

> It is no accident that the symbolic system of the family of man - and so the essence of woman - breaks up at the same moment that networks of connection among people on the planet are unprecedentedly multiple, pregnant, and complex... In the 'Western' sense, the end of man is at stake. It is no accident that woman disintegrates into women in our time. (1991, 160)

The fractured identity of the cyborg, the constant struggle that the cyborg faces in realising itself between the mechanical and the organic, gives it certain autonomy over creating its own self and the surroundings. As Haraway would put it,

> The cyborg is resolutely committed to partiality, irony, intimacy, and perversity. It is oppositional, utopian and completely without innocence. No longer structured by the polarity of public and private, the cyborg defines a technological polis based partly on a revolution of social relations in the oikos, the household. (1991, 151)

Haraway's contributions to the imagination and formulation of cyborgs has been extraordinary, because not only did she dissolve the earlier mind-body, biology-technology divides but she also envisioned the cyborg as embodying a position of power and political resistance. She hints at the centrality of the narrative powers of the cyborgs, the conditions within which the cyborg generates itself in its interactions with technology and the promise that this non-human protean identity has for further politics of production, gender and materialism. She further postulates that the cyborg is a contextual creature, circumscribed by the reality within which it is produced and hence cannot be celebrated as a universal monolithic structure.

Gibson and Haraway's cyborgs, even as they get incorporated within Clark's Natural Born Cyborg, still remain theoretical abstractions. Though Haraway herself proposes that theory is never abstract and that it is always embodied by the subjectivities and the processes that are in the orbit of the theoretical (as opposed to ideological) formulations, her own analysis was in a time before the cyberspace had come of age. Their cyborgs are more an indication of the everydayness of the cyborg without robbing it of the agency, the tensions, the conflicts and the participatory processes which is often the case with a large section of Cybercultures. The theoretical formulations miss out on the material making and practices of the cyborg.

I use the Cyborg as a conceptual category to engage with the idea that the postmodern body is an amalgam of biological processes, regulatory practices, and technological prostheses. It is thus a contextual being that is circumscribed not only by the technologies but also the geophysical conditions within which it is located. I offer the framework of the Technosocial to think of a lived, embodied, everyday cyborg that critically reflects on its conditions of

cyborgification as well as embeds it within processes of regulation and social transactions in particular geo-political locations

2.3 The Social Cyborg

Anne Balsamo, the cultural theorist, in her formulation of the technosocial cyborg – a cyborg that is 'an organism embedded in a cybernetic system' (1996; 46), presents a much more interesting idea that both the cybernetic system and the cyborg are so intricately connected that it is difficult to determine or define either of them without the other. She writes,

> Cyborgs are *the postmodern* icon. From children's plastic action figures to Robocop's titanium exoskeleton, cyborg-ian artifacts will endure as relics of an age obsessed with replication...[O]ur technological imagination imbues cyborgs with ancient anxieties about human difference (2000, 149).

For Balsamo, the cyborg is a node within the cybernetic information networks, where it becomes a part of a larger system of interactive cyborgs. She revisits the process of cyborgification as referring to the building of a system, rather than just an individual, that has components that are artificial and natural, living and dead, evolved and invented. She quotes the cultural theorist Gregory Bateson (1969) to argue that the cyborg body 'is not bound by the skin but includes all external pathways along which information can travel' (154).

The cyberspace can be looked upon as one such cybernetic system – not simply a network or a collection of databases or a technological form – where the technologised identities are a part of the cyberspace and essential to the sustenance and development of cyberspace. Within the cyberspaces, as Turkle mentions, the self gets created within 'screen worlds' so that we

experience ‘reality’ as mediated by technology. The cyborg exists in union with the space it occupies and can be located largely through its material practices. The cyborg thus informs the technosocial subject as a system that syndissertationes the organic, the technological, and the spatial in its functioning.

Experimenters like Kevin Warwick have contributed significantly to the production and the imagination of a certain kind of physical, embodied cyborg that exists among us. Warwick, in his autobiography, *I Cyborg* (2002), posits two ways of looking at the human-technology interaction. He looks at ‘accessorial technologies’ and ‘integral technologies’ (23) as two different ways in which to engage with technologies to think of a cyborg. Warwick’s categories resonate very strongly with the distinctions that Clark had made in his work on *Natural Born Cyborgs.* However, Warwick is more interested in looking at these technologies as forming an interactive environment within which the cyborg resides rather than looking at prostheses (physical or imaginary). As he reflects in his autobiography,

> My own definition of a cyborg is something that is part-animal, part-machine, and whose capabilities are extended beyond normal limits. … it allows for metal upgrades as well as physical upgrades and allows the extension to go beyond the normal limits of either the animal or the machine. (pg. 61)

For Warwick, the ability of the physical body to stimulate the mechanical components which in turn are in sync with a wide array of elements in his environment inform these categories. His focus was on the building of such an environment, where through technologies he would be able to interact with the machines around him. He writes,

> As a result of the experiment, I received several communications from companies, government bodies, military and police forces about … what it might mean for the

> future. Would we as a society want implants like this to be generally available? Who would control the situation? The technology was now available, so such questions had to be raised, rather than just discussed as a mere futuristic concept that might never happen. (2000, 89)

From spectacles used to enhance sight to spectacles with a mini computer projecting data on the lenses; from a cane that helps you support your weight to a cane that protects you from threat and can be used as a weapon; from shoes that cover your feet to shoes with microcomputers built into them in order to adjust the pressure as you walk; no matter how fantastic or technologically augmented these particular gadgets might be, Warwick looks upon such wearable technologies, as accessorial in nature. For Warwick, such forms of technology, though they do enhance the normal capability of an individual within a spatio-temporal context, they do not enhance his/her capabilities to determine who they are or how they perform in certain other environments. He articulates this as the guiding principle behind his experiments on his body:

> My own definition is that a cyborg is something that is part-animal, part-machine, and whose capabilities are extended beyond normal limits. This is much more general than other definitions and includes creatures other than humans. It allows for mental upgrades as well physical upgrades and allows the extension to go beyond the normal limits of either the animal of the machine. I can't really see that it includes wearing a wristwatch, a pair of glasses, or riding a bicycle – to me that's a cybernetic system. (61)

Warwick proposes that such an accessorial use of technology is the formation of a 'cybernetic system'. Drawing upon the origins of the word 'cybernetique' or 'cybernetic' meaning mobile or disposable or temporary Warwick argues that the deployment or employment of

technology does not constitute a cyborg – a cybernetic organism – but adds to the understanding and development of a cybernetic system. This kind of formulation immediately refutes the everyday cyborg that Bell or Gray were trying to posit. The conditions of technology – or what Warwick calls the production of a cybernetic system – are necessary for the formulation of a cyborg.

The cyborg, which Warwick himself is interested in – not only in imagining but also in becoming – is a cyborg that is an 'augmented human being.' For Warwick, the cyborg is an individual who is not merely a node in the networked neighbourhood of interactive technologies but an organism that has internalised technology so that it becomes a part of its neuro-sensory circuits, thus producing an identity that more intelligently and effectively interacts with its immediate environment. Warwick's cyborg destabilises the human-machine divide or privilege and instead brings about a symbiotic relationship between the two. Warwick's own experiments in cybernetics foreground the body, the biological self above the technological modifications.

Warwick's experiments draw from two ends of the cybernetic spectrum - on the one hand he has been developing robots with artificial intelligence that replicate human processes of learning and cognisance and aim at enhancing the communication patterns, going beyond speech to more enhanced, undistorted digital communication. On the other, in his experiments with his own body, he has been developing prostheses – not the large grotesque accessorial prostheses of an industrial era, but small, bio-integrable devices that harmoniously fit into the human body to produce new ways of interacting with the surrounding environment that is sensitive to such implants. Thus, Warwick defined the cyborg as a tenuous identity. It was an identity that was willingly produced. It was an identity

that he willed himself to acquire or at other times to experience. As he very interestingly puts it,

> I don't know that I felt any different in myself, other than the fact that I now had the potential to be different: I had an array connected into my nervous system, wires running up my arm and a terminal-connector pad waiting to be plugged in. It was as though I was still a human but with a cyborg socket. (217)

Warwick's experiments also extended beyond his body through a relay of information across the internet channels. Warwick imagines the cyberspaces as an extension of the individual body. While he remains interested in how the physical body, through extendable prostheses or implanted chips manages to communicate using the electronic circuits, it is possible to take this idea and think of the millions of people who are increasingly populate cyberspaces and extending their notion of the self, their private lives, their activities and relationships on to the digital matrices. Warwick's cyborg, though it also posits an embodied cyborg that can be traced in its materiality, still recognizes the cyborg as a willing and an empowered entity. Warwick, because he is as much interested in documenting the processes of producing the figure of the cyborg, also leads to further possibilities of imagining the social cyborg as a willing, conscious participant in the conditions of cyborgification.

Clark's notions of the Natural Born Cyborg also include this particular strain of thought borrowing from Artificial Intelligence and Cognitive Theory that looks at the cyborg as in conditions of authorship, perception, communication and interaction. One of the ways by which such a cyborg can be accessed – and also revealed to be circumscribed by its context – is in the digital cyberspaces and the popular networks that the social cyborgs inhabit. In the

earlier sections, the figure of the cyborg as found in social networking systems, was still to talk about the relationship of the cyborg and the narratives that it produces.

In almost all the models that we discussed earlier – from Haraway to Clark – there is an imagination of the cyborg as possessing supreme agency that enables the production of a cyborg identity. The cyborg, thus imagined, does not take into account either the idea of a reluctantly formed cyborg or the possibilities of other authorities and authors providing for conditions of technologisation. The notion of the Technosocial subject challenges this presumption fundamentally and posits that the cyborg and the technosocial subject are forms of everyday being. They are both conditions (rather than objects) which can be experienced with or without the conscious knowledge of the individual involved. The technosocial subject comes into being because of the insertion of an individual in technologised platforms and practices. Just like we saw in the case of Avatars on Orkut, the individual who is a part of the technosocial complex is not in complete control of production of this subjectivity. The technosocial subject may choose to be called so and transform him/herself in the process to actively become one. However, like the cyborg, there are many different 'authors' who write and produce this subjectivity. As the technology ecologies within which these subjectivities find meaning and anchoring, grow large, diverse, the conditions of being technosocial become more complex and increasingly out of the control of the physical body that seems to anchor it in the material world.

