TECHNOLOGY METAPHORS AT THE BASE OF THE PYRAMID

ARUNDHATI BHATTACHARYYA

A DISSERTATION SUBMITTED TO
THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

GRADUATE PROGRAM IN ADMINISTRATION
YORK UNIVERSITY
TORONTO, ONTARIO

March 2016

ABSTRACT

Much of the technology consumption literature is predominantly situated in the context of the relatively "free" individual. It also assumes that the adopted technology is owned, or easily accessible by the consumer. This dissertation foregrounds the overlooked *"invisible world of technologies*" (Edgerton 2007. p xi), heeding the call to shift attention from the *"the spectacular to the mundane, the masculine to the feminine, the rich to the poor*" (ibid. p. xiv). It highlights technology consumption under the "unfreedom" of resource constraints and that of entanglements created by desire.

The dissertation uses a metaphorical approach in examining technology experiences among the poor in India. Metaphors are known to shape perceptions and understandings of consumption objects. They also inform and guide consumption. Specifically, technology metaphors have implications for how human beings (e.g., technology service providers or power brokers of other sorts) are perceived, and thereby, what expectations (realistic or unrealistic) we might have of these human beings. A year-long phenomenological investigation of the technology metaphors explicitly or implicitly held by the under-represented poor, surfaced commonly overlooked non-dominant metaphors

The study reveals that among the involuntarily poor, technology is perceived according to the varying inflections of its effects through the "forbiddances" set by those controlling allocative resources that affect poor consumers' access to or consumption of technology. Contrastingly, technology perceptions among those who are voluntarily poor, mostly stem from how strongly the tug of desire is perceived to exist in the particular consumption object versus in the need for self-realization.

These findings augment and challenge existing theories of technology perceptions by widening the scope of the theorizing lens that has so far focussed on the affluent First World "consumer and product attributes" microcosm. This broadened view introduces the overlooked role of class-based societal domination in considering involuntarily poor consumers' technology perceptions (and thereby their adoption and consumption decisions). In contrast to the involuntarily poor, where objects and dominant others have primary agency over the self, the findings among the voluntarily poor extend our understandings of human "entanglement" with objects by revealing methods of humans gaining primary agency over objects.

ACKNOWLEDGMENTS

This dissertation would simply not have come into fruition without the unwavering patience and support of three amazing individuals. Mom and Dad: Thank you for taking care of everything else in my life while I simply worked. Russ Belk, a mentor and a human being par excellence: thank you for being there every step of the way while I struggled through the various obstacles in this journey. I also thank the informants and the three contact persons of this research, without whose participation and help, this dissertation would not have existed.

I am deeply grateful for the incisive feedback from Eileen Fischer, Markus Giesler, Rohit Varman, Peter Darke and Hira Singh that helped give this dissertation its final shape. I would also like to thank other professors at Schulich who have indirectly and directly assisted me in this journey through their invaluable discussions: Sammy Bonsu, for always being there for me; Detlev Zwick, whose work I immensely admire; Ashwin Joshi and Mark Pagell, two phenomenally inspiring professors whose pedagogy takes "clarification of concepts" to an entirely different level.

The PhD journey is incredibly stressful, and I thank my colleagues whose love and support have made the stress bearable: Sarah Wilner, Eric Li, Sutapa Aditya, Yikun Zhao, Yongian Chen, Aron Darmody, Richard Kedzior, Ahir Gopaldas, Pierre-Yan, Daiane Scaraboto, Kamila Sobol, Leah Carter, Gachoucha Kertz, Golchehreh Sohrab, Sharvani Sharma, Usman Ahmed and Andrew Smith. I am also deeply grateful to Sheila Sinclair, Maria Rizzuto and Vilda Palmer who were always available when I wanted to talk "general life" things through.

Finally, I thank my baby, Kripa, for simply being there.

Table of Contents

List of Tables

List of Figures

CHAPTER ONE: INTRODUCTION

The Plight of the Poor

> *In Y2K, the BOP infant mortality rate was at about 6% within a year of birth, and as many as 8 of 100 children did not live to see their fifth birthday. Of every 100 school-age BOP boys, 9 did not go to school. For girls, the number was 14. These figures were accompanied by the disconcerting forecast that, in the next 25 years, the world would add another 2 billion to its population. Do these statistics bother anyone?* --- Chakravarti 2006

Such statistics do seem to trouble many. The United Nations has listed eradicating poverty as the most important among its millennium goals, the World Bank (n.d.) has recently agreed to lend its weight to India's poverty reduction schemes for the next couple of years and Warren Buffet and Bill Gates have recently popularized the "Giving Pledge" campaign among billionaires to give most of their wealth to philanthropy.

Technology has been held as crucial to alleviating poverty (The World Bank; Castells 1996; Milanovic 2005; Norris 2001; Warschauer 2003). Thus, at immense cost to the exchequer, efforts are being made to empower the poor through technology. For example, even in a developing nation like India, where much of Chakravarti's angst is applicable, 113,000 crore INR (approximately 17 billion USD) has been earmarked for its recent and ambitious "Digital India" project. According to website of the Ministry of Communications and Information

Technology, Government of India, this project aims to transform the life of every Indian citizen through "public cloud and internet access". Both Microsoft and Google have expressed their intent to provide the required infrastructure (PTI 2015 [a, b]). Work has begun on laying out 600,000 km of optical fibre cables to provide universal phone connectivity and broadband to 250,000 Indian villages (Krishnan 2015). With India's current prime minister, Narendra Modi, envisioning technology as the empowering tool that "bridges the distance between hope and opportunity" especially among the poor (PTI 2015[a]), this project seems to be a viable implementation of noble and socially worthy goals.

Yet, the poor's adoption of ICT so far seems to be sluggish worldwide, whether in the US, South Africa, China, or India (Oberholtz and Richard 2015; Wild 2013; Agence France-Presse 2013). Theories of technology paradoxes (Mick and Fournier 1998) or ideologies (Kozinets 1998) that so holistically explain technology adoption/rejection the context of the relatively "free" consumer do little to explain this sluggishness when consumers are subject to "unfreedoms" (Sen 1999). Affordability might well be an important cause (Prahalad 2012). Yet, Varman, Skålen and Belk (2012) have laid bare the failure of an affordable poverty-alleviating scheme, demonstrating the limits of an affordability lens in understanding the BOP's experience of technology "solutionism" (Morozov 2013). The affordability lens is also problematized by the revelation that the poor, at the cost of being exploited, buy expensive products to compensate for the lack of upward mobility available to others (Caplovitz 1963).

Detailed explorations of poor's adoption/non-adoption of products are to some extent examined by practitioners or scholar-practitioners (Simanis 2012; Prahalad 2012). But here our understandings of the poor's adoption of technology comes from a managerial "profit-bottom line" perspective, with the eye firmly on the hotly debated "fortune" that is to be made at the

bottom of the pyramid. Speaking of the BOP markets, Prahalad (2012, p 7) insists, *"Established global firms ignore this market at their own peril… Understanding and effectively participating in the BOP markets is essential to growth in most sectors."* The "fortune" lens has led some scholars to shift from the 4P's to the 4 A's (Affordability, Accessibility, Availability, and Awareness) where it becomes marketing a product to the poor for profits (Prahalad 2012, Nakata and Weidner 2012). Still others (Karnani 2007) have questioned the very ability of the poor to be worthwhile (from a fortune perspective) consumers at all, stating that the poor would be better served if we cast them in the role of producers instead.

For all of their worthwhile goals of bettering the lives of the poor through products (whether as consumers or as producers), scholars have focussed on the consumer-product dyad in formulating ways to achieve this goal. They have ignored the social or relational ties that are held to bound consumption (Appadurai 1986; Latour 2005), and thereby influence object perceptions. Yet as Latour indicates, the shifting relational ties within which a consumption object might be embedded, are comprised of both intermediaries (entities that transport meanings without transformation) and mediators that *"transform, translate, distort, and modify the meaning or the elements they are supposed to carry"* (Latour 2005, p39). While Prahalad does emphasise on the need of an "ecosystem" as an enabler of product functioning, his conceptualization of such a support system still revolves around the product-consumer dyad, as is evidenced by his envisaging an ecosystem that is *"cost-effective, scalable, and provides much needed skills and knowledge"* (Prahalad 2012, p 9). This conceptualization of an ecosystem is totally sanitised of the various social norms, power plays, conflicts and agendas that exist in most networks of relations in which consumer behaviour is embedded.

An additional shortcoming of scholarship aimed at improving the lives of those who live at less than a $2 a day is the assumption that without some essential goods and services, people would be relegated to "*brutish lives oriented towards survival*" (Hill and Martin 2014, p 19). However, this default couching of poverty in economic terms or in materialistic ones has been questioned by some scholars (Karnani 2007; Sen 1999; Gregg 1936). This diversity in thought related to experiences of poverty suggests that "the poor's" experience of products is more varied than has been previously conceptualized and needs further investigation. My study of the poor's experience of technology heeds recent calls for new ways of thinking of society, consumption and life (Belk 2011; Lee, Cherrier and Belk 2013). It aims to do so by exploring the metaphors of technology that stem from the Base of the Pyramid.

The Role of Technology Metaphors

The Base of the Pyramid is a metaphor for the majority of the world who survive on the lowest levels of income. It conjures an image of an income distribution with fewer and fewer people earning higher and higher levels of income as we go "up." A study of metaphors can be extremely useful in understanding a phenomenon. A single metaphor can serve as a coalescing motif for the different influences of and on consumer behavior, thus having the power to *"holistically"* describe something (Cotte, Ratneshway and Mick 2004). With its ability to convey *"a nexus of assumptions, concerns, values, and meanings"* (Thompson, Pollio and Locander 1994), each metaphor that is identified, can bring fresh insights to an oft-researched domain (Spiggle 1994). Equally important, metaphors that surface from a phenomenon can highlight

systematic differences in the phenomenon that themes tend to gloss over (Thompson, Pollio and Locander 1994).Thus metaphors are invaluable in theory building (Lakoff and Johnson 1990).

While there is no single definition of metaphors (Soskice 1985), for the purpose of this dissertation, metaphors are defined as the *"juxtaposition of two normally unaffiliated referents"* (Radman 1997, p. xiv) that help to draw inferences about the unknown referent from the elements of the known referent through false yet artful equation (Lakoff and Johnson 1980, p. 113; see also Chae, Xiuping and Zhu 2013; Glucksberg 2003; McQuarrie and Mick 1999). Humans have a natural tendency to try and make sense of something unknown through metaphors (Leary 1990; Lakoff and Johnson 1980). As *"vehicles"* that carry unconscious thought to the conscious level (Joy, Sherry, Mick and Arnould 2003), metaphors illuminate what is otherwise inexpressible.