In the earlier discussion of Technosocial subjects, we have only encountered the State through its legal apparatus, largely as a regulating agency that is grappling with the idea of a technosocial Citizen subject. In this last section, I specifically want to look at the State as not merely dealing with the emergence of a new technology mediated identity, but adding and

contributing (sometimes through its ignorance or lack of comprehension) to the emergence of the Technosocial Spaces and subjects. Apart from the regulatory mechanisms to control and affect Technology interactions in the country, the State also actively invests in technology infrastructure and policy. At the heart of these efforts is an attempt to not only regulate an existing technosocial subject who is beyond the reach of the mechanics of governance but also a formulation of what is a desirable technosocial subject and what manifestations of technosociality (spatial and bodily) need to be punished. I look upon a particular case in India which helps in introducing the actors that play an active and crucial role in the production of the technosocial subject.

3. BUILDING THE BASE

This third chapter wanted to incorporate literature, theorisation and practices from cyborg studies into the growing model of technosociality that the dissertation is building. It showed, in the light of the discussions around Technsocial Space and subject in the preceding chapters, that the bodies implicated in these discourses are not just matters of fiction or imagination. The technosocial subject and Space are both materially grounded and produced in their local environments and contexts. They do not only consume the technologies or on technologised platforms but undergo a significant transformation in the way they are, because of their interactions with digital and internet technologies. I also wanted to draw from cyborg studies because the social sciences and cultural studies scholarship otherwise gets contained in the physical-virtual binary or dialectic and keeps the notion of technosociality at the level of abstractions. This results in a gap between the theoretical interventions and the material practices in the field of Technology and Society studies.

The chapter started with discussions around the cyborg and demonstrated how the cyborg is not located only in exceptional environments or in imaginary representations. It further saw that the cyborg studies – scattered across science fiction writing, social sciences, feminism and technology studies – suffers from certain presumptions that are contested in Cyberculture discourse. Conversely, the presence of the cyborg and the way in which it is materially produced and identified, helps to rescue the technosocial subject from being confined only to the physical-virtual debates and allows us to explore the various complexities in the environments and ecologies within which these technosocialities are produced and located. I further looked at a specific case of cyberspace interactions in the recent past in India and proposed that the cyborg as located within such material practices of urban mechanics is a manifestation of the technosocial subject and a smaller subset of it. I posited that agency and access are taken for granted when looking at cyborgs and showed how larger conditions of technology can render a person cyborg without his/her will, agency or choice.

In all these discussions, there is one unproblematised question that remains severely undertheorised – The Question of Access. In the last chapter of this dissertation, I shall go back to the Technosocial subject, that is also informed by the discourse on cyborgs. I want to show how the material and legal tensions around Technosocial subjects help us re-evaluate the biological-technological relationship that has been mapped in these different models of being/becoming cyborgs. As in the case of Technosocial spaces, I would also like to illustrate how the idea of what constitutes Access shapes Technosocial subjectivity in the Indian context. It also hopes to show how problematising Access helps to critically reflect on the usage-adoption based theories and frameworks of human-technology interactions that primarily arise in Communication and Development Studies. Especially in the context of India, concentrating on three technosocial Identities which have garnered great discussion

and concern within ICT4D initiatives, it is necessary to understand the limitations of access-based discourse and build a better understanding of technology as condition rather than a tool or an instrument.

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Chapter Four │ *Subject to Technology*

The chapters preceding this chapter have discussed the nature of Technosocial spaces and subjects and the ways by which they are produced and mapped on our everyday realities. In this chapter, I want to add to this discussion, debates around Access. Both in ICT4D discourse as well as in Cyberculture, Access to technology is rarely theorised or complicated. Within ICT4D debates, access is accepted as the end-point of the initiatives, thus facilitating new individuals and communities to connect with the information highway using digital technologies. Within Cyberculture, while there is an acknowledgement that access is uneven, there is little attempt made at understanding the mechanics and politics of Access. While ICT4D and Cyberculture often work in separate realms, they both give Access central focus which eventually reduces the arguments around human-technology interaction to question of usage. I attempt to show, by looking at the emergence of 3 figures in the context of digital and internet technologies in India – the lurker, the pornographer, and the terrorist – how it is necessary to understand 'conditions of technology' rather than technology usage, when it comes to formulating a technosocial subject.

1. ACCESS AND THE TECHNOSOCIAL SUBJECT

As one of the key transformative factors in a globalising India, advances in ICT have transformed everyday life and how people interact and interconnect with each other, communities, states and markets. The so-called ICT Revolution is characterised on the one hand by the Indian national government's 10th Five Year Plan (2002-2007) and its desire to make India a 'SMART' (Simple, Moral Accountable, Responsible, and Transparent) State. On the other it has been informed by e-governance initiatives like Aadhaar[69], that are aimed at

[69] The Unique Identification Authority of India, launched an e-governance initiative that sought to provide unique identification numbers to all residents in India, in order to facilitate their access to public delivery systems and private services. I analyse the Aadhaar project as a symptom of changing conditions of governance and state in India in the Conclusion of this dissertation.

creating public information access infrastructure. This has had an inordinate effect on governance and economies, that Philip Cerny (1995) calls a ‘Global Shift.’ Cerny writes,

> In both modern domestic political systems and the modern international system, the state has been the key structural arena within which collective action has been situated and undertaken, as well as exercising structural and relational power as an actor in its own right. However, the state is being not only eroded but also fundamentally transformed within a wider structural context. The international system is no longer simply a states system; rather it is becoming increasingly characterized by a plural and composite- or what I have elsewhere called "plurilateral" – structure. (Cerny, 1995)

Erwin Alampay, in his ‘Introduction’ to *Living The Information Society in Asia* (2009) looks at Cerny’s ideas of the ‘global shift’ as marking two fundamental alterations to the global political economy. He argues,

> First, there is the movement from an industrially based international economy to one that is information-and-knowledge-based. For some, these changes signal the emergence of the ‘Third Industrial Revolution’ which is both transnational in character and based on post-Fordist regimes of accumulation. Second the ICT revolution is said to have profound positive and negative social, political and economic consequences that can become factors in determining development and underdevelopment. As such, ICT and its management have become a new rhetoric of development (Alampay 2009, 10)

For Alampay, the ‘new rhetoric’ is in the reduction of ICT based development to a ‘quantiphilia’ that looks only at quantity and infrastructure of access rather than quality and

conditions of access. In the same book, Richard Ling (2009) presses the question forward as he talks about the need to develop temporal frameworks for understanding technology and access. He emphasises that 'interaction between technology and society' (14) has been at the core of most debates around emergence of new technologies. In his essay, Ling compares the kind of changes that are brought about with the Industrial Revolution and the changes ushered in the by the Information Revolution. He sides with the position that James Beniger (1986) took in his book *The Control Revolution,* and argues that 'we have not really experienced an information revolution. Rather, the increasing demand for control of ever more complex systems has resulted in a parallel, but perhaps somewhat lagged development of information systems (Ling 2009, 15). In critiquing the various approaches to technology-society interactions, Ling finally posits three crucial questions that he sees as necessary to be identified by ICT4D practitioners:

> First, what characterises the adoption process at the personal level? Second, after adoption has taken place, how does the object or service become integrated in our daily lives? And finally, how is the object or service interpreted by others after it has been adopted? (Ling 2009, 17).

Ling's work is useful to reflect on the access based technology infrastructure practices which have been at the centre of much policy and governance debates around the world. He stands out as a strong voice that refuses to look at access to technology as the panacea to all problems and instead insists on 'radically reinvestigating what it means to live with technologies' (18) and its subjects.

In a different context, but in a similar vein, Jean-Francois Doulet et al (2009) look at how urban dwellers in China integrate mobility into their everyday lives with the help of ICTs. In particular, they look at how access to information provides people with new spatial strategies

that allow them to become more mobile and confident in exploring the real world. Drawing from the work of John Urry and Elizabeth Buchanan, they posit, 'that since new mobilities produce and develop extensive and far-flung social connection, it is necessary to examine topologies of such social networks and especially the patterning of weak ties that generate "small worlds" amongst those apparently unconnected (2009, 52).' In addition, they look at the changing socialisation patterns among new urbanites, from small social circles based on deep personal relationships to larger social circles based on common interests. They end their study by positing two questions which they see as crucial to understanding a technosocial interaction and how it affects social conditions (both spatial and relational): 'How [do] people assess their own mobile living arrangements? Is becoming mobile mainly an autonomous decision or a forced situation?' (55).

Even within contexts where ICTs are not the primary object of discourse, the understanding of access remains the same. In a report on 'Moving Toward Knowledge Based Economies' (2007) by the Asian Development Bank, ICTs are considered as one of the four pillars of growth and development in Asia. The report recognises the various forms of e-governance sites which are right now being run in India and looks at them as nodes of open data production and dissemination:

> [R]ural Internet kiosks, community e-centers, e-healthcare, geographic information systems (GISs), dairy sector applications, teacher training, online agricultural systems, wireless local loop solutions, databases of rural innovations, and other services targeted at women and children. In the realm of public service, e-Government projects include online delivery of land titles, land and property registration, and empower dairy farmers though a dairy information and services kiosk' (p. 33).

The report suggests that the emergence of ICTs has led to a 'global mode of thinking' (20) in which the global links and networks have become significantly important in the country's own planning policies. After an analysis of government policies and the use of ICTs in the newly emerging information economies, it concludes that 'ICT provides for efficiently acquiring, capturing, storing disseminating and using local and foreign knowledge on a global basis' (24). This is because of the capacity of ICT to support the development of networks and to establish and maintain connections among individuals, groups and organisations that possess knowledge considered to be of great use and value to others. In fact, the importance of ICT in supporting knowledge-based development 'lies in its capacity for efficient networking, interconnectivity, interdependence and coordination. Whereas physical infrastructure is critical in the industrial age, information infrastructure is becoming indispensable in the knowledge age' (25).

The report also introduces the idea of a 'Ubiquitous Network Society' where 'information can be exchanged anytime, anywhere, instantaneously between people, objects and systems (26).' It goes on to further look at the economy of this information explosion and the need for knowledge-based development by evaluating India as the 'global outsourcing centre'. It says that 'India is well positioned to take advantage of the knowledge revolution, to accelerate growth and competitiveness primarily because of the skill and labour endowment of its citizens and its ICT capabilities' (32).

Ashish Rajadhyaksha, in his monograph *The Last Cultural Mile* adds to this debate by suggesting that the 'state-citizen relationship has often been defined significantly by protocols of access to information. The state has been seen as the arbitrator of information dysfunction, and the citizen has been seen as both the producer and the repository of rights

and sovereignty over information' (2011, 29). He suggests that state technocrats such as Vikram Sarabhabi imagined the contours of participatory democracy as being shaped by people's access to information owned by the state. The State was hitherto accepted as the collector of citizens' information (via processes such as the National Census); it was deemed important that citizens have access to the information (which is often about them) owned by the State (48). In this paradigm of information exchange, state-citizen relationships have undergone many calibrations as different structures of information production, distribution and arbitration have emerged in the country (109).

The question of Access has not been discussed with more furore than in the Open Everything movements around the Internet. Openness is generally regarded as a key feature of good governance, promising to address problems of development failure and democracy deficit. David Berry (2008), in his work on Open cultures and intellectual property notes that much of the literature around Openness

> [T]akes a particularly liberal approach to the understanding of the subject. Questions regarding the motivations of actors are addressed as individual preferences of groups operating within the sphere of artistic or cultural production and this individualistic outlook informs many rational-choice-oriented approaches to this issue. (2008, xi).

He further suggests that we need to move away from the 'Romantic idea of the artist' that is at the central focus of discussions around the Open and start to look at a 'technology of the commons' which captures the collective moment in production. Through the book, Berry examines different moments of Openness in technology's history – Open Source, Open Knowledge, Open Access, Open Content, and Open Education – to see how central 'Access' is to the idea of openness.'. He argues that 'the production and distribution of information is a key source of wealth in the digital age and creates a new set of conflicts over capital and

property rights that...get deflected as concerns around right to distribute and gain access to information' (2008, 75). He demonstrates, how, in the works of influential scholars like Lawrence Lessig (1999) and Siva Vaidhyanathan (2004), different concepts like

> [P]articipation, collaboration, decentralization, interactivity, peer-2-peer production, communal management of resources, new forms of intellectual property rights licensing, and distribution of resources, are eventually formed as questions of *access to information*' (2008, 94) Emphasis Mine.

This quest for facilitating access to digital technologies has a particular resonance in the Indian context. The Indian national government has made the importance of access clear in its tenth Five Year Plan, where it announced its intention for India to become a 'SMART' (Simple, Moral, Accountable, Responsible and Transparent) State. This has informed e-governance initiatives that are aimed at creating public information access infrastructure. The ICT Revolution that marks the State's technocratic imagination of the future, is constructed around the ideas of greater openness and access. There is a spate of e-government initiatives that also look upon Access as the central trope by which the state-citizen relationship can be understood.

The idea of Access to governmental data through online purposes, open for bulk downloading and data manipulation is most evident in the passing of the National Right to Information (RTI) Act in 2005. The Preamble to the Act reads,

> WHEREAS the Constitution of India has established a democratic Republic;
>
> AND WHEREAS democracy requires an informed citizenry and transparency of information which are vital to its functioning and also to contain corruption and to hold Governments and their instrumentalities accountable to the governed;

> AND WHEREAS revelation of information in actual practice is likely to conflict with other public interests including efficient operations of the Governments, optimum use of limited fiscal resources and the preservation of confidentiality of sensitive information;
>
> AND WHEREAS it is necessary to harmonise these conflicting interests while preserving the paramountcy of the democratic ideal;
>
> NOW, THEREFORE, it is expedient to provide for furnishing certain information to citizens who desire to have it. (Right to Information Act 2005)

This desire of the citizen to obtain information about the society that they live in was the catalyst for the Act, which culminated after a long campaign by the rural poor of Rajasthan[70], bolstered by the efforts of the Mazdoor Kisan Shakti Sangathan (MKSS, literally the Labourer Farmer Empowerment Organisation). Harsh Mander and Abha Joshi (2008) chart how the MKSS conceived the right to information as a crucial part of people's audits (of muster rolls, bills, vouchers) – not as a means of finding out that corruption was happening, but rather as a means of officially exposing it, rectifying it and demanding action against the corrupt. They posit that access is the central trope through which the RTI campaign was conceived of:

> Information is the currency that every citizen requires to participate in the life and governance of society. The greater the access of the citizen to information, the greater would be the responsiveness of government to community needs. Alternatively, the

[70] Harsh Mander and Abha Joshi, in their paper on 'Movement for Right to Information in India: People's Power and Control of Corruption' note that states like Goa and Tamil Nadu brought about their state level Right to Information Acts without the push of grassroots movements. However, even in those states, the national-level campaign started by the MKSS and carried forward by the National Campaign for People's Right to Information had an effect in creating a space to enforce accountability.

> greater the restrictions that are placed on access, the greater the feelings of `powerlessness' and 'alienation'. Without information, people cannot adequately exercise their rights and responsibilities as citizens or make informed choices. (Mander and Joshi 2008, 3).

Aruna Roy and Nikhil Dey map how the 2005 Act replaced most existing state-level Right To Information Acts as well as the Freedom of Information Act (2002) which was generally acknowledged to be 'toothless'. They show that in overriding the colonial Official Secrets Act of 1923, the RTI gave people unprecedented access to documents that were never available hitherto. They suggest that this led to a new imagination of the citizen as an active participant in the democratic decision making process. They passionately argue,

> It is necessary to point out how critical the difference in approach is, to the perspective of the Right to Information movement and of the aspirations of the poor. By resting the sovereign rights with the citizen and making citizens action the focus, these grassroots level demands for the Right to Information (commonly labelled Transparency) and peoples audit (labelled accountability) radically alter the potency, use, and perspective of what seems to be a commonly understood term. Clearly the demand for the people's right to information emerging from a people's struggle and campaign, is far more incisive than the comparatively limited assertion that the Right to Information is contained within the Constitutional right to the freedom of expression. (Roy and Dey, 2010)

Neelabh Mishra, in a discussion paper series for the Human Development Resource Centre also makes similar claim of the Right to Information Act 2005. Mishra points out how the earlier Freedom of Information Act of 2002, while it acknowledged a person's right to information, did not think of access as a crucial right of the citizen. He writes,

> Even though Freedom of Information has been defined as the 'right to obtain Information' in section 2(C) of the Act, the difference in the nomenclature is significant in that it suggests that though one is free to access information, it is not a natural right i.e. a right a human being is born with. (Mishra 2010, 59)

For Mishra, the RTI Act 2005, introduces a 'subtle shift' where by making information a constitutional right provided to the subject, it promotes a 'government sharing information proactively without being asked for it' (66). He suggests that this imagination of access to resources, especially to information, as a basic right, marks 'a paradigm shift from the culture of secrecy to one of transparency' (66).

Talking about a larger e-governance framework in India, Renu Budhiraja and Sameer Sachdeva look at the question of 'e-readiness' as a new criterion for analysing the efficiency of governance. E-readiness is understood as 'computers, access and effective usage of computers'. They note that the biggest problems with the Indian e-governance landscape is that 'hardware and access are not enough for real e-readiness, there must be extensive training programs locally relevant content, and a local IT sector' (2005, 23). This measure of efficient governance through its ability to provide access to its citizens[71] remains at the imagination of a technosocial subject in India.

[71] The Department of Information Technology has already mapped out the different zones of e-readiness available in India. They further suggest ways by which the states which are lower on the pyramidal structure can 'improve' their status by implementing several economic and urban reform movements. For the pyramidal structure mapped out by them, see Appendix A.

Central to these arguments is the idea that it is the duty of the State to provide access to information (as opposed to information itself). The very conceptualisation of the body politic changes as a consequence: Formerly passive subjects of a state are re-imagined as active citizens with a legitimate interest in such information, and thus having an inherent right to it. However, in all these different approaches to understanding, facilitating and creating infrastructure for access, the mechanics and politics of access do not get enough attention. Access is either thought of as something that needs to be granted for better public engagement with services and governance, or the measure by which success of ICT4D can be measured. There is no account for what are the relationships between the human and the technological – the technosocial if you will – and what are the conditions of access.

As a result, the larger analysis fails to posit either a technology mediated identity or an understanding of how different people engage with digital and internet technologies. It also often neglects the social transactions, political processes and contextual histories which technology systems often replace through a top-down approach. In this chapter, through three case-studies, I want to demonstrate how we need to look at other ways of understanding access to technology that are a part of everyday cultural practices in emerging ICT spaces like India. Because this idea of access to technology is central to the imagination of Technosocial Subjects in India, examining access to technology, not merely as a transaction but as producing 'conditions of technology' leads to a better contexutalised framework of understanding the process of technosociality.