The metaphors that we hold help shape our perceptions (Gentner and Stevens 1983) and thus help form the reality that we experience (Lissack 1997). From sense-making and rationalizing one's consumption choices (Thompson, Pollio and Locander 1994) to reducing feelings of threat (Ritson and Elliott 1999), consumers have been shown to use metaphors to inform and guide their consumption in myriad ways. In fact, the metaphors with which or "as which" consumers view a particular thing have been seen to influence their behavior related to that object (Kim, Zauberman and Bettman 2012; Rozin, Hormes, Faith and Wansink 2012). For example, Kim et al.'s (2012) study suggests that viewing meat metaphorically as "male" influences female consumers' decision to shun this food category. Consumers' variance in the metaphoric "distance" *as* which they view time, can influence their patience and their inter-temporal decisions (Rozin et al. 2012). Metaphoric perceptions about something can inform consumers' use of that thing *as well as* their engagement with other activities. For example,

women who perceive time as a “pressure cooker” treat shopping as a “well-planned expedition,” in contrast to those who view time as a “river” and shop impulsively (Cotte, Ratneshwar and Mick 2004). At a societal level, the metaphors that people have even the slightest access to, have been shown to exert considerable influence over how they attempt to solve social problems and how they selectively consider information in order to make *"well-informed"* decisions (Thibodeau and Boroditsky 2011)

Metaphors and technology are inextricably tied to each other (Levy 2001; Wilken 2013; Lombard 2005), as are the dominant technologies of a time period and people’s metaphors of various aspects of their reality, especially in the West. To take just one example -- that of the human mind -- through the various technology “epochs” (Bolter 1984) in the West, the human mind has been variously likened to the prevailing technology of the time: a container (in the “classical period” dominated by pottery and weaving), an aviary[1] (Plato), a clock (Descartes), a steam engine (Freud), and now as a computer[2]. This has implications for how human beings are perceived, and thereby, what expectations (realistic or unrealistic) we might have of human beings. For example, prior technologies like the telephone gave us metaphors to refer to consumer behavior as “encoding and decoding communications” and today, the computer makes a number of people characterize consumers as “information processors.”

In a similar fashion, the metaphors that consumers might hold about technology itself might promulgate what expectations (realistic or unrealistic) they might have for technology

[1] this metaphor of the mind is still popular today (Fernyhough 2006)

[2] However as Gigerenzer (1991) points out, the “mind as a computer” metaphor followed computers’ mind-like designs.

(Marakas, Johnson and Palmer 2000). As a result, technology metaphors might cause consumers to shun a particular technology, befriend it, be frightened of it, or engage in a host of other behaviors (Goos 2005; Mick and Fournier 1998; Kozinets 2008). There may also be cultural differences in the metaphors associated with technology or other referents.

Nowhere is a need for theory building more urgently required than in the context of the under-represented, for such contexts are replete with over-looked technologies as well as non-dominant metaphors. For instance, as Edgerton (2007) points out, even though the majority of the world's population is *"poor, non-white and female"* (Edgerton 2007,p xiii), the existing preoccupation of technology consumption theorists have predominantly been with lesser used "high technology" , such as computers, internet technology, nuclear energy, aeroplanes, etc. This, he asserts, has rendered consumption of "used-based" technologies that are more prevalent in the world (such as bicycles, corrugated iron and asbestos) invisible. Ignoring the consumption of "used-based" technologies ignores maximum of the world's population.

Beyond a much-needed examination of "technologies of the poor" (Edgerton 2007, p.45), a study of non-dominant metaphors is also crucial, considering that dominant metaphors have a tendency to reify policies and muffle, and subsequently elide, other possibilities with that technology (Markham 2003). For instance, if people focused only on the dominant metaphors for radio and ignored the metaphors of those in the fringes, broadcasting would never have been born (Sawhney 1996) because it was seen as a means of one-to-one communication. In studying the metaphors of the under-represented, the current dissertation continues the legacy of using metaphors to unearth consumers' underlying perceptions used in capturing a consumption phenomenon (Arnould and Price 1993; Belk 1988; Belk, Sherry and Wallendorf 1988, 1989; Belk, Ger, and Askegaard 2003; Fournier 1998; Holt 1995; McQuarrie and Mick 2003; O'Guinn

and Belk 1989; Sherry 1990; Thompson, Pollio, and Locander 1994; Wallendorf and Arnould 1991).

My personal journey

The unravelling of a privileged "understanding."

The English economist, Walter Bagehot, once said, *"Poverty is an anomaly to rich people. It is very difficult to make out why people who want dinner do not ring the bell."* I had begun this dissertation believing that I did understand why the poor didn't "ring the bell" when hungry. After all, since I have spent most of my life in India, a vicarious "immersion" in the context of poverty and spirituality is hard to avoid. Both poverty and spirituality unavoidably surround those living in India, either in reality, or through media. Besides this, I had "interacted" for years with the poor through assigning work to my maids, giving directions to rickshaw pullers, buying the occasional puja related flower garland from flower sellers, and so forth. My "understanding" through this position of privilege, and my resultant sympathies for the involuntarily poor's conditions, could be summarized in a "such is life" philosophy.

The deeper involvement with the poor that this dissertation necessitated, showed me that "such" need not be "life". It chipped away the protective coating of social and financial privilege around my perceptions of the involuntarily poor. My engagement with the involuntarily poor underscored for me that they are not simply a class of "service providers," but are humans with consumption needs and aspirations that are frustrated by the dominating class on a daily basis. It threw into glaring relief my own contribution (and those of my ilk) to the "such-ness" in "life" that the poor experience daily in their consumption. Every time I stayed silent when the

housemaids sat on the floor while we sat on sofas, or were given different utensils to use than what the rest of my family used, were not protected by any "minimum wage" structure, were taken to task for absenteeing every weekend, I, as part of the dominating class, was party to the reinforcement of the "naturalness" of the centuries-old class distinctions. Such reinforcements throughout the day from different quarters of lives possibly explains why the involuntarily poor in this dissertation did not stand up for their rights as consumers: they were "naturally" inferior.

From this "lower" position, they likely saw the consumption world differently than I did. "Technology," I found, was not necessarily complex machines. Furthermore, it played a more complex role than that of a magical saviour. While "technology" was the rickshaw that helped a man to feed his family, it was also the close-fistedly rationed "pumped water" that caused daily harsh conflicts among those living in a slum. It could be bits of "magically" enhanced healing leaves that gave hope to the cash-starved mother of an ailing child, or an albatross around the neck that prevented a person from moving towards his/her life goals. In contrast to the dependability of technology that I have known, technological products among the poor could even be capricious, changing their nature according to the other actors in their network, thereby forcing the poor to be flexible with their immediate needs. It is these perceptions of technology, viewed from the bottom of the technology structure, that this dissertation explores.

Re-assessment of Hegemonic perspectives

This dissertation also explores technology perceptions from a different perspective at the base of the pyramid – one, where the poor are usually regarded in high esteem in India, higher even than emperors. These are the technology perceptions of the Sadhus. Sadhus are consumers,

who, because of their perceived ability to give up their desires, are mostly revered across India. My explorations of technology from their perspective made me re-assess what I "knew" to be true about routes to happiness. This knowledge, admittedly, is something that is reinforced on a daily basis through media, and is hard to give up as a consumer. However, the lesser practiced alternative methods of consumption of the sadhus might point to ways of having a world that continues to exist (something that has been worrying policy makers, activists and laymen equally in recent years). After all, as Marshall Sahlins (1974) suggested, there are two ways to be rich: by having more and by wanting less.

Structure of this dissertation

This rest of the dissertation is organized as follows: I review literatures from different streams that might illuminate our understanding of BOP consumers' technology perceptions, and illustrate the need for the current study. The review is followed by an explanation of this dissertation's method. In this dissertation, I conducted an analysis of the technology metaphors of two groups of poor people in India: those who were poor due to circumstances, i.e "involuntarily poor", and those who were poor by choice. The latter, for reasons explained in the footnote in the chapter on Methodology, were mostly "Marginals", and comprised those who have made realization of the self as their life goal.

Next, I present the study's findings. I argue in this study that perceived domination (whether social domination or the salience of domination by desire) critically impacts the technology perceptions of those at the base of the pyramid in highly nuanced and various ways. The results of these findings have strong implications for theorizations on Technology perception, adoption

and consumption as well as for consumer agency. A detailed discussion of these implications is offered along with limitations of this study. I conclude with a brief section of suggestions for future research.

CHAPTER TWO: LITERATURE REVIEW

Technology's different definitions

Definitions are never objective. Nor are they unproblematic, for they come loaded with implications (Ingold 1992). Thus, an exploration of subsistence consumers' metaphors of technology must necessarily begin with the caveat that there are varying definitions of "Technology". From a broad artefactual stance, technology can be defined as tools that serve as "means to fulfil a human purpose" (Arthur 2009). Viewed in this light, technology would encompass the rocks, stones, twigs and leaves that early man used for survival. Following the Aristotelian division of what was natural and what was human-made (*Physics*, Book 2, Chapter 1), the latter, specifically the mechanical crafts of humans, gained a higher status, especially by the end of Renaissance (see Francis Bacon's *New Atlantis*, and *Novum Organum*). Today, "technology" continues to strictly fall in the domain of what is human made (Mitcham 1994; Nye 2006), with an even narrower definition coming from the artefactual stance of defining technology as human-made consumption products, whether organic or inorganic (Steigler 1998).

This domain of "the human-made" has seen a bifurcation through the "Othering" stemming from the European colonization of the world of the "natives": that of "complex technologies" versus simple ones. The latter were often defined as those used by "simple minds" (Ingold 1992). Remnants of this colonialist legacy of privileging complex technologies over simple ones live on in contemporary theorizations of technology perceptions through the choice of artefacts that serve as the contexts for technology (e.g., Mick and Fournier 1998; Kozinets

2008; Oldenziel 1992, 1999; Marx 1994, 1997; Kline 1995; Salomon 1984; Mitcham 1979). This is true too for scholarly understandings of technology from the macro perspective, one that takes a socio-technical stance in defining technology. Defined from this perspective, "technology" encapsulates social and technical systems including theories and practices involved with the artefact under consideration (Veblen 1904; Cardwell 1995; Hughes 1996). The complexity of the artefact is a given.