1.1 Delhi Public School MMS: Access as Transgression

One of the cases where the ideas of Access were complicated in the Indian context, was the legal and public furore over the distribution of an MMS (Multi-Media Message) video that captured two underage young adults in a sexual act. The clip, which was dubbed in popular media as 'DPS Dhamaka' became viral on the internet. The video clip was listed on an auction (peer-2-peer) website as an e-book and as 'Item 27877408 – DPS Girl having fun!!! Full video + Bazee points' for Rs. 125. This visibility of the clip on the auction site, brought it to the eyes of the State where its earlier circulation through private circuits and P2P networks had gone unnoticed. As Namita Malhotra argues in her monograph on *Porn: Law, Video, Technology* (2011),

> While newspapers and TV channels were creating and participating in a frenxy, there would have been no effective way in which the State could have intervened, without the slip of the object away from nether spaces of p2p networks and covert exchanges on mobile phones into a public space like Bazee. (Malhotra 2011, 140)

Following the visibility of the video clip, there was an attempt to find somebody responsible for the crime and be held liable for the 'crime' that had happened. Originally, Ravi Raj, a student at IIT Kharagpur, who had put up the clip on Bazee was arrested for possessing and selling pornography. He was arrested and kept in police custody for at least three days and so was the male student who made the clip. They were both made to go through proceedings in juvenile court. Both the students in the video were suspended from school after the incident. Eventually, the most high profile arrest and follow up from the DPS MMS incident was the arrest of the CEO of Bazee.com – Avnish Bajaj. Malhotra finds this arrest a symbolic resolution of this incident where none of the obvious perpetrators could be indicted and there

was a need to find a culpable person to be punished. Writing on Avnish Bajaj's arrest, she says,

> This seemed to be a satisfactory response to the public furore because (finally) there was someone to pin it on who was sufficiently high profile so a downfall of some kind, other than that of Indian culture and values, could be effected. Also Bazee was soon bought over by Ebay, and the CEO, Avnish Bajaj was a respectable, foreign-educated man who had been touched by the spread of such sleaze (Malhotra 2011, 141)

This is the beginning of a series of slippages where a punishable body in the face of public outcry had to be identified. Malhotra writes, '[i]n the public eye, blame is fixed for a brief period, before it slipped towards the next and more likely target' (141). And so we witnessed a witch-hunt that sought to hold the boy who made the video clip responsible, the student of IIT who attempted to circulate the clip and eventually the CEO of Bazee. For Malhotra, '[t]he string of failed prosecutions seems to indicate that pornography-as-object was slipping through the cracks of the legal system' (141).

Malhotra, in her legal analysis of the case, argues that the court's judgment[72] on who can be held liable for the circulation of the MMS clip online and specifically its sale on Bazee.com is an interesting phenomenon where,

> [It]t is not the pornographic text that keeps slipping and eluding the grasp of the court, but the inability especially in the age of the Internet, to fix the transactions around such an object that is rapidly changing hands and circulating in an exponential speed through the Internet (Malhotra 2011,55)

[72] Avnish Bajaj V/S State on 29/5/2008 by Muralidhar J. Available online at http://www.indiankanoon.org/doc/309722/

Suggesting that charges of obscenity could not stick on Bajaj, Malhotra argues that the 'slippery transaction of the gaze with the pornographic object is difficult to fix...it is still hard to determine for the law, especially with the Internet, how and by whom has circulation of the pornographic object has taken place and to fix these transactions to ensure legal culpability'. We can see in the case that the earlier positions that were easily criminalised when it came to objects in mass media – producer, consumer, distributor of obscenity, were vacated rapidly in the DPS MMS case. We have a case where the bodies, when looked at through simplified ideas of Access, could not be regulated. The girl in the clip could not be punished because she was the victim in the case that could be read as statutory rape. In the case of the boy, a stranger argument was posed – 'that in our fast urbanising societies where parents don't have time for children, they buy off their love by giving them gadgets – which makes possible certain kinds of technological conditions...thus the blame if it is on the boy, is on the larger society' (Malhotra 2011, 57).

The court holds that the safeguard and filtering procedures of Bazee were inadequate and therefore, it can be held liable as a corporate body, and so can Avnish Bajaj only in his capacity as Managing Director but not in his individual capacity. However, the case was filed against Avnish Bajaj and not Bazee, and hence no charge criminal offence of obscenity is concerned under Section 292 of the Indian Penal Code which deals with sale and procurement of obscene works. Similarly, under the Information Technology Act (Section 67: Publishing of information which is obscene in electronic form) Avnish Bajaj himself not just in the role of MD of Bazee can be held responsible. Section 67 covers anyone who 'publishes or transmits of causes to be published in the electronic form'. The court held that considering the registration, listing procedures on Bazee, the website is definitely responsible

for ‘causing to be published’ obscene material of the DPS MMS clip – eight transactions had taken place in the 38 hours when it was available via Bazee. Malhotra suggests,

> Though not under the penal code, but under provision of the Information Technology Act (Section 85), the court held that a prima facie case can be made against Avnish Bajaj himself for causing to be published obscene material and the trial court has now to look into the matter to determine if he can be held liable, in an individual capacity. The case now disappears in the morass of court procedures and delays and so far no further development has taken place (Malhotra 2011, 143)

This, for me is also the beginning of understanding the technosocial subject implied in this incident. It is necessary to emphasise that this was not a run-of-the-mill case about obscenity and censorship. The particular clip did not have complete nudity or a completed sexual act. If it is possible to say this, the intentions, gestures and suggestions in the clip were explicit but not the clip itself. The only description for the MMS clip includes- “This video is of a girl of DPS RK PURAM which has been filmed by his (sic) boyfriend in very sexual explicit conditions.” It seems like the calculations of the court might rest on whether this pithy description itself can satisfy the requirements of obscenity under Section 294 of the Indian Penal Code, because the case is not against the person selling the video clip, but against the CEO of the corporation for hosting the said clip.

The court held that this description indicates that the said obscene object is just a click away and such a ‘listing which informed the potential buyer that such a video clip that is pornographic can be procured for a price’. There is a suggestion that there was nobody in particular that could be fixed with the blame. What was **at blame** was access to technology and conditions of technology within which the different actors in this case were embedded.

In the case of the DPS MMS, it seemed that technology – especially access to technology by unsupervised persons – has taken that role. The eventual directive that came out of this case was a blanket warning issued to the public that 'anyone found in possession of the clip would be fined and prosecuted' (Malhotra 2011, 58). There was an anxiety around peoples' unsupervised access to digital technologies, the networks that facilitated access to content without the permission of the state, and modes of circulation and dissemination that generated high access to audiences which cannot be controlled or regulated.

The State's interest in this case, is not in the sexual content of the material but in the way it sidesteps the State's authorial positions and produces mutable, transmittable, and transferable products as well as conditions of access. Such a focus on practices and behaviours around the obscene object, rather than the content itself, seems not to disrupt the law's neat sidestepping of the force of the image itself. These different tropes of access to technology informed the State' attempt at control and containment of technosocial practices in the country, giving rise to imaginations of the User as being in conditions of technology which make him/her a potential criminal. Access, which has so far been glorified in the ICT4D discourse, actually converts the User into a potential criminal. The very conditions of access transform the User into a transgressive subject. This idea of access as transgression or overriding the legal regulatory framework does not get accounted for in the larger technology discourse. However, they do shape and inform the Information Technology regulations which are made manifest in the IT Act. The DPS MMS case complicated the notion of access and posited a potentially criminal technosocial subject who, because of access to the digital, will be able to consume information and images beyond the sanction of the law. As Ajit Balakrishnan, the

CEO of Rediff states in an interview, what 'is bookended on the one end by the Delhi Public School caper and on the other by attack on Parliament.' [73]

The DPS MMS case shows how the ways in which public discourse can accuse, blame and literally hang technology seems to diverge from how the court attempts to pin down an offence or crime and prosecute by constructing a technosocial subject as the pervert, while also accusing pornography as a phenomenon. The court is unable to hold technology to blame but the accused is technology-at-large and modernity, which subsumes practices around technology and separates out the good and ethical ways in which a citizen should access and use technologies to rise from the potentially criminal conditions of technology within which their Technosocial identity is formed.

1.2 The Lucknow Incident: Access, Virtual Reality, Real Life

The idea of Access to conditions of technology producing a Technosocial subject is best demonstrated through the story that is now referred to as 'The Lucknow Incident' (Gupta, 2006). The case is reconstructed from the Literature published by the NGOs and the activists involved, as well as newspaper reports on the incident. On 3rd January 2006, police men in the city of Lucknow, masqueraded as gay men and registered with a popular queer dating website. According to the FIR, the police officer on duty stated,

> We got specific information by an informer that four people are involved in obscene condition there in the picnic spot. …[and] involved in unnatural sex, after few attempts they were arrested at near about 8:30 pm in the evening. …[and] told us …that we share same sex relation amongst us.[74](UNHCR, 2009).

[73] Interview with Ajit Balakrishnan on 10th August, 2009. See http://pad.ma.
[74] English translation of the FIR 194337 of Police Station Gudama, Lucknow January 3, 2006

The Human Rights Watch received reports that "undercover police, posing as gay on the website, entrapped one man, then forced him to call others and arrange a meeting where they were arrested" (UNHCR, 2009). A fact finding team of queer activists, feminists and lawyers found 'that none of the men involved were having public sex… the story put out by the police in the FIR is a completely false one with the entire process being a sex spectacle put on by the police'.

The preliminary fact finding report[75] suggests that these policemen created profiles where they listed themselves as gay men and started interacting with the members of the guys4men.com site. Pawan Deep Singh (2007), in his graduate dissertation *Inside Virtual Queer Subcultures* does an anthropological study of guys4men.com and finds it very similar to Orkut in its functioning. Explicitly a gay dating site, it allows for the users to create their profiles, add pictures and text, arrange their personal data in a scripted space, exchange messages and chat. The users also search befriend each other, participate public discussions on forums and arrange for physical encounters at a personal or a collective level. The policemen spent time on the net, establishing trust and communication with different members online and eventually entrapped one man, arrested him and used his cell-phone records to invite three more men to meet him on false pretexts. The four men were then arrested in Lucknow for operating a "gay racket" on the Internet and engaging in unnatural sex[76]. The popular media reported this as 'Gay Club running on the Net Unearthed'. The website was looked upon as a physical space where people indulged in 'unnatural sex acts.'