Technology Perceptions:

Perspectives from Philosophy of Technology

Macro understandings of technology are found in contemporary contemplations in the philosophy of technology. Such contemplations usually subsume *all* artefacts and their associated socio-technical systems under the hegemonic term, "Technology". Technology perceptions from this stream of literature have usually been normative, and have veered around preoccupations with how technology *itself* is perceived to function. Thus, technology has been variously perceived to function in manners that are territorializing /oppressing (Veblen 1901; Mumford 1970; Ellul 1964; Postman 2011), liberating (Asbell 1963; Canham 1950; Kurzweil 2005) or paradoxical (Berman 1983; Winner 1977; Boorstin 1978). Heidegger (1977), uniquely, has differentiated between old technology and modern technology in his conceptualizations of it. While the former, he held, might well be tools, the essence of the latter was not so straightforward according to him. Modern technology (unlike the old), he asserted, even when viewed as a means to an end, did not mean that humans necessarily had control over it.

In sum, macro-perceptions of technology are structured around the extent to which technology is perceived to be able to determine society or be subservient to it. Those framing technology in deterministic terms have often feared that technology works in an unchanging direction (McLuhan 1964; Beard 1927; Romanshyn 1989), and have thus been concerned with technology's current and future negative impact. While such treatments allow that in the past technology was used to serve the needs of mankind, today technology reigns "sovereign, " dominating all forms of cultural life (Postman 2011). Technology, the determinists assert, has led humans to live with reduced engagement with the world (Borgmann 2009). Stripping humans of their feelings of self-worth, and rendering them incompetent and alienated through its growing complexity (Mitra 2010), technology is seen instead to demand its own reactions -- for example those of efficiency and rationality-- from humans (Marcuse 1982; Mumford1970). Scholars of this stripe fear that technology's supreme agency has influenced every domain crucial to the wellbeing of the human condition. As Nye (1996) points out, even something as spiritual and abstract as the human experience of the sublime, has been relocated from its traditional residence in the lap of nature, to the thrall of the pageant of technology. Today, humans are perceived to experience sublimity through technologically mediated hyper objects, technologically created hyper moments, and technologically determined modern spectacles of consumer culture.

This perception of technology as a supremely agentic, unstoppable phenomenon has been qualified by some scholars. They demonstrate the power of social interventions (Nye 2006; Latour 2005; Hughes 1996) or individual ones (Mitra 2010; Gitelman 2006) in the form and functioning of technology. Some have gone even further and asserted that every disenchantment by technology has in turn always given birth to efforts directed toward re-enchantment, mostly

through more technology (Szerszynski 2008), thus casting technology in the dual roles of disillusioning demon and magical saviour.

From one perspective, the belief that all technologies might be conflated into one might have some merit, for it is undeniable that some seemingly quite different technologies have commonalities in the way that consumers engage with them. For example, as with the early perceptions of networked computers, the telegraph of Victorian times too was initially touted as the harbinger of world peace. Mirroring internet use of today, the telegraph was susceptible to being hacked, could be used to cheat others, allowed strangers to connect deeply enough to fall in love, and also flooded people with information that threatened overload. Furthermore, knowledge of codes separated those in the know from others (Standage 1998).

Yet, technology perceptions arising from aggregating all kinds of technology under one monolithic term often confine views on technology to a good/bad debate, missing possible nuances that an allowance for the uniqueness of the different pieces of technology might reveal. As Gitelman (2006, p. 7) points out, *"Just as it makes no sense to appreciate an artwork without attending to its medium (painted in watercolours or oils? Sculpted in granite or Styrofoam?), it makes no sense to think about 'content' without attending to the medium that both communicates that content and represents or helps to set the limits of what that content can consist of*" . While Gitelman's admonishment is in the domain of "new media," this is equally true for all of "technology". As Edgerton (2007), emphasizing technology multiplicity through a focus on "things" points out, "things belong to particular people in ways that technology does not." (p xviii). Besides overlooking the role of the uniqueness of the different types of technological artefacts in influencing technology perceptions, macro perspectives on technology writ large also overlook the particulars of consumers and the contexts in which they encounter technologies.

Product Design Perspectives

From the perspective of uniqueness of individual technology artefacts, insights into technology perceptions come, for instance, from the product design literature. This sub-stream holds that the design of technology --from appearance and feel of products (Mori 1970; Aggarwal and McGill 2007; Landwehr, McGill and Herrmann 2011; Yun, Han, Hong and Kim 2003; Marakas, Johnson and Palmer 2000) to their hardware and software --impacts consumers' engagement. For instance, anthropomorphism is seen to positively bias consumers toward technological products as long as the latter do not bear too uncanny a resemblance to living counterparts, whether human or non-human. However, considering that the very design of a technology has several cultural legacies –both negative and positive-- influencing it (Selfe and Selfe 1994), it is surprising that these cultural legacies are elided from most extant research exploring consumers' technology perceptions based on the design of decontextualized, individual artefacts. Williams' (2010) exploration of the introduction of the supernet in Alberta provides a glimpse of what a nuanced, contextualized exploration of the common internet metaphor – as "a highway" --- might reveal: while the press articulated this highway as a prestigious one, with immense scope and speed, the community viewed the same highway as a "too local" and as a private road, not open to all, one that would stop rural folks from travelling on it due to lack of "appropriate vehicles" or the "keys" to the vehicles. Similarly, whether a piece of technology is networked or is standalone is seen to influence consumers' perceptions of what is possible with that technology (Epp, Schau and Price 2014; Belk 2013), including loss of control to others (Best and Tozer 2013; Viseu, Clement and Aspinall 2004; Bhattacharyya 2014). The non-immediate contexts too are important in technology usage. For instance, while

condoms have existed in the world for a long time, their sales exploded only with the advent of the AIDS virus in the world (Edgerton 2007).

Contextualized Perspectives

Heeding the repeated calls for contextualized studies of technology consumption and perception (Johnson-Eilola 1996; Spinuzzi 1999; Nardi and O'Day 1999; Slack 1989), consumer researchers have attended to the intersections of technology form, consumers' uniqueness (for example, their technological familiarity, ideologies, core self and evaluations), as well as situational variations (for example, the nature of interactions, information cues). What has emerged as a result are myriad metaphors. Consider the range of perceptions about just one piece of technology, the internet:

> *Is the internet a place with a sense of location, or a tangible thing with a physical manifestation, an abstract topology, virtual city, parallel universe, a lattice, virtual universe or a global brain? Perhaps it is an Indra state of independent but associated mutual self-reflecting metaphysical pearls? A library, shopping mall of competing stores, an ever changing morphogenic field, a deity-like entity with infinite information or a simple but prolific seed-bearing flower? The internet is simultaneously all of the above and none of the above.* (Ratzan 1998, p 14)

While it is possible that the internet lends itself to this variance in perceptions because of its mutability, intangibility and malleability, going beyond the normative or etic approach has revealed that consumers perceive technology beyond the tropes of harbinger of social and economic progress (Barzun 2000; Ross 1991; Segal 1985), of a source of pleasure, or of

destruction of nature and culture. For instance, radio has been likened to “voices in the wilderness”, Television to a “two way mirror” or a “window on the world”, the computer to a “black box”, a “Rorschach” test (Turkle 1980), or a “poison” (Joerges 1990), guitars as “male” and keyboards as “female” (Gay 1998). Often times, the myriad of technology perceptions plays simultaneously in consumers' technology narratives (Kozinets 2008; Mick and Fournier 1998).

While the above body of work is illuminating, there are several assumptions in both macro and micro levels theorizations of technology perceptions, all indicating an elitist bias that elides the discourse of a large section of the world’s population. Firstly, it has eschewed what might be considered in current times as unsophisticated technologies, and has focused primarily on consumption of increasingly complex human-made artifacts. Consider, for example, one of the earliest studies of consumers’ perceptions of technology in the Journal of Consumer Research: Mick and Fournier (1998). Given that the study’s focus was on understanding consumers’ perceptions of the paradoxes of technology, it is understandable why the initial explorations of what *consumers* considered to be technological would be backgrounded. However, the scholars, through their choice of intercepting consumers during the purchase of items in an electronic store automatically precluded an understanding of consumers’ perceptions of technologies that might be less complex. A decade later, Kozinets’ (2008) examination of the ideologies driving technology consumption also limited itself to technology considered complex for that period of time.

Beyond the limiting focus on complex technologies, the extant body of research presumes free will among consumers. Yet such an assumption, especially among the underprivileged is questionable in a consumption context (Allen 2002). This body of research also pre-supposes access to technology, overlooking the minimal or non-existent access to

technology that can impact much of the world. That there may be a difference is suggested by the observation that regular access to a technology can make people quite blasé as they come to take it for granted (Nye 1996).

Technology Perceptions based on Limited Access

Insights from History

Some understandings of how non-access or limited access to technology can impact technology perceptions may be gleaned from historical studies. These studies explore technology perceptions when most people were mere onlookers. Jennings' (2012) seminal documentation of people's trying to make sense of the coming of the industrial age establishes that people perceive new technologies by tying the particulars of the technology to how they already made sense of the world. This is evidenced by wondrous onlookers trying to make sense of a huge machine in 1803 in terms of "forge-hammer", and "a giant with one idea" .

Themes of sacredness also abounded. Similar to pilgrims' practices of returning home with a piece of the sacred, when people first saw a demonstration of the "inscription" of sound onto tin foil, they brought back pieces of the used tin foil with them. (Gitelman 2006). This conferring of sacredness was done to innovations as diverse as the "buoyant machine" (hot air balloon) to the casting of the steam cylinder, the latter envisioned in terms of God's formation of granite mountains. However, not all religious lenses of making sense of technology were positive, as the following terror-struck wonder of Mary Shelley, documented by Jennings (2012), reveals:

"…In my mind…I saw the pale student of unhallowed arts kneeling beside the thing he had put together. I saw the hideous phantasm of a man stretched out, and then, on the working of some powerful engine, show signs of life, and stir with an uneasy, half vital motion. Frightful it must be; for supremely frightful would be the effect of any human endeavour to mock the stupendous mechanism of the Creator of the world. …"

Beyond fear and fascination (Marvin 1997), historical analysis reveals that consumers also perceived technologies to which they were mere onlookers, with ambivalence or suspicion. For example, Standage (1998) reports that despite a working demonstration of the telegraph by Samuel F. Morse to the US Congress in 1842, nearly half of the Congress members believed it to be "an elaborate conjuring trick" (pp. 45-6). Some abstained from voting for funding since they were still uncertain of what the technology was.