[75] Available at http://www.yawningbread.org/apdx_2006/imp-249.htm. retrieved 3rd March 2007

[76] Police also arrested a number of gay men in the Meerut region (use standard citation format consistently : 'Cops refuse to release 4 gays' 2006, *Khaleej Times*, 12 January and Townley, Ben 2006, 'India feels heat over gay rights', Gay.com UK website, 12 January. A police taskforce in Hyderabad "busted the first–ever male prostitute racket" and arrested three people under Section 377 for indulging in "unnatural sex" ('Cops expose 'gay abandon'' 2006, *The Times of India*, 1 February).

The Lucknow police claim to have seized the four men while they were having a picnic in a public place. The report goes on to expose the prejudices of the policemen and the magistrate involved and the forgeries in the FIR that the police had produced to penalise and punish these men.

While the moral implications of such policing and entrapment, the indiscretion that the police exercised in this clear violation of an ethical code of behaviour, and the abuse of power that informed this exercise clearly propelled by prejudices and homophobia are all elements that merit a detailed discussion which also incorporates technology mediated governance structures (technosocial States, perhaps). However, to further my argument I want to draw on three elements of this case which need extrapolation.

Firstly, as queer activist and researcher Alok Gupta (2006) points out 'the police, despite the ... narrow requirement of actual sexual acts under the law, will go to the extent of fabricating false cases, and set up entrapments, just to incarcerate men who they believe are homosexual, due to certain appearance and actions, therefore likely to commit sodomy' (2006, 7) Gupta suggests that this ability of using technologised traces and fantasies as material evidence for the intention of the people under question is unprecedented. The physical evidence of their apparently straight behaviour was discounted because of their turning up at the public park.

Second, the policemen who were luring these men towards an arrest were also projecting similar fantasies as those arrested. However, their fantasies were being authored, presumably in the service of the state and hence gained validity and were sanctioned where as similar personal fantasies produced by the other men were disciplined and punished. This means that performative sexuality even when illegal, when sanctioned by the law and mediated by the

digital, could be taken as only fantasy and not mapped back on to the bodies of all the men on the site.

Third, while the men were caught in the physical meeting space, the charges against them were all based on the activities online. While none of these activities is criminal in itself, what was being punished was the fact that these men conjured fantasies in the medium and that these fantasies were presumed to spill over into the physical world – that it was the production and spillage of avatar and role playing that was being punished in this particular case. The anxieties of the VR-RL or the self-avatar were easily resolved by, ironically, favouring the online evidence and activities and mapping those on to the users.

The actions of the police in mapping these avatars on to the physical bodies of the four men, bring to the fore the question of access that I have been trying to complicate. There was a way in which the data producing capacity of these individuals, mediated by their access to digital technologies, preceded their physical actions or testimonies. In fact, there was a deliberate conflation where the intentions and the aspirations of the avatar were mapped on to the physical reality and brought under legal jurisdiction. The scant literature that surrounds the Lucknow incident focuses on the policemen's punishment of the *act which had not occurred*. The act that was being punished was one of access rather than performance or action.

A different focus that looks at the role of technology and how it mitigates the questions of actions, desires and identities, offers a different reading of the case. The argument is not that these accused men were being punished for things that they had not done, but that they were being targeted as technosocial subjects, where the ambitions and intentions of the avatar were

looked upon as ‘material’ practice that overrode the material reality. It is also necessary to recognise that this is not merely the case of speech/action where a definite communication was used as evidence of intention or action. The mere presence in a technologised space enabled the police to fabricate these culpable identities for the men involved.

The story of the Lucknow incident also brings to the fore, the possibility that there might also be reluctant Technosocial subjects who enter into conditions of cyborgification – people who might not have the same agential engagements with technology that we saw in the models that Clarke (2003) and Warwick (2000) posited. These are people who do have access to technology but their cyborg-ness is not a part of their ambition or design. They are constructed as cyborgs as they become embodied in their digital practice. It is possible that all the users of the cyberspace do not imagine themselves as authoring a cyborg or inhabiting a Technosocial Space and Subjectivity. It is also imaginable that quite a lot of the users might be using the cyberspace functionally – towards a particular aim, like sending an email for example – and do not produce sustained and elaborate narratives of themselves. The general rhetoric of agency, will and choice that marks the idea of cyborg (ever since its first model offered by Clynes and Kline (1960) needs to be revisited. Given the different stakeholders and legitimising powers that have an interest and say in cyberspaces and internet regulation, the technosocial subject is not merely created in his/her interaction with the technology.

As is in the case of the Lucknow incident, the user might be interacting with the technologies without any conscious straddling of two realms (very different from the users Turkle (1996, 1998) and Dibbell (1993) talk about – users who are consciously entering into a virtual reality) but might still be shaped as cyborgs because the VR-RL conflate at the will of a superstructure external both to the person or that particular digital platform. The everyday

embodied cyberspace cyborg becomes subject to the state as well as the technology. The State, in its interactions with technology, makes clear distinctions about safe activities online but remains quiet about the fantasies that will be punished as the online and offline personas and activities conflate.[77]

It is not the intention of this chapter enter into debates about technology mediated police states. However, in the positing of this technosocial subject who gets produced by having access to digital technologies, I do want to signal a new approach towards understanding access to technology and technology mediated spaces. I want to suggest that the while talking about technosocial subjects, we also need to take into account the technology mediated conditions that these subjects live in. It is important to look at human-technology relationships beyond access and adoption to see how technosocial subjects are formed. The Lucknow incident is a symptom of how access is taken as an uncomplicated idea in our debates around human-technology relationships.

1.3 Digital Conditions: Access As Evidence

The question of Access, just like in the case of obscenity and pornography, has been central to the discussions of danger and cybercrime in the country. The National Crime Resource Bureau of India mentions in its report on *Crime in India 2005*, that 'CyberCrimes are a new class of crimes rapidly increasing due to extensive use of Internet and I.T. enabled services (2005, 175).' These IT Acts (2005, 2008, 2010) become the basis by which these crimes are identified and brought to prosecution. However, the report says that it also relies on the 'appropriate sections of the IPC with the legal recognition of Electronics Records and the

[77] There are processes for monitoring online activity, interaction and communications being established by the Indian State. The Cybercrime Investigation Cell which runs out of Mumbai offers the internet consumer safety tips about protecting their identities and assets while being online. The official website is available at http://www.cybercellmumbai.com/

amendments made in several sections of the IPC vide the IT Act, 2000.' (2005, 175). The 'recognition of Electronic Records' is an interesting way to unpack the idea of Access. It suggests that the presence of digital objects, computing gadgets or internet services, or access to any of these, potentially can produce a condition where 'cyber-crime' happens. The report notes, that even when 'offences fall under the traditional IPC crimes, the cases (that) had the cybertones where computer, Internet or its related were present in the crime and hence they were categorised as CyberCrimes under IPC' (2010, 179). I want to show how, in the case of cybercrimes, especially when they are around concerns of danger and terrorism, the notion of Access gets re-formulated so that there mere presence of 'cybertones' or access to 'Electronic Records' produces a pathologised Technosocial subjectivity.

One of the most high profile cases of how Access came to stand in for evidence is evident in the case of Laksmana Kailash K. Kailash, who was a software engineer in Bangalore, was arrested by the police on 31st August 2007, on suspicion of having posted insulting images of Chhatrapati Shivaji on Orkut. He was put behind bars because Shivaji is protected under the Indian National Emblem's Act and hence insulting his name or image is an offence. The incident, when it was brought to the attention of the police, led to them asking Google, the parent company that owns Orkut, to identify the user behind the avatar who had posted that information. Google got in touch with Airtel, the Internet Service Provider, to trace the person back to his physical address, and this led to the arrest of Kailash.

This case is not particularly news-worthy because similar incidents have dotted the history of freedom of speech and expression debates online in the country. The technology magazine Techgoss provides a quick summary of such similar debates. A detailed blog post titled

> ‘Anti –Gandhi site self-censors’ by Techgirl reports, ‘Gurgaon-based techie Rahul Vaid posted a vulgar message about Congress supremo Sonia Gandhi on Google’s social networking website Orkut community ‘I Hate Sonia Gandhi’... He was arrested in Gurgaon, North India and taken to Pune, Maharashtra and put in jail.’ (Techgirl, 2008).

The blogger is ‘intrigued at all the energy and money invested in prosecuting Vaid’. (2008). Vaid was booked under section 292 of Indian Penal Code and section 67 of the Information Technology Act and would have been punished with a fine of 1 lakh rupees or up to 5 years of imprisonment. There are many such other instances where the expression of a personal opinion around political figures or phenomena on social networking sites have led to the prosecution of the people concerned.

However, Lakshmana’s case gained high visibility, because it was revealed that his arrest was a false arrest. As Bala Shah on Techgloss writes, ‘An Airtel techie makes a grave error and gives police the name of an innocent person using a different IP address. An innocent man is jailed due to the mistake of one Airtel employee.’ (Shah, 2008). The mistake, in this case, as the newspaper *Bangalore Mirror* reports quoting the State Human Rights Commission which ordered Airtel to pay Rs. 2 lakhs as compensation to Lakshmana, ‘Airtel had confusion over AM and PM’ and basing their formulation purely on usage and access, they pointed the police in the wrong direction. (Shah 2008).