Still others positioned technologies that most had little access to, with hard-nosed practicality and at times, with misguided foresight. The idea of the use of machines in servitude to mankind, for instance, was promoted by some, even in the domain of play, for such "rational toys" were viewed as early mind training tools for the next generation.(Jennings 2012). As with Nanotechnology, GMO and self-assembling technologies of today, historically technology metaphors were at times rooted in conflicting agendas and contestations about the meaning of the specific technology under consideration. For instance, in a letter to the luddites in response to their burning of woollen cloth mills in 1812, journalist William Cobbett insisted that machines were the indicators of a civilization, as opposed to the savages, and that machines would benefit everyone in the society. As Umble (2003) has documented, the telephone too, in its early days was positioned as a harbinger of "social distinction", and an increase in longevity, "profit,

comfort and pleasure", and as part of "divine service" by its proponents. Such avowals were seen to challenge the authority of the old order church leaders, and the telephone wires were in turn contested by metaphors of "Devil's Wires". Connectivity itself was deemed to be "a Sinful Network" by the opposing Amish groups and the Old Order Mennonites. Telephones were perceived to promote "individualism and pride", and to "social disharmony" through the gossiping that could occur through these machines. Since telephones were seen to represent a shift away from the Old Order Mennonites' ways of being in the world, those owning telephones were excommunicated.

As illuminating as the historical analyses are about technology perceptions when access to still limited to a few, these studies rely on oral anecdotes of perceptions of the past (Umble 2003) or primarily document perceptions of those who were technically savvy (Marvin 1997) or belonged to the educated class (Jennings 2012; Marvin, 1997). Technology perceptions of those who were struggling to get by in life due to the lack of the privilege of education or wealth remain overwhelmingly muted.

Contemporary Insights

Consumption decisions among the less privileged are seen to be influenced by factors beyond the obvious barriers erected by financial constraints (Pitta, Guesalaga and Marshall 2008). Negatively impacting affective states, constant resource deprivation is seen to frame everyday existence as overwhelming, hopeless, frustrating and the future filled with dread (Underlid 2007; Kasser 2002). Self-image and perceptions of control also erode among the less fortunate (Andreason 1993; Hill and Stephens 1997; Alwitt and Donley 1996). Not surprisingly,

then those living in poverty prioritize different consumption needs than those who are financially better off (Rashid and Rahman, 2009; Karnani, 2006; Subrahmanyam and Gomez-Arias, 2008; Arnould 1989). For example, in a study of special possessions among homeless people, Hill (1991) shows that poverty shifted attachment from typical consumer goods to atypical items, like "memories, relations and religious beliefs" (Hill 1991, p 308). Hence, the assumption (implicit through lack of representation) that technology perceptions of the underprivileged would be not too different from those better off, is likely erroneous.

Only a handful of studies have examined technology perceptions among the financially underprivileged (Hill and Stamey, 1990; LeDantec and Edwards 2008; Roberson and Nardi 2010). However, these studies have been situated in contexts where the consumers either have ready access to technology through government funded structures or live in countries where the poor are buffeted by government-provided standards of "*consumption adequacy*" (Martin and Hill 2013), something not available to the poor in the developing and underdeveloped parts of the world. Furthermore, the extant focus on technology consumption of developed countries mutes the discourse of two-thirds of the world's population -- i.e those from developing and underdeveloped nations. That there might be a difference in technology perceptions between people living in the developed world and those in the developing/underdeveloped nations is suggested by a few scholars. For example, Bell (2006) notes that in Asia, unlike in the US, a computer does not have to be perceived as an *"object of efficiency."* Donner, Rangaswamy, Steenson, Wei (2008) show that the cell phone is at times a symbol of "existing tensions" in Asian families and Keniston (2003) reveals the perceived interchangeability between digitally connecting villages and the function of a bicycle in India. For instance, when a consumer was told about the benefits that digitally connected villages will bring to the villagers in terms of

being able to share news and information, he couldn't comprehend why the sharing of news/information in the traditional way --that of visiting each other's villages using bicycles -- was any less useful.

Literature on the "Digital Divide" is an ostensively corrective stream that protests against the bias that currently seems to expunge the under-represented in technology theorizations. The Digital Divide is *"the gap between individuals, households, businesses and geographic areas at the different socio-economic levels with regard to their opportunities to access information and communication technologies (ICTs) and their use of Internet."*[3] (OECD 2001). This gap is substantial enough for the World Bank Group to mobilize hundreds of multiglobal projects (the World Bank's infodev.org lists all the projects currently underway) and to propel many countries in the "Global South" to make major investments to bring ICT to the "have-nots". For example, in India alone, 4.5 billion Euros have been invested into the government's "Digital India Initiative" to connect 250,000 local government bodies in the country by 2017 (Krishnan 2015). The digital divide is perceived to induce unequal social and economic conditions (Castells 1996; Norris 2001; Warschauer 2003; Milanovic 2005), and as discussed earlier, such differences can impact technology perceptions. Yet through the preferential treatment meted out to digital technology, the Digital Divide stream of literature too shows an elitist bias in the choice of technologies that is assumed to be important. The result is a very restricted view of the poor's perceptions of technology.

Lack of legal access to certain forms of technology by no means automatically represents a lack of access through illegal or improvised means. Indeed, the resourcefulness of those

[3] Besides this commonly held meaning of digital divide, there is one that additionally exists – the digital divide between technology and humans, where the "digiteratti" have an edge over other consumers (Kensiton 2004).

stricken by poverty is well established in the body of literature dealing with "*Jugaad*" (Hindi: innovation under desperation). Mirroring the clever, illegal sourcing activities of the homeless in the West (Hill and Stamey, 1990), through *"personalized boreholes, 'non-legal' taps of power, water flow, and satellite access points"* (Rangaswamy and Sambasivan 2011), aspiring consumers in resource-constrained countries like India and Africa seem to freely acquire what they want.

Such agentic action points to people having already made a positive value judgment about a piece of technology that they don't already own, and having decided that they want it, noting that they have the means to create it, and then taking the necessary steps to create their own version of it or access to it through other means. This optimistic vision presumes that the poor will invariably have the wherewithal to make judgements about a piece of technology, and will be automatically driven to expend the effort needed to get it or have the freedom to create their own versions of it. Yet, variations among the poor in their tendencies to innovate when in need have been noted both by those examining peasants living a "hand to mouth existence" (Douglas 2002, p 14) as well as those studying consumption in slums. In fact, while "*Jugaad"* seems to be the way of things in many slums situated in urban India (Birtchnell 2011; Radjou, Prabhu and Ahuja 2012), resource-constrained consumers seem to expend their efforts on the *Jugaad* of some technologies, and not on others. For example, while Rangaswamy and Sambasivan (2011) report consumers doing some "*Jugaad"* to access DVD players or cell phones, not much effort is reported to be expended on doing *Jugaad* for personal computers or for accessing the Internet.

One explanation for this could be that not all modern technologies, perceived by developers and those at the privileged end of the technology access spectrum to be so crucial in

the west, are considered to be as important (or important for the same reason) by those on the other end of the divide. The following report by Heeks (2008) about villagers' usage of the Namman Dhwani project in South India seems to suggest this:

> *"Community radio loudspeakers were wired up around the village to broadcast "developmental" information. Villagers were not happy about this and, at one point, the wires were cut and speakers linked up to a mobile sound system to broadcast music as a statue of Lord Ganesha was paraded around the village for a local festival. The former use of ICT was seen as one the community needed. The latter was what they wanted."*

However, Douglas (2002) has pointed out in the case of the peasants living a hand to mouth existence, that beyond personal incentives to produce, what separates them from the rest of the society might impact their consumption. The barriers are undertheorized.

The other assumption of the literature exploring poor's consumption of technology is that all poverty is prompted by circumstance, i.e "involuntary poverty" (Elgin 1993). Yet the practice of Voluntary Poverty or "poverty chosen" (Benedict XVI 2009) has been practiced world over throughout written history. This choice of living poorly can be as extreme as in the case of wandering monks: deliberately living without a fixed shelter, eating only what is obtained through begging, with no concern for the source or occurrence of the next meal. Voluntary poverty can also be the act of choosing to live extremely austerely amidst access to plenty, as in the case of Mahatma Gandhi, Mother Teresa and monks tied to spiritual organizations. A variety of reasons engender this voluntary choice of poverty. Siddhartha (later known to the world as "Buddha"), the sole heir to the kingdom of Kapilavastu, renounced all that he had, in search for a "high truth." The prosperous silk merchant Giovanni di Pietro di Bernardone (later renowned as St. Francis of D'Assisi) stripped himself of his possessions to join the poor in begging at St.

Peter's Basilica (Cross 2005) in solidarity of the latter's way of life. Still others choose to live in material poverty, because in their eyes, material things have little materiality or value.

Through the overlooking of technology perceptions of those who choose to be poor, this body of literature has asserted that technology perceptions are coloured by want, need and despair. This positions all humans as materialistic maximizers (Ryan and Durning 1997; Halweil and Mastney 2004; Manning 2001; Faber and O'Guinn 1988). Yet some scholars (Campbell, Conserve and Rodgers 1975; Gregg 1936; Elgin and Mitchell 1977) have shown that some people chose to be poor, at least where material possessions are concerned. Driven by concerns over the impact of desperate consumption on the world, others, and self , some people have chosen to either downshift or strongly simplify or live holistically and simply (Etzioni 1998) in an effort to reverse the perceived wrongs done to self and others through rampant materialism. Still others have adopted and propounded a "Buddha[4]" way of being, through practicing generosity, sufficiency, compassion, and non-attachment while avoiding extremes. But these theorizations (Badiner 2002; Kaza 2005; Payne 2010) are often normative and prescriptive and stop short of examining deeply the lived experience of voluntarily reducing access to technology. That the lived experience is different from what is prescribed is suggested by Belk (2011). He observes Tibetan monks' consumption of various objects tied to the material world, from junk food to cell phones, laptops and cameras. At one level, such a phenomenon may seem to contradict common understandings of what it means to live "spiritually", possibly smacking of a pseudo-ism. Alternatively, it may be a unique form of consumption behaviour crying out for greater theorizations, one with the potential to offer solutions to living tranquilly right within the

[4] "Buddha" refers to one who has "Bodh" (Sanskrit), a close English translation would be Wisdom or enlightenment.

raging fire of desire (Belk, Ger and Askegaard 2003) that today's "libidinal economy" (Stiegler 2012) is perceived to fuel.

CHAPTER THREE: METHODOLOGY

To answer my research question of "How do the poor in the developing world experience technology?" I conducted an analysis of the technology metaphors of two groups of poor people in India: those who were poor due to circumstances, i.e "involuntarily poor", and those who were poor by choice. The "poor by circumstances" informants were sourced from the slums in and around Kolkata and New Delhi in India. The *sadhus*[5] (people who made achieving the goal of self-realization their entire life's focus) were the informants in the "poor by choice" group. The informants in this latter group can be broadly classified as those affiliated with a spiritual organization/attached to a temple (Hindus, Buddhists and Jains) and those who are the wandering monks, or "*Ramta Yogis*" (the Ramta Yogis that I came across were all Hindus). They were sourced in Kolkata through various means, detailed in the section titled, "The Contact Person".

Standards by which "poverty" is gauged are subjective (Karnani 2007), and in India, arriving at a realistic "poverty line" has always been a contentious issue (Sangal 2015). For the purpose of this dissertation, I have focused on informants earning less than 2000 USD a year. This figure is drawn from Prahalad and Hammond's (2002 p.48-9) conceptualizations of those existing at the "bottom of the pyramid".

Minding the Gaps

[5] While the sadhus might seem to form an extreme set of informants, extremities often help break new grounds in theorizing about familiar phenomena (Arnould, Price and Moisio 2006)

There were a few contextual considerations that influenced the collection, translation and interpretation of the data for this dissertation. These are enumerated below:

Gap I: "Aami bolte parbo?" ["Will I be able to say?"]

The above question, an excerpt from the start of one interview in the "poor by circumstance" group, literally translates to "will I be able to say?" This literal translation accounts for nothing unless one takes into consideration the social domination permanently and culturally etched within Indian culture into the consideration. In the current context, this phrase has overtones of uncertainty, seeking reassurance from someone who has the answers, someone who is seen as "more" than himself/herself. It is reminiscent of an uncertain child's seeking reassurance from his/her parent when coaxed into participating in public speaking. In sum, in the given context, the literal translation, "will I be able to say?" actually means "will I, an uneducated, poor person be of any use for the purpose that you an educated, rich, "so far above me" person, need me for?"

This perceptional difference in social standing that colors this group of informants' responses also permeates their behavioral responses. For example, Ronu, one of the informants and a new migrant to India's capital city, was supposed to take me to her home for my interview. However, when she invited me to sit inside a home in the slum that she lives in, I discovered that the house that I was sitting in was that of her niece, someone who had been in Delhi for a while. Some of the curious slum co-dwellers milling around the single entrance door to that home/room were despatched by the niece: one to source a cold fizzy drink for me (when I refused that, a glass of cold water), one to get me some snacks, one to get me comfortable chair (for the bed that

I was sitting on was deemed as being "not comfortable enough" for me). Ronu herself stood next to me, using a hand fan to cool me.

Confused by what was going on, I asked Ronu whether she would be taking me to her place. She responded that she would, after I sat "there for a little while" and "relaxed". Disregarding the fact that she had walked as far as I had, to get to the slum, she said, "*You've walked so far, sister. You must be hot and tired. Sit here and rest a while. My house has nothing (no comforting things to relax me). I'll take you there, once you cool down and rest a while."* She took me to her home after she felt that I had rested enough. Probing further about the other possible reasons for the "transit" seating before Ronu took me to her own home, I understood that her house didn't have a bed or a chair for me to sit on, was structured in a way that didn't allow coolness, and "was not pretty". While "Atithi Devo Bhava" ["Treat Guest as God"], a rule of conduct layed down in one of India's sacred scriptures, is well known among most educated Hindus[6], it was here among the poor that I found an actual practice of it. I was a person of a perceived "higher" social standing. This permanent gap, one cemented by centuries of domination of the weaker class by the higher class, had to be minded in all of my interactions with them.

The minding of this particular gap informed a substantial part of my research design including who to source my data from and how to collect the data. I subsequently excluded those who worked for me from being the informants (but they were invaluable in being my "contact person", as is explained later). The initial couple of informants in the "involuntarily poor" group were sourced through my house-help, a highly social person who was in good terms with many

[6] This phrase is well-known enough to be recently incorporated as the tagline for Government of India's Ministry of Tourism

of the surrounding slum dwellers. The subsequent informants in this category were theoretically sampled, and were sourced through snowballing from these initial informants.

I further decided against immersing myself in the informants' lived experience by trying to live with them. As my experience with Ronu forecasted, had I lived among my informants, their behavior would have changed drastically, focused as they would be on making me comfortable for the duration of my stay there. This focus could also potentially have prodded the informants into procuring things that they would not have otherwise used. Keeping all this in mind, I chose to collect my data solely through depth interviews, observations and field notes. However, where the "poor by circumstances" group was concerned, I decided to do the note taking from memory once I left the site. This is because the initial few forays in taking notes in the informants' presence resulted in the informants becoming highly self-conscious and stilted in their subsequent responses.

Gap II: "Ye sab faaltu ke cheese hain" ["All these are nonsensical stuff"]

Another gap to be minded yawned in front of me when I tried interviewing some of the informants among the "poor by choice" group. This was especially true for the *Ramta Yogis*. My informed consent form, verbal explanations of how I would maintain identity confidentiality, how I would re-check with them whether my interpretation of their response was valid, etc were treated in manners that ranged from gracious nods or bemused indifference, to outright impatience and a contemptuous tossing aside of the said form. As one Ramta sadhu impatiently demanded to know, *"We are Sadhus. Do you know the meaning of a sadhak? Life after life after life, what do we spend time on? This stuff means nothing (the actual, unflattering words used*

were "ye sab faaltu ke cheese hain"). If you want to talk to me, talk. Today you find me here. Tomorrow…(he shrugs)." Responses such as these bludgeoned me with one fact: while my aim was to try and understand a consumption phenomenon from the informants' point of view, I was trying to recruit those very informants while seeing reality (that informed the consumption phenomenon) from my point of view: informants' rights, their confidentiality, the correct representation of their responses ---had to be important to these informants too, because they were important to me. Yet, the rights of privacy and confidentiality about *one* miniscule part of *one* life apparently was not all that important to some informants who thought in terms of "life, after life, after life".

Gap III: The non-salience of the tech/non-tech divide

A specific incident brought home to me the complete non-salience of the tech/non-tech divide in the minds of the group of people who were "involuntarily poor": When I showed my house-help (who also doubles as my baby's nanny), how to operate the baby monitor, she asked me, *"Haven't you done Shosti Pujo?"* [a puja] While my house-help was not one of my informants (the reason behind this is explained on page 30), I found this question too curious to ignore. Wondering why (or even, how) she would link a baby monitor to a puja (worship) of a deity that I hadn't even heard of[7], I probed further. It appears that "Shosti Pujo" is a worship ceremony apparently done in the slum where she lives (and on later enquiry, in many parts of India) that is undertaken when a baby is 21 days old. This is done to please the Goddess "Shoshti" into "immersing herself" (a loose translation of the actual words used: "boshey

[7] Considering that Hindus have many million deities as manifestations of the supreme consciousness, my lack of knowledge about this particular deity, despite being a Hindu, is understandable.

jaawa") into the baby for six months, thereby ensuring that nothing will go wrong with the baby. Why would I consider a baby monitor to be so crucial if I have done Shosti Pujo, she wondered. She didn't have one, but her baby turned out to be fine. This incident made me re-assess my implicit reification of the notion of technology, me being a "modern Indian". Much of "modern India", potentially influenced in a major way by its British legacy (Semple 2013; Quack 2011), eschews traditional Indian ways of doing things as non-scientific, non-technical and superstitious in favour of a "modern" outlook. Yet for a section of the Indian population, the salience of technology/non-technology divide is perhaps limited, and Goddess Shosti and a baby monitor, a newly wed daughter-in-law and a rickshaw –all meld into one world of resources that can be drawn on to help them make it from one day to the next. Keeping this in mind, I cannot deny, therefore, that in this category of the poor, "the poor's perception of technology", is in actuality, "the poor's perception of what I consider to be technology."

Thus, instead of asking the informants in this category of the poor about their perceptions of technology, I asked them grand tour questions of specific items that I perceived as technology from among their possessions. The sadhus that I interviewed understood the concept of technology. However, I lead up to their perceptions of technology after I ensured that I had first spoken to them about things that were important to them.

Gap IV: Translating a highly contextual language

Even though my native language is Bengali, and Hindi (the language that some of the sadhus spoke in) is also something that I am trained in, translating these languages into English without losing the essential nuances was a difficult task, and I am not sure that I managed to be completely successful in doing that. Ensuring that the meaning is retained through a

Bengali/Hindi → English→Bengali/Hindi translation did not help entirely, for the highly contextual nature of Bengali/Hindi meant that someone else would do the English translation in different manner when translating it back into the languages. Having another's opinion brought to bear on my English translation of Bengali/Hindi also did not help much, for in certain places there were disagreements. For example, "Oi" in Bengali can indicate different things, depending on the accompanying words, the tone with which it is said, the physical gestures that accompany it, the length to which the sound is dragged, the length of the pause between it and the next word uttered, and the translator's perception of many of these factors. The above problems were addressed by handing over my translation of the interview excerpts to one other person (who varied with different excerpts) who was adept at both Bengali (or Hindi) and English and have that person check for the possible validity of my translation. Despite the above safeguards, while many nuances can be captured when translating Bengali or Hindi to other non-South Indian languages, many nuances were lost while translating these languages to English. I address this by trying to explain the nuances in the explanation of the specific interview excerpts. (More about this challenge is addressed in the section on "Data Analysis")

The Crucial link: The Contact Person

The contact person served an absolutely crucial role in my data collection. Where the informants of the first group were concerned, the contact person (someone similar to them in lifestyle) was useful in allaying suspicions. For example, the informants in this group were more than willing to talk to me, until I showed them the human consent form and explained its

purpose. In a classic effect of Cohn's (1987) observed phenomenon of "objectification", this very act of mine changed their willingness to participate for various reasons. The first of these was the existence of such rights—why would such rights need to exist at all if everything I was doing was innocent, a few wondered. Secondly their inability to read (not just English, but many lacked the education necessary to read in their own mother tongue). Even when I explained to them what the form said, they had no way of knowing whether what I was saying was true. Third was the requirement for their signatures. In most cases this was a case of needing their thumb impression, for they did not know how to write. Years of being exploited possibly fuelled their suspicions when I asked for their thumb impressions or signatures, the suspicions centered around what were they *really* giving these for. Did they just agree to a life-time of bonded labour? Did they sign on something that could get them in trouble with their landlord? Was I actually from "the papers" and would their names be out in the news? After the first few fruitless attempts, I decided to take my house-help along. She was "one of them," and her explanations of my research and the content of the human informed consent form were believed, especially when she mentioned to them that one of her relatives too had been one of my informants.