Yasmin Ahmed, in her newspaper article ‘Cops blame Bharti Airtel for techie jailing’ reports that the Pune police, in the face of the fiasco, came out with a reply that says that ‘police were not responsible’ (Ahmed, 2008). She quotes the 5-page reply by Netaji Shinde ACP (economic and cybercrime branch) saying that ‘Bharti Airtel had given him Lakshmana’s IP

address on August 8, 2007 and the techie was arrested at noon on September 1, 2007'. Simultaneously, when the police approached Google to trace the culprit, Google pointed them to 'Kiran Reddy, a techie at Convergys Company at Bangalore'. Reddy confessed to the offence and Lakshmana was released from prison. It was evident that Airtel had provided erroneous information that had led to Lakshmana's error, and yet the Telecom company insisted that it was a technical error: 'A small change in AM or PM or simply GMT, that is, time component in the IP address, changed the entire complexion of the information' (quoted in Bangalore Mirror, 2007). Claiming that it was the police's responsibility to verify the information, Airtel claimed that 'they had no role to play in violation of Lakshmana's human rights' (quoted in Bangalore Mirror, 2007).

Lakshmana's case offers us another way of complicating the ideas of Access. In his case, the mere attribution of access led to his being produced as a technosocial subject who could be punished. Unlike in the guys4men case where the avatars were mapped back on to the physical bodies, we have a case where somebody else's avatar and its activities are mapped on to Lakshmana's body, producing it as a criminal. The evidence was not based on actions or intentions or desires but on the very fact that access to the website could be traced (albeit erroneously) back to a physical body. The incident flags for us, the idea, that the potential for 'access', and the transactions of access can also produce technosocial subjectivities. In discussions of access, these particular sets of transactions that enable access are often glossed over. Lakshmana's case shows that the conditions of access to technology implicate many different articles and are important factors that contribute to the production of technosociality. Our interaction with internet service providers, IP addresses, operating systems, data sniffers, firewalls, and other opaque computing protocols are also a part of our access and need to be understood as building technosocial forms of being.

The idea of access as evidence for technosociality, takes a more sinister tone in the case of S.A.R. Geelani and his alleged role in the terrorist attack on the Indian Parliament on 13th December 2001. Shuddhabrata Sengupta, in his poignant and poetic essay 'Signatures of the Apocalypse' (2003) contextualises the case of Geelani in contemporary India where 'technology, information, databases and surveillance are beginning to emerge as primary issues that shape the political scene.' He acknowledges that State surveillance is not a new thing but in 'the last five years or so have seen computers, the internet, mobile phones, video footage, and sophisticated databasing techniques become central to the political imagination. The state sees control over information, and the technologies of communication as one of the keys to power' (2003). Sengupta posits that the case of Geelani needs to be read as the State's efforts at building a surveillance apparatus to gain 'control over the means and politics of information and communication, maintained through successive legislative instruments specifically designed to deal with information ranging from the Indian Telegraph Act (1885) to the Information Technology Act (2000) and the Convergence Bill (2001)' (Sengupta, 2003).

Sengupta reconstructs the SAR Geelani case from personal interactions with Geelani as well as Sengupta reconstructs the SAR Geelani case from personal interactions with Geelani as well as popular media reportage. Sengupta tells of how the attack on the Parliament led to the trial of the four accused under the Prevention of Terrorism Act. He writes, '[p]articularly disturbing was the meting out of a death sentence at the end of first phase of the trial to SAR Gilani (sic), a Delhi university lecturer in Arabic who happened to be a Kashmiri Muslim, on the basis of the mistranslation of an illegally obtained mobile phone intercept.' (Sengupta, 2003).

While there are many questions of state-surveillance, human rights violation, Islamophobia, the ethical role of the police in producing evidence, the State's political investment in constructing narratives of danger, etc. which need to be answered, I am particularly interested in the ways in which digital technologies were used to construct Geelani as a potential criminal.

Nandita Haksar particularly focuses on the role that technology (and Geelani's relationship with it – largely defined through access) played in getting Geelani framed for the charges. Haksar, in her essay 'Tried by the Media' writes, '[t]he only piece of evidence against him [Geelani] is a two minute sixteen second telephone conversation he had with his brother while travelling in a bus from his home to the nearby mosque on Friday, December 14th, 2001.' (Haksar 2004, 159). In a detailed analysis, looking at the translation of the original transcript, Haksar shows that the content of the transcript were inoffensive and should not have been justified as evidence to convict Geelani on charges of terrorism. She argues at length:

> Geelani produced two independent witnesses who put the transcript of the taped conversation on record and testified that the conversation could not be remotely linked to the conspiracy to attack the Parliament.
>
> The trial court judge...held that the two independent defence witnesses were in fact 'interested witnesses'. He did not explain how [witnesses]...who appeared in court at the request of senior civil liberties activists known for their personal integrity could be called 'interested'. The Judge stated in his judgment that himself had taken lessons in the Kashmiri language and was thus competent to decide on the truth of the police version.

> Geelani was condemned to death on the basis of this evidence and he spent one year on death row before being acquitted by the High Court on October 29th, 2003. (Haksar 2004, 159-160)

I suggest that the content of the phone was not really crucial to the judge's ruling and the media's construction of Geelani is as a terrorist. The fact that he had access to the digital technologies that enable mobile telephony was enough to incriminate him as a criminal. Nirmalangshu Mukherjee (2005) who produces a detailed account of the incident and the legal battles that followed thereon, in his book *December 13: Terror Over Democracy,* hints at this in his analyses of the public and legal discourse around the case. Mukherjee shows that there was an overwhelming emphasis of the phone call, the ability of somebody to make a phone call to Kashmir and Pakistan while residing in Delhi, in media reportage. He cites Devesh K. Pandey of *The Hindu* in his piece 'Varsity Don Guided 'Fidayeen'' (2001) who wrote that 'intelligence agencies had been tapping Geelani's telephone for sometime as he had contacts in Pakistan' (Pandey in Mukherjee, 2005, 23). Rajnish Sharma of *Hindustan Times* (17th December 2001, 29) in his article 'Hunt for Teacher's Pet in Jubilee Hall' mentions how Geelani had spent long hours with a Jordanian doctoral student of Delhi University in Astrophysics and how, 'lengthy phone-calls were made to West Asia from booths located in the Delhi University campus' (Sharma in Pandey 2005, 33). Sharma also found it necessary to report that 'before carrying out the attack on Parliament, the terrorists had sent back to Srinagar Rs. 10 lakhs of unspent money and a laptop.' (Sharma in Pandey 2005, 34)

Pandey looks at the ways in which information was manipulated, forged, and distorted without any factual evidence but a continued hinting of use of technologies which, in itself was considered sinister. This can be an answer to Haksar's question about how any court sentenced a man to death 'on no evidence at all'. SAR Geelani's legal battles give us a different idea of access. Access not as merely empowering the individual to connect with the technological, with information, consent and choice. In this case, we have an individual's access to the digital and the technological as a way of rendering him accessible and subsequently culpable. Geelani's access to the mobile also made him accessible as a data subject who can be accessed by surveillance and media agencies.

The possibility of access rendering a subject transparent and hypervisible needs to be considered in the building of the technosocial. In both these cases – of Lakshmana and Geelani's arrest – the rhetoric and the argument, the evidence and the trial, were all premised upon certain technological conditions rather than the content of the evidence. It was as if, the availability of technological forms of interaction communication which can bypass the otherwise plugged-in ears of the State (as was also seen in the DPS MMS case), was necessarily a condition of being anti-state.

In all these different instances, we are looking at how the different relationships between the human and the technological, when subject to geo-specific regulatory mechanisms and frameworks, helps understand a Technosocial condition within which subjects, spaces and modes of regulation can be studied.

2. THE TECHNOSOCIAL CONDITION

In the preceding chapters, we have looked at many conceptions of the Technosocial condition. Most of them deal with questions of biotechnology or the socio-economic orders created by new technological forms. Sherry Turkle (1998), for example, looks at the rapidly growing biotechnology and genetic studies which posit a unique combination of the biological augmented by new technologies. Turkle, in her analysis of 'Techno tots' looks not only at a generation that is growing into technology (as opposed to growing up with technology) but also at the technosocial conditions that produce 'designer babies' and 'cloned selves' and the questions of ethics and the notion of the self. She looks at how digital technologies have given us tropes of understanding our self and the world around us; Replication, Duplication, Blue prints, expandable systems and transmittable data have all become a part of the imaginations of our future selves.

Anne Balsamo (1996) had similar questions to ask in her study of the hyper-mobilised body that is constructed out of spaces of incessant consumption, like gyms, beauty parlours, body shops, etc. These are all conditions of the technosocial as different from the ones that were fantasised of in science fiction literature or even the earlier Cyberculture discourse. These were everyday spaces that produced certain technology mediated material practices. They become the sites where the syntheses of the technological and biological can occur, producing mobile and temporary technosocial conditions mediated through consumption.

Arturo Escobar, posited the technosocial condition in the socio-economic orders created by new technological forms. In as early as 1994, he talked about technosociality as one of the emerging and dominant strains of cyberspatial technologies. Escobar introduced the idea of

the technosocial subject not as an individual body or a person, but as a distributed self located in the matrices and hierarchies of a larger system of technologisation. It is with the formation of new networks, new ways of communicating and relating with each other that the technosocial body comes into being. The body and its self are realised, not only in the constitution of the body but in its practices – The technosocial condition is in the way the technosocial body interacts with other similar bodies using new forms of electronic communication and interaction. Howard Rheingold (2000), in *Smart Mobs,* identifies the technosocial condition as a space where political mobilisation and social transformation is effectively orchestrated by large communities clustered around technologies. Even when the cyborgs are located in the everyday, the influences or the determinants of cyborgs, in these formulations are either the market or the individuals.

In *The Database Nation,* Simson Garfinkel (2001) talks about the State's investment in and promotion of digital infrastructure as a condition of technosociality which is marked by the loss of privacy and the need to protect the privacy of the individual from becoming data which is essentially private in nature and not available to the individual him/herself. As we saw in the case of SAR Geelani, the subjects often have to become transparent in the technosocial condition so that data can pass through them seamlessly. David Brin (1998) takes this idea further in *The Transparent Society* and envisions a world where technosociality becomes the conditions through which every technosocial subject watches every other technosocial actor (subject, space, state).