The contact person was equally irreplaceable when I needed access to informants who belonged to the poor by choice group, although for different reasons. As touched upon earlier, the informants among the "poor by choice" were of two types: independent sadhus who roamed from one place to another, and those sadhus who belonged to a spiritual organization. The former didn't want to talk to me because they didn't have the time for things that were not related to their sadhana. Anything unrelated to that was "unnecessary," although one sadhu did remark that he found my "jhola" –a cloth bag—very beautiful, and didn't demur when I gifted it to him.

Among the latter, the sadhus were too busy with running their organization, doing social service, and engaging in their sadhana.

The best places to locate the Ramta Yogis are either in the depth of the Himalayas, or in the *Kumbh Mela*, one of the most populated religious festivals in the world (The number of pilgrims estimated to have attended the last major Kumbh Mela is 100 million). The timing of the Kumbh Mela depends on a particular auspicious alignment of the stars and occurs once every three years in one of the four particularly auspicious sites in India. This timing did not align with the time period during which I was collecting the data. Neither could I travel to the Himalayas on the off chance that I might meet a Ramta Yogi who was willing to speak to me. To circumvent the access problem with these Yogis, I tried a three-pronged approach: I recruited the temple priests (pujaris) in the areas where sadhus are known to frequent during certain auspicious times of the year. These areas are parts of Kolkata, especially through where the Ganges flow. This recruitment ranged from wearing the pujaris down with repeated requests for an "in' over the course of two months, name dropping, using those in the locality who knew the pujaris well, and in a few cases, giving "*bakshish*" to the pujaris. I also took the help of a now retired journalist (whom I have named "Urmila") who had spent two decades of her career reporting on various aspects of "Kumbh Mela". The Ramta Yogis also at times move through "*Maths*" (that for them, function like transit houses, where they get free food and place to stay for three days). I took to haunting a particularly well-known Math in Kolkata once a week for two months and interviewed the few willing Ramta Yogis whom I could access there.

Where the sadhus attached with spiritual organizations are concerned, many of them agreed to meet me due to my connection with my contact person, a young lady whom I shall call, Radha. I fortuitously met this young lady when I was extensively networking to get an access to

the sadhus of any spiritual organization. Radha had been suddenly orphaned at a very young age. Even though she came from a middle-class family, at the age of ten, she found herself tossed out on the streets (she held on to her bags of school books) by her brothers who found her a burden once both her parents suddenly died. Ignoring her relatively higher social status, she survived on her own until reaching adulthood (an extremely difficult thing to do for a girl child in India) by sheer determination, washing vessels in others' house (a taboo job in middle class houses), sleeping on the platforms of railway stations, and by knocking on the doors of various spiritual organizations, who helped her. Now a very successful adult, she contributes what she can to these various organizations, and has as a resultant developed an immense amount of goodwill among the sadhus there. It was her "good-will capital" which gave me access to the sadhus associated with the various spiritual organizations.

Locale of data collection:

Choosing India

The choice of situating the study in India instead of the other possible developing nations was spurred by a couple of considerations. Firstly, India is my home country, which meant that I already had a deep immersion of the possible idiosyncrasies of its culture as well as relevant language skills. Secondly, while being a major player in the global economy (Sheth 2011), this country is rife with contrasts (Tharoor 2007). To cite a quote attributed to British economist, Joan Robinson (Sen 2005), *"Whatever you can rightly say about India, the opposite is also true."* Such contrasts, I hoped, would be invaluable in gaining a wider and more variegated spectrum of the phenomenon under consideration.

Choosing the state of West Bengal (within India)

Contrary to Dumont and Pocock's (1957) sweeping claims of the one-ness of India, this country has an ancient history of being home to myriad civilizations from all over the world (Keay 2011; Mohammada 2007). Resultantly, even today, India's "culture" is seen to change every 100 kilometers (Panda 2007). Hence, it is quite possible that the findings unearthed in one state in India may be different from those unearthed in another state.

Due to time and resource constraints, it was impossible to carry a study of technology perceptions among the poor across all the states of a vast nation like India. Given the poverty dimension inflecting the nature of the phenomenon that I was investigating, among the various states in which to possibly situate my study, a logical decision would have been to choose informants who lived in the poorer states of India, as is listed in the recent most publication of the Reserve Bank of India (available online at https://www.rbi.org.in/scripts/PublicationsView.aspx?id=15283). However, those states either were in the North East of the country, where the law and order situation is currently volatile, or in states where, due to the current Maoist rebellion or due to the still strong patriarchal view of women's roles in the society, it would have difficult to obtain data while still feeling safe. Taking these factors into consideration, the state of West Bengal, with 20% of its people living below the poverty line, was identified as the ideal one in which to primarily situate my study. Data was additionally collected from India's capital city (and union territory), New Delhi, that has double the per capita plan expenditure that exists in many other states in India (Bagga 2011). This was to assess the difference (if any) that this relative prosperity among its poor might make to their perceptions of technology.

Choosing the city of Kolkata (within West Bengal)

Of the many cities, towns and villages that exist in West Bengal, I chose to situate my study in the city of Kolkata. There were several reasons for this. Kolkata has been a magnet for refugees from surrounding poor countries (e.g., Bangladesh and Burma) as well as those from surrounding states (for example, Bihar, Chattisgarh). With the resulting population of the city of Kolkata today outnumbering that of the entire country of Canada, all concentrated in an area of 185 square kilometers, this city is a context where there is an extreme struggle for resources among the poor, intensifying their experience of poverty.

However, for the involuntary poor group, data was collected from among a particular group -- the Bengalis -- living in Kolkata (and those living in India's capital city). This served to maintain some control on the interpretation of the data, given the diversity of Indian culture. I did not have this control over the sadhus who were willing to be interviewed in Kolkata. From their languages and accents, I would assume that they came from all parts of India, except the South.

Means of data collection

To address the question, "how do the poor experience technology?" immersion through "going native" among those who were involuntarily poor was not possible due to reasons mentioned on page 31. I chose to employ depth interviews instead. However, I found that the self-consciousness during interviews among the involuntary poor did not abate despite long

hours of interaction. This pointed to the consciousness of societal difference inbred into the bones of these informants. Thus, my data collection was not restricted only to the interview times. I kept myself open (and the recorder switched on) to the possibility of capturing all behavioral and verbal matter that existed at every point of our interaction. I let the respondents choose whether to delete any of the things captured in this manner (they never did).

I interviewed to the point of concept saturation and stopped after the 27th interview in the "poor by circumstances" group. Where the informants in the "poor by choice" group are concerned, I interviewed eight sadhus (three of whom were female) from spiritual organizations and nine from among the Ramta Yogis (all of whom were male). Table 1 lists the pertinent details of the informants in the poor by circumstances group (all have been given pseudonyms to protect their anonymity). Table 2 lists those among the poor by choice group.

Table 1

New Delhi informants	**Pseudonym**	**Sex/Age**	**Occupation**
	Anurul	M/26	Chauffer to a college professor
	Jeet	M/34	Office boy
	Nafisa	F/26	Helps in a tailor's shop
	Picku	M/32	Auto-rickshaw driver
	Praval	M/44	Security guard of a small building
	Rita	F/65	Minds a "paan-bidi" shop
	Ronu	F/36	Housemaid
	Savitri	F/38	Housemaid
	Sushma	F/26	Cook
	Yaseer	M/45	Auto-rickshaw driver
	Yasmin	F/23	Stay at home wife
Kolkata informants	Aftaab	M/37	Bus driver
	Geeta	F/26	Housemaid
	Hiren	M/29	Construction worker
	Kaushik	M/30	Whitewashes houses
	Leela	F/25	Stay at homewife
	Maro	M/52	Potted plant seller
	Neel	M/30	Rickshaw puller
	Pallav	M/41	Daily wage labourer
	Promila	F/27	Housemaid
	Protima	F/30	Housemaid
	Raju	M/60	Rickshaw puller
	Sangeeta	F/35	Housemaid
	Seema	F/28	Sells flowers for puja
	Shibu	M/32	Sells subscription of cable TV
	Suchitra	F/32	Stay at home wife of an apartment care-taker
	Taposhi	F/20	Housemaid

Table 2

Sadhus from Spiritual Organizations	Pseudonym	Sex/Estimated Age	Location
	R1	M/in his 30s	Hindu Organization 1 in Kolkata
	R2	M/in his 30s	Hindu Organization 2 in Kolkata
	R3	M/in his 40s	Hindu Organization 2 in Kolkata
	R4	M/in his 60s	Jain temple in Kolkata
	R5	M/in his 30s	Buddhist Organization in Kolkata
	R6	F/in her 50s	Hindu Organization 3 in Kolkata
	R7	F/in her 60s	Hindu Organization 3 in Kolkata
	R8	F/in her 30s	Hindu Organization 4 in Kolkata
Ramta Yogis	R9	M/ in his 70s	Kalighat, Kolkata
	R10 (No technologies)	M/in his 30s	Outram ghat, Kolkata
	R 11 (No technologies)	M/in his 40s	Shyambazar, Kolkata
	R 12 (Tantrik)	M/ in his 40s	Ahiri Tola, Kolkata
	R 13 (Tantrik)	M/ in his 60s	Ahiri Tola, Kolkata
	R 14 (No technologies)	M/ in his 50s	Ahiri Tola, Kolkata
	R 15 (No technologies)	M/in his 50s	Ahiri Tola, Kolkata
	R 16	M/ in his 40s	Outram ghat,Kolkata
	R 17	M/ in his 30s	Kalighat, Kolkata

The way I lead up to my actual question –"how do you perceive technology?"—differed according to which category of poverty the informants belonged to, and also (especially in the case of the Sadhus) with how impatient I perceived the particular informant was to get up and get going with what they felt was more important in life. As touched upon before, many among the "poor by circumstances" category, didn't seem to have a notion of the word, "technology," not even when translated into Bengali. This is contrary to the stream of technology literature that talks about technology "goodness/badness" or "technology –ideology," assuming that all people have the notion of an idea called "technology" under which certain things may be categorized and certain things may not be. For informants in the "poor by circumstance" category, everything

that the academic community calls technology, has its separate identity. These informants didn't think in terms of "technology helps us; technology doesn't help us, etc". They thought more in terms of the particulars –"*The TV* helps us, *the radio* doesn't." I tried to get around this problem by showing them their cell phones, air coolers, and asked them to show me other similar things. This led to their showing me things that used electricity in some manner. When I added a bicycle to my list of "explainers," they showed me other tools that they had (for example, a crowbar). Among this group of informants, there *are* no varied notions of *one* thing called technology, because there *is* no one thing called technology. As mentioned in page 33, for this group of informants, I began by asking grand tour questions about things that I perceived as "technology" from among their possessions, and then continued the interview through suitable probes.

Data Analysis

All of the interviews were audio recorded and transcribed in the language of the respondents, i.e., Bengali or Hindi. Two approaches were tried to analyse this data. The first approach was to translate the data into English and then analyze it for technology metaphors. Since I am trained in both Bengali and Hindi, and my "first language" is English, I did not use any outside help to translate the first couple of data sets. However, I found that analyzing the data once it was translated into English resulted in a loss of several nuances, and the metaphors that didn't quite "fit" the feel of what was coming across when the data was played back in Bengali or Hindi. At this point I adopted my second approach: I analyzed the data based on what was said in the original language, and coded for contextually based concepts and apt Bengali/Hindi metaphors. These metaphors were then translated into their respective closest English counterparts. Given

this approach of analyzing data in Bengali and Hindi, I opted out of using software for coding, and exclusively employed hand-coding.

The metaphors that surfaced among the voluntarily poor were largely emic. In contrast, the metaphors that are proposed as emanating from the involuntary poor group stem from the researcher's holistic grasp of the *"nexus of assumptions, concerns, values and meanings that systematically emerged throughout the interview dialogue*" (Thompson, Pollio, and Locander (1994, p. 435). This approach follows past research that has used etic metaphors (for example see Cotte, Ratneshwar and Mick 2004; Thompson, Pollio and Locander 1994) to understand consumers' lived experience. The trustworthiness of etic metaphors is established through a "fusion of horizons" (Thompson, Pollio and Locander 1994, p. 434) between the researcher and the informants. This fusion is particularly possible when the researcher and the informants are from the same culture (Thompson, Pollio and Locander 1994), as is the case in the current dissertation.

As indicated in the introduction, this research entailed eliciting perceptions of consumer groups with whom I could never fully identify. Furthermore, these groups have been comparatively less researched by other scholars. As a result, I did not have many ex-vivo "categories" when I approached the data. I decided to employ a grounded approach (Strauss and Corbin 1998), making myself an "empty vessel" so as to speak, in order to be sensitive to new constructs.

While it was impossible to trace the responding "Ramta Yogis" to get their feedback on my analysis of their thoughts, I reviewed my metaphors according to the feedback that I received from the sadhus linked to spiritual organizations, and from those in the "poor by circumstance" category. Revisions were done only on the basis of what the former said, for those in the latter

category, couldn't even grasp what metaphors meant, and didn't know the stories behind the Bengali counterparts of some of the metaphors that I had used (for example, "Walled Garden", "Albatross", "Shylock/Jezebel"). Furthermore, it was inconceivable for them to think of rebutting what I told them I had written. One response encapsulates this deference: "Ki bolbo didi? Aamra to lekha-pora korini; Oto-shoto janina. Aapni i bolen." ["What will (I) say, sister? We are not educated; we don't know these things. You yourself say (whether what you have written is correct or incorrect)."]. These circumstances precluded a "bracketing out" (Moustakas 1994) of my own views during the phenomenological analysis of my data. Instead, my own interpretation strongly mediated my understandings of the lived experience of the informants' experience of technology. Such a strong mediation is in keeping with the analysis methods of hermeneutical phenomenology (van Manen 1990 p.26).

CHAPTER FOUR: FINDINGS

In the sections that follow, I present findings related to the focal research question for this study, namely: "How do the poor in the developing world experience technology?" Data analysis reveals that at a macro level, the poor's perception of technology is ungirded by whether their poverty is one of choice or one of circumstance. Without exception, all informants who voluntarily chose a life of penury, perceived the self and the world as breakable illusions, whereas informants who were involuntarily poor viewed both the self and the world as ominously real. As the data in this chapter will show, this difference accounts for the sparseness of technology metaphors in the former group, a paucity that stands in stark contrast to the myriad metaphors unearthed in the latter group.

Those among the involuntarily poor group perceive technology as a tool, a toy, an uncaring demander, a distant star, a spare tire a mystery, Fort Knox, an albatross and a stonewall. While they masterfully (although at times with effort) engage with some technologies that they view as tools, and playfully interact with those they perceive as toys, much of their engagement with technology is through what I term as *"subservient consumption"*. This is consumption aimed at achieving sustainable harmony with their domination by higher classes (i.e those high on allocative resources). They achieve this through myriad strategies that will be elaborated in this chapter.

A different set of technology metaphors were unearthed from among the informants who embraced poverty as a life choice. In considering a similar phenomenon, scholars researching voluntary simplicity have implicated environment consciousness, sustainability, reactions against excessive materialism, and anti-globalization as influencers of consumption choices of those who

choose to live a life that is less full materially (Gregg 1936; Elgin and Mitchell 1977; Leonard-Barton 1981; Valaskakis 1979). Their studies have focused on moving away from things (either minimally or maximally) as the key consumption practice of interest (Etzioni 1998). My findings shows that when poverty is embraced in search of a perceived "higher" truth, a goal not implicated in the voluntary simplicity literature, there are other consumption practices beyond downshifting[8] that consumers use, to navigate through life. This choice of poverty is made based on alternative perceptions of "reality" of "self" than those that are currently hegemonic world-wide. The "self", in this perspective, is not one bounded by the body, but an unbound, eternal, unchanging consciousness that humans "forget" by identifying with the body and its desires. Practices of austerity are not required to "get back in touch with" or "realize" this self. In fact, ancient Indian mythologies (written by seers called the rishis) have served as educational tools to Indians for centuries, and abound with tales where austerity is not prescribed, but instead detachment while living in the world of things is the spiritual evolution to aspire to. For example, the human person deemed worthy of being the father of a goddess (Lakshmi, the goddess of wealth, in the avatar of the human Sita), was a king (Janaka) who ruled over a rich kingdom while maintaining constant detachment from his possessions. Lord Vishnu is mentioned in a mythology as explaining to the celestial sage that his true devotee is a particular butcher who lived his life chopping animals to death, but keeping the lord in his heart. Another tale mentions that a man who visits a prostitute while thinking of a spiritual gathering is more dear to the Lord than one who visits a spiritual gathering while having a prostitute in his mind. However, most people who engage in Sadhana find it impossible to continue their spiritual practice while living

[8] Except for Jainism, most philosophies that originated in India (e.g., Hinduism, Buddhism and Sikhism) do not advocate strict austerity as a way of life. In fact, the most popular among the many Hindu scriptures, The Bhagvad Gita, has an entire chapter devoted to how moderation in everything is the true path to Yoga (Note: While "Yoga" in the west is used to refer to "Yoga-asana" or physical postures , in this dissertation, I use "Yoga" to refer to its unchanged meaning, i.e "yoking with the supreme consciousness" (The Bhagvad Gita)

in the world of things, and so choose to renounce everything they own and then engage in their Sadhana.

Situating the Metaphors (involuntarily poor group)

Consider the following excerpt:

> Ronu: "Earlier we used to be given water as and when maalik (the landlord) wanted. It used to be very difficult for us then. We would be given water twice a day. Then the "supply wallah" fitted that thing for water. That's why things are no more problematic for us. Twice, the water comes through there (the "supply wala"). It supplies water for part of our needs. After that, the landlord switches on the motor to give us water."

Extant studies unearthing consumers' technology perceptions (e.g, Mick and Fournier 1998; Kozinets 2008) have been rooted in the assumption that consumers consume technologies that are owned by them, or that are in their control through their access to these technologies (Bardhi and Ekhardt 2012). Such free choice in access is presumed too, in suggestions that access may vie with ownership in influencing self-perception (Belk 2014). In the current context, much of the technology that the informants need to survive is routed to them through others, especially those in power. As this chapter will show, this power plays a significant role in consumers technology perceptions, because it is a power that changes the entities in a network from innocuous intermediaries to mediators who "*authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on*" the meaning that flows through the network (Latour 2005, p. 71-72). The perceived chain of mediators that exists in the access to

certain essential benefits of technology is salient among my informants, as is encapsulated in the excerpt above.

While Ronu can currently access enough water and is not troubled any more by water shortages, the chain of "in-betweens" and their actions (the action of the "supply wala" and then the action of the "maalik") that is required to access technology's benefits (in this case, access to pumped water) mean that the technology required for this access is in others' hands. Her timed access to the essential resource of water points to a timed engagement with the technology tied to this resource, a temporality that is not of the informants' choosing (as is assumed in most extant technology perception theorizations). It instead timed according to the powerful class' decisions (in this case, the government's decision of when to supply water and the landlord's decision of when to switch on the water pump).

This salience of others' role in my informants' access to technology is implicated in the nuanced ownership of technology that is seen in their discourses. For example, where it comes to TVs or cell phones, it's "aami chalai" (literally, "I make it work"). The same is true in the case of the electric motor that pumps the water to their huts, and in most cases, the electricity that they are "given access to", it's "maalik chalaey" (or "maalik" --a subservient's term for landlord – who switches it on and off). And for essentials like cooking gas or kerosene that are required to get their stoves to work, it is "sarkarer loker bapaar-shapaar" (the closest context-based translation is "according to the whims and fancies of the government people"). This last perception points to a placement of the accessibility to such essentials in a completely uncertain space if one has to try and get them legally.

The sheer power that the mediator "maalik" wields through this control of essential technologies, is apparent in the fact that across cities and across informants, there is a repeated

use of the word “maalik” (owner), instead of the term that the non-poor, educated class usually use, “makaan maalik” (house –owner). This reflects the perception that for these informants, their landlord is perceived to actually own *them*, and not just the houses in which they live. This perception is reinforced by the landlord’s complete control of the electricity and water that the informants need. The impact that this constant and historical domination has on their technology perceptions is apparent in their skewed way of thinking about technology. A critical feature is the lack of control that the poor have over certain essential technologies. Another telling element is, that even a technology like electricity that is pure energy, takes the form of a solid object in their perception. It is solid in the sense that it cannot be in two places at the same time, as the following interview highlights:

> Arundhati: “It’s so hot in here! Is there no light?” (“Light” is a colloquial term used to refer to electricity in general among Bengalis)
>
> Ronu: “No, there’s no light. Light toh bodhoye (possibly)… (pauses).There...the water is running (na) through the motor? That’s why the light has got cut off.”

“Na” used in this context points to a belief that that is the way things are, and that I (the researcher) should have known it since the logic of what happened to the “light” is obvious: when electricity is in point A (i.e. at the water pump), it cannot be at point B (as “light” in their houses). It is an either/or situation with regard to its location, just like a solid object that cannot be in two places at once. The perceived obviousness in this logic is further made salient by the term, “light has got cut off” (a salience that comes out strongly in the actual spoken language “light kete gachey”), instead of the more accurate expression, “the landlord has turned it off”. This phraseology makes “got cut off” an action of the electricity (rather than an action of the landlord), simply attributed to the presumption that it cannot be at two points at the same time.