In all these instances that have marked different technosocial conditions, the subject is generally looked at as a willing and voluntary state of being – the high individualism of Western traditions of citizenship allows for the notion of an informed rational citizen who

participates in processes of becoming a technosocial. This is what allows for Kevin Warwick (2000) to announce in his autobiography that he is the first living human cyborg. In many similar discourses, different practitioners and the subjects of cyborg experiments have also talked about the syndissertation of biology and technology in order to become cyborgs. The technosocial condition is seen as a scientific experiment – detached from the sphere of our realities and contained within a hypothetical environment; sterile and uninterrupted. The only actors that are thought of as involved in the project are scientists and the subjects – often the two are the same, and the external conditions are invoked only when it comes to concerns of mass production and public engagement.

The dissertation has shown how, especially in the case of India, the relationship that a Technosocial subject has with its technosocial condition is complex. The production of a technosocial subject seems to be on a dual trope of idealisation and criminalisation. The State, in the Indian Context, is an active player in the production of the technosocial condition. It was the ambition of this concluding chapter to look at the ambiguities, the dilemmas and the questions that arise when everyday citizens gain access to technologies.

The last chapter has sought to complicate the idea of Access to technology to move away from 'access as usage' conflation that happens in ICT4D discourse. The different case studies and their analyses build a 'condition of access' rather than access as a simplistic state of being. There are four different propositions which help understand the technosocial condition within which technosocial subjectivities are being produced.

The first proposition, analysing the DPS MMS case was to understand Access as Transgression. It was to mark a departure from the idea that Access is granted by the State to

look at how access to technologies can actually override the ambitions and designs of the State. It showed how, this tension between user behaviour and the State's technoscience imagination of the user helps us understand the Technosocial in a new way. It is distinctly different from the models of cyborg identities mapped in Chapter 3 and shows how a grounded, contextual reading of human-technology relationships leads to a more nuanced framework of the Technosocial that is sensitive to the cultural practices within certain geopolitical and social contexts.

The second proposition was that access to technology is not always equivalent to the production of a technosocial identity. Technosociality has to be understood not as a mere access, usage and adoption but as also marked by intentions of access and the engagement of the individual at that moment of access. Technosocial subjectivity can be tentative, fluid, and tenuous. It might emerge at certain points and is invoked at specific moments. These moments might not necessarily be the same as moments of access. There may be times where the individual, functionally checking the email might not choose to identify him/herself as a technosocial subject. There might also be times, as we saw in the Lucknow Homosexual Coup case, where the technosocial subject is constructed far after the moment of access, though still invoking and referencing that particular state of access.

The third proposition was to look at access as a series of transactions rather than just a one-time interaction. There are many transactions with different multiple stakeholders involved in access to digital technologies. State owned infrastructure, market owned services, privately owned operating systems, open and closed computing devices, multi-nationally distributed online systems and networks, all posit different protocols of negotiation and interaction which are often hidden behind the Graphical User Interface. As we saw in the case of the

Orkut arrest, there are many different regulatory frameworks that affect our access and also monitor who we are, what we do and what we might not want to be brought forward as public data. Unpacking the different levels of transactions that enable access – from State mandates and official regulatory acts to Terms of Service and private contracts that we sign with private service providers – helps understand the Technosocial as more than an individual-technology interaction. It is a relationship that the individual forms with the technological, but it is subject to different kinds of regulations and is constructed through the design, intent, application and imagination of the various stake-holders involved.

The fourth proposition, as was seen in the case of SAR Geelani, was about suggesting that access is not a unidirectional process. It is not merely about granting the individual access to information and communication technologies. In the granting of access – perhaps, almost as a precondition of granting access – the subject has to be made into a data subject. The subjectivity has to be produced so that the digital databases and networks can access the subject. The subject gets rendered readable or accessible, and thus often made vulnerable to different surveillance and regulatory mechanisms that can exploit the conditions of its technosociality to form unwarranted identities for the subject. Access, then, is a multi-directional process where different nodes within the network are granted access to each other and we need to look at the politics, power contestations of safety and security that need to be mapped in this condition of technosociality.

The conclusion to the dissertation looks at what the emergence of the Technsocial subject and the corresponding technosocial conditions, pose new challenges of governance for the changing nation state. It hopes to look at the e-governance programmes and ambitions of the Indian State as the technosocial condition within which the technosocial subject need to be

placed. It posits the Technosocial Condition as an essential condition of our contemporary lived practices and a framework through which questions of regulation, governance, negotiation, and interaction can be understood in the transaction between technosocial subjects, spaces and governments.

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Appendix A

The E-readiness report of Indian States/UT's 2005

Conclusion │ *The Technosocial Subject and new conditions of Governance*

The Technosocial Subject has been at the central focus of this dissertation. An attempt has been made to move away from the cyborg discourse that thinks of human-technology in isolated lab-like conditions. The chapters have discussed the Technosocial as a condition, a lens, a paradigm through which spaces, bodies and the digital cyberspaces can be studied. The Technosocial has been constructed as an embedded, contextualised framework that needs to be understood both as constituting and constituted by everyday cultural practices of the Internets. It has been the ambition of this dissertation to demonstrate how, examining digital objects and phenomena at the conjunction of law, technology and cultural production leads to an unpacking of the contemporary globalised forms of technology mediated subjectivities.

The different chapters have tried to complicate the universalist frameworks that have remained persistent in Cyberculture and showed how historical, social and cultural trajectories need to be recognised in the otherwise flattened accounts of digital phenomena. Chapter 4 in particular, was an attempt to look at the role that law, regulation, policy, and development agenda have played in shaping our engagement with the Technosocial. In the building of this framework, I have examined the construction of the physical cities that we occupy and the material bodies that we inhabit, to see how these ideas have been complicated for us with the emergence of Cyberculture theory and practice. In mapping the transitions of emerging technosocial spaces and bodies, the State has remained a strong presence but not yet analysed in this dissertation.

In this conclusion, I want to look at how, the production of a technosocial subject is not against the backdrop of a monolithic un-changing State and its governance apparatus. While

it is not in the scope of this dissertation to go into conceptualising a Technosocial State, I want to signal how, the State's own technoscience imagination of itself has changed with the rise of ICTs and that the framework of technosociality can be extended to also look at the mechanics and politics of changing nature of governance in India. I want to signal these changes in the Technosocial State through two case-studies and suggest that further research in these directions will be fruitful to looking at larger processes of the Technosocial.

1. TECHNOSOCIAL STATE AND CONDITIONS OF GOVERNANCE

Ashish Rajadhyaksha (2011), in his landmark monograph on the *Cultural Last Mile* as a problem of Indian governance and technology, suggests that 'India has had a long history of governmental techno-utopia – where technology has been presented as somehow clean, as everything that the state, in its messiness, is not – where, somehow, leaving it to technology instead of to mere human beings would make it faster, easier, more accessible and less corruptible.' (39). He maps a long history of significant moments where different technologies have been invoked as 'impartial, balanced, pluralistic, diverse, equally accessible, efficient and incorruptible' (39) and thus able to assist the government in a seamless implementation of its governance in the country.

Drawing from Balaji Parthasarathy et al's (2005) comprehensive study of e-governance initiatives in the early 2000s, Rajadhyaksha emphasises that 'the cultural difficult of translating such symbolic attributes [like transparency and accountability] into functioning systems crippled several major initiatives, precisely because [of] their absolute belief in the capacity to attribute abstract democratic values into the technology itself.' (40). Rajadhyaksha looks at other instances of techno-utopianism in the history of State Technoscience – the telegraph, the radio terrestrial or satellite television, the atomic

programme etc. – and proposes that technology has also been central to theories of governance in India. With the emergence of Information technologies, Rajadhyaksha suggests, there is a signal

> change in the character of the State: namely, the very different role that technology – more precisely information technology – now plays within both the function of the State and the market...no good neoliberal would today call for State rollback...but would rather call for a radically different nature of State intervention...(and) one critical way this shift can be characterized is through shifting the very terms of political science, in their relationship to technology.*'* (Rajadhyaksha, 2011, 45)

Rajadhyaksha looks at the Government of India's formation of the Unique Identification Authority of India (UIDAI) as embodying this foundational change between the State and the citizen in contemporary India. The UIDAI initiative sought to issue unique identification number to Indian residents that would be robust enough to eliminate duplicate and fake identities and which can also provide identity authentication in an easy, cost-effective way. Rajadhyaksha argues that while, through its several iterations, these remain the two specific claims of the UIDAI, 'as the potential for usage of this service is diversified, and coupled to a growing number of Government of India's Centrally Sponsored Schemes (CSS), these claims have been refracted through several further claims on what such an initiative can do for India' (166).

In its founding working paper 'Creating a Unique Identity Number for Every Resident in India', the UIDAI claimed that it envisioned itself as providing a UID Aadhaar number without any intelligence which would provide a 'yes-no' authentication without any possibility of fraud and theft. The Aadhar number would only collect basic information on

the resident for its functioning, but might facilitate other registrars in collecting more significant information on the enrolee in the system. As Rajadhyaksha notes,

> In setting up this architecture, the UIDAI claims to have drawn major lessons from previous State experiments in providing a clear identity to residents, starting with the 1993 effort of the Election Commission to provide voter Ids, the Multipuopose National Identity Card (MNIC) approved in 2003, and PAN and EPIC (Electoral Photo Identity Card)...Three of its key claims, that it is **not a citizenship record,** second, that **submission of personal data would be voluntary and not coercive,** and lastly that it would directly facilitate **major public distribution welfare systems** derive from its avowed distance from previous schemes. (Rajadhyaksha 2011, 168).

The UID programme, thus, clearly demarcates itself from earlier modes of State-thinking as can be found in the NATGRID, that, in the words of Home Minister P. Chidambaram, was supposed to include '21 sets of databases...to achieve quick seamless and secure access to desired information for intelligence and enforcement agencies'. The NATGRID was supposed to include a series of surveillance apparatus databases such as the DNA data bank, Crime and Criminal Tracking Network and Systems (CCTNS) and a National Counter Terrorism Centre, which would produce a devastatingly frightening surveillance society.

The UID, in its quest for identifying residents, and not citizens, also veers clear from the National Population Register (NPR), the official census body of the State. Rajadhyaksha claims that there is a very clear divide between the intentions and the designs of the NPR and the UIDAI, although the NPR seems to be riding on the UIDAI to get its work done (171). He marks the distinction of the UID from earlier identity schemes, when he writes,

> It has become increasingly evident that on its own, *unlike* purpose-driven identity definitions, whether these are social security numbers, voting registrations or driving licenses which became only secondarily a proof of identity, the UID has no primary purpose other than establishment of such identity, if it was indeed an identity.(Rajadhyaksha 2011, 171)

The UID thus becomes a facilitator, an empty receptacle which can be modified and used by different actors for their own purposes. Since the UID's avowed claim is to be in the business of producing identity which can be used for numerous purposes, the chimera like nature, the explosion of definitional responsibilities, and varied uses by the both the State and the market is something that the UIDAI has willingly taken on. Simultaneously, as Rajadhyaksha notes, 'it has also clearly asserted that it would not itself be directly responsible for such uses, since these were autonomous domains of functioning.' (172)

Usha Ramanathan (2010), a legal scholar and historian who has been one of the most strident critiques of the UIDAI argues that the project is a gross and fundamental violation of privacy and dignity. She clubs it together with the NATGRID and how it alters the characterization of citizens and residents. Rajadhyaksha reads Ramanthan as suggesting that in this changing relationship with the state, 'all citizens are seen as *a priori* terrorists who are presumed guilty and need to establish their innocence and this is incompatible with our democracy' (179). In her essay 'A State of Surveillance, Ramanathan argues, that this is a new moment for the Indian State where the politics of suspicion, 'dramatically erodes the ideas of citizenship, privacy, and minimum-invasion-and-that-when-there-is-reason-why' as the state becomes 'pre-emptively readied to catch whoever of the 1.4 billion may commit the act of terror' (1).

Ramnathan summarily dismisses the UID's claim that enrolment will be voluntary, that it is pro-poor, and that only basic information will be gathered. She passionately writes,

> Scratch the surface of these assertions, and a different truth emerges. The creation of the National Population Register, with its element of compulsion, is one aspect of this exercise in creating the UID database. And there is one fact about the UID that is incontrovertible; that it provides easy route for the market and the security agencies to identify and profile any person. That is how the UID fits into the larger scheme of monitoring and control, and that, as the current discourse reveals, will be its central purpose. (Ramanathan 2010, 1).

Whether or not Ramanathan's critique of the UIDAI's intentions is valid or not, belongs to a different set of debates. However, there is no denying the fact that Ramanathan, like Rajadhyaksha, is pointing to a significant transition in the State-citizen relationships in India, catalysed by the emergence of digital technologies. This transition is from being a Welfare State into what Ramanathan calls a 'Surveillance State'.

Sahana Basavapatna (2010), in her well detailed essay, also marks a similar but different transition[78]. For Basavapatna, the transition is in the State's recognition of resident non-citizens as constituting its subjects. The essay charts anxieties around what would happen to these resident non-citizens and who are the various people who occupy these positions, ranging from foreign travellers to asylum seekers; from the homeless to the dislocated who would be subjected to the surveillance of the State without accruing any of the benefits that the system is supposed to offer, because these benefits are clearly linked with benefits afforded to the citizens only. The State's interest in exercising its power over these people

[78] The digital copy of this text available at http://www.mcrg.ac.in/Development/draft_Symposium/Sahana.pdf requests that this text not be quoted in any manner, and hence I am only summarizing her position rather than citing from the text.

who were not always at the centre of its other endeavours like the National Population Register data collection, gives us a new insight into the changing nature of State governance in the country in the face of rapid digitisation.

Ajay Kumar and David Zhang (2010), in their edited anthology on *Ethics and Politics of Biometrics*, locate the UID and its biometry driven database creation in a larger transition in State's practices to accommodate for new forms of technology based labour and lifestyle identities which are arising in India. They write,

> Expanding cyber security threats, evolution of cyber terrorism, requirements for speedier trial of, increasing awareness of security of personal data gathered by organizations, data protection requirements of Indian IT/BPO companies serving global clients and increased security requirements for expanding e-governance and e-commerce demand a national level security ecosystem. (Kumar and Zhang 2010, 144).

This national digital ecosystem covers a wide range of fields within which structures like the UIDAI are producing systemic changes. While their primary interest might be the 'business of identity', there are efforts to link various public sector services like banking and micro-finances, identity and authentication, privacy and security, health-care and biometrics that the Aadhaar project signals in the country. As the 'Study Report on Assessment of Mode e-districts' also mentions, 'under [the] National e-Governance Plan (NeGP) initiated b Department of Information Technology (DIT), Government of India...[e-governance] proposes to adopt an integrated approach for delivery of citizen services...through automation of backend, workflow based on process redesign and data digitization across participating departments' (DIT, 3). The very vocabulary of State's imagination of itself and how it is to

engage with the technosocial subjects has changed. The UIDAI's Aadhaar project is a part of a much larger set of transitions that the Indian State is going through in its attempts to become a Technosocial State, thus producing new conditions of governance.

2. TRANSACTION OF THE TECHNOSOCIAL STATE

As Bhuwaneshwari Raman and Zainab Bawa (2010) show in their analysis of ground realities of the Citizen Service Centres in India, 'embedded nature' of these technologies need to be further interrogated to see what are the systemic changes that are emerging within the State structures as on the material practices of governance. They quote policy researchers Robin Williams and David Edge, to talk about how the rise and emergence of digital technologies change the landscape of governance and governmentality in emerging contexts like India:

> [T]echnology does not develop according to an inner technical logic but is instead a social product, patterned by the conditions of its creation and use. Ever stage in the generation and implementation of new technologies involves a set of choices between different technical options. Alongside narrowly technical considerations, a range of social factors affect which options are selected, thus influencing the content of technologies and their social implications. (William and Edge 1996, 2 in Raman and Bawa 2010, 6).

They argue that technological interventions 'reconfigure existing power relations and social structures' which affect both the 'bureaucratic rationality for introducing ICTs in government processes' as well as 'the ability of different groups in society...to respond to the claims of different groups of citizens' (7). By looking at 'anthropological perspectives on everyday politics, everyday state and embedded relations' (8), they examine the role of technology in shaping agency and social relations in the face of a State that is quickly changing in its

structure (11). It is evident that the introduction of an ICT interface between the state and citizens would lead to claims of efficiency, transparency and accountability being made on both sides. However, Raman and Bawa suggest that this formulation hides the 'technological determinism, where technology is assumed to be an artefact outside the influence of human agency or the context in which it is embedded and whose influence can be predetermined' (17).

Their research resonates with the central idea posited in this conclusion – that while the Technosocial subject is necessary to be unpacked and studied, it is equally important to look at a Technosocial State and how it is constructed with engagement with technology. Just like in the case of the technosocial subject, the technosocial state also needs to be examined beyond tropes of access, infrastructure building and development agenda. There is a new layer of governance, which is new in form, structure, implementation and imagination that is being structured by the embeddedness of digital technologies in policy, regulation and state departments. Raman and Bawa identify, for example, the emergence of a 'screen bureacracy' that emerges as an evolution of the system bureaucracy which has been a part of India's governmental functioning (18). They write,

> [w]hen technology gets embedded within existing processes and systems and in the process additional layers of bureaucracy is created which citizens have to navigate and negotiate before they can receive services and interact with their governments...[the] introduction of information technologies in a fraught and contested context adds more layers which...citizens have to navigate before they can actually attain the welfare services. (Raman and Bawa 2010, 19-20)

Empirical work like this that concentrates on the material practices of state policies and grass-root transactions enabled by the State's engagement with digital and internet technologies, open up existing theories of State governance to new articulations and practices.

3. NOTES FOR BUILDING A FRAMEWORK TO UNDERSTAND A TECHNOSOCIAL STATE

The framework that has been developed in this dissertation, to posit the technosocial subject in everyday practices and engagements with technology, will hopefully allow for a further examination of what this technosocial state looks like and what are the ways in which its territorial sovereignty and its hyper-territorial modes of governance produce anxieties around identity, citizenship, rights and everyday technology transactions in India. It is not in the scope of this dissertation to give an account of what the technosocial state might be, but the examples discussed above seem to be fruitful ways of inquiring into this phenomenon. Just as has been demonstrated in the dissertation, with technosocial spaces, bodies and subjects, it would be worth our while to look at the technologised history of state governance in India, the continuities and ruptures that e-governance initiatives and projects produce, and the anxieties around the role of the State in the globalised contexts of governance. Unpacking the State's attitude, engagement, aspiration and affective relationships with the future of technologies seems as important as looking at its policies, regulations and legislative structures.

The Technosocial, as it has been constructed in this dissertation, has drawn from various sources – academic research, speculative fantasy and science fiction, cultural and social theories, everyday cultural practices, legislative and policy practices, media and popular discourse, and cyberculture. The intersections between these different streams allowed for

complicating the more common-sense understanding of technology-human relationships and engagements that existed in different disciplines and fields. The dissertation has shown how, in order to produce a more comprehensive and contextual understanding of the Technosocial, it is necessary to produce a multidisciplinary dialogue between these different sources and approaches. It is hoped that a similar framework can be developed in the future, with this dissertation as the catalyst, to understand the mechanics, politics and reconfigurations of the Technosocial State and the conditions of governance that are established to accommodate for the Technosocial Subject.

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