Resistance to domination through various means has been seen as instinctive in most humans (Dobres and Robb 2000; Fowler 2004). Indeed, the poor have been noted to be remarkably agile and resourceful in the ways that they subvert domination by those high in allocative resources (Hill 2003; Hill and Stephens 1997; Hill and Stamey 1990; Snow and Anderson 1993; Duneier 1999, Hagan and McCarthy 1998; Lee and Farrell 2003; Dordick 1997; Wright 1998; Molina 2000; Wagner 1993). Against the backdrop of a country that has been steeped corruption for decades and embedded in beliefs in Dharma[9] for millennia, my data analysis shows that my informants' perceptions of technology varies on two key dimensions. It varies according to the specific type of agency that technology is seen to possess and according to the amount of control informants can wrest from the dominant class in their consumption situation.

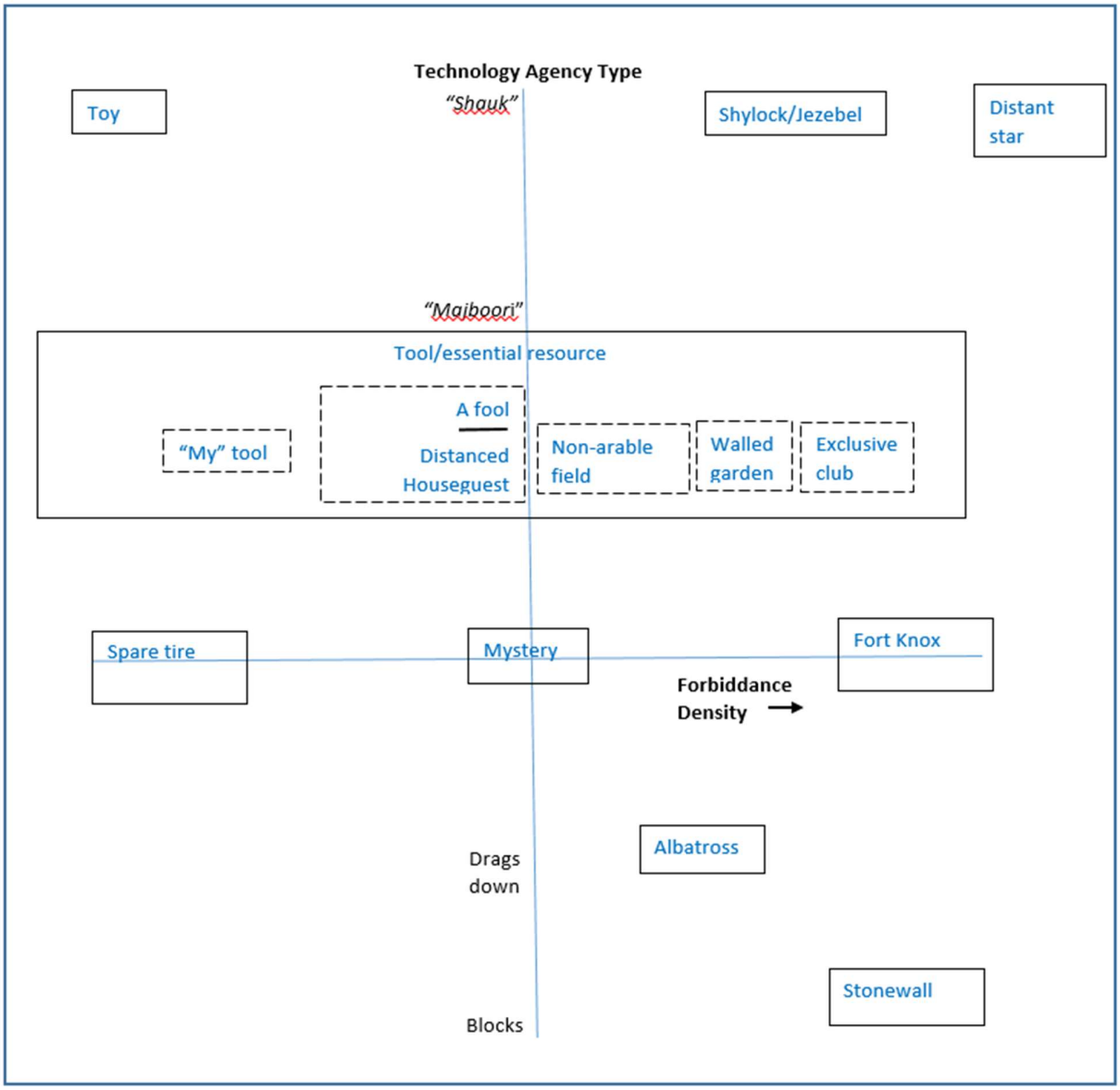
Metaphors of Technology (Involuntarily Poor group)

The resulting array of technology metaphors can accordingly be expressed on two axes (this is for simplicity. In actuality, a three dimensional 5-planed pyramid structure would have better captured the immense complexity): One axis, "forbiddance density", refers to the informants' perceived intensity of barriers from the human intermediaries associated with technology as well as the types of forbiddance (whether easily negotiable, negotiable at a high cost, or completely non-negotiable) that these mediators exert. "Forbiddance" in this case refers to the refusal by the dominant class to allow the involuntary poor (either deliberately, or as a by-product of their own

[9] Dharma (duty): While this is too complex a term to be explained properly here, a simple meaning (as understood by the average Indian) of *one* aspect of Dharma would be the fatalistic notion of being what one was born to be (traditionally, this has been denoted by one's birth conditions, including, but not limited to caste), for what is desirable for one section of the society may be degrading to another.

decisions and actions) to engage in daily consumption practices freely within the limits of their income. Forbiddance could also be exerted by life situations. The forbiddance is not simply a static obstruction, since the obstacles here can often be intentioned as well as dynamic in varied ways depending on the amount of push-back from the informant. Forbiddance density ranges from none (where the informants' agency is maximum) to total (human intermediaries completely dominate). The second axis, the "effect of technology agency", denotes technology's agentic role as perceived by the informants. Four roles emerged as being important to the informants: "*Shauk"* (a loose translation would be gestalt of leisure-wish-hobby) which implies that the technology is perceived as one capable of giving an "emotional lift" (however temporarily) to the poor from the daily drudgery of their lives, or that gives succor in some way. "*Majboori"* (a close translation would be a gestalt of forced-essential) points to certain technologies being essential to help the informants get on with their day to day living; helping with their physical survival. The descriptor "drags down" is used to denote the capability of technology to restrict the informants from getting on with their lives. And the term, "Blocks" is used to refer to the ability of technology to stop the informants completely from achieving their life goals. The range of metaphors emerging from the interplay of the two axes are shown in Figure 1 and described below:

Figure 1


Technology Agency Type
"Shauk"
Toy
Shylock/Jezebel
Distant star
"Majboori"
Tool/essential resource
A fool
"My" tool
Distanced Houseguest
Non-arable field
Walled garden
Exclusive club
Spare tire
Mystery
Fort Knox
Forbiddance Density
Drags down
Albatross
Stonewall
Blocks

"A Toy"

The metaphor of technology as a toy is represented in the upper left corner of figure 1. The engagement with technology here is playful, with the user (mostly males in this case) perceiving a dominance in the interaction. Consider Anurul's engagement with his phone. According to what his employer had earlier mentioned to me, he regularly changes his ringtone. On asking him how he does that, in contrast to his self-conscious single-line responses about other things related to technology, he enthusiastically elaborates:

> "Here is my phone, sister. I've got it a year and half back…I use Idea's Docomo SIM….I go to the settings, sister, then I go to the ring tone, Ok? Then from the ring tone, I change the "ring", I change the song. [He changes the "ring" during this demonstration. The song that plays is an incomprehensible, Asian version of "I am a gummy bear" and he starts laughing.] It's all stored in the memory chip. See here? [Shows me what he says is the memory chip]…I get it all from Boo-loo Tuth (Blue tooth). You know, Boo-loo Tuth? [I look vague.] The thing that sends song from one mobile to another? I got to know about it while tinkering around with my phone, his phone [indicates his cousin]. I tried to find out how the song it sends, how the song it takes, how to save a song. I take songs from my cousin's phone. He has a Sony Erikson. I also take songs from my friends' phones. I like it (smiles). New, new day; different, different songs, my phone sings to me."

Anurul's joyous laughter at the incomprehensible mewing version of the gummy bear song emitting from his phone after he tinkers around with it (and the very fact that he even *has* this children's song in his phone) demonstrates that for him, his phone is a toy to play with. His tinkering around with the phone when he came across Bluetooth reveals that he sees the phone as a free territory to explore, like a new game with unknown rules. Anurul's playful consumption of the phone, a piece of technology that he had earlier claimed to have got "only for emergencies" (i.e. technology as a tool) highlights that for him, his phone (or phones in general) are toys too. Besides being something that helps to constantly be a point of contact for his family in the dangerous place that he perceives Delhi to be, his phone is also something that "sings to him";

the blue-tooth in it is something that allows him to connect with the pleasure-giving facets of his cousin's and friends' phones. He takes pleasure in frequently changing his ringtones, thus making his phone "sing to him" differently each day ("new-new day").

In a parallel discussion, Piku, an auto-rickshaw driver, speaks of his experience with a computer:

> Piku: "Before, I used to work as a cleaner in an office. Once everyone left the office (after hours), I used sit next to a computer. I used to touch it here and there. Or if there was a VCR or laptop working (during office hours), I used to sit in a chair and watch, I used to clean the tables on which these sat, ok? Time-to-time, I used to be able to bring out videos...I have not been educated beyond grade 2, but I know that this thing can be done this way, if I press here, it will stop, if I press there, it will start, things like that…with phones, I save a number, I see a number and pour in the message, I can do all that. "

Even though in comparison to Anurul's actual ownership of his "toy" (his phone) Piku's consumption of computer was partly vicarious (he used to watch others use it while cleaning tables or simply by hanging around) and part stealthy (when "everyone left"), the same masterful playful tones, denoting a combination of an emotional lift and agency, are apparent in his consumption of a technology that he didn't own. His touching the computer "here and there" alludes to the computer as a new, unknown pet, with him waiting in anticipation to see how it responds to the different touches of his. His confidence as the dominant one in this interaction with technology (and his total subjugation of technology) is further evident in his reference to "pouring in the message" into the phone, with the technology being something that takes in his message (unlike carrier pigeons) with no obstacles.

While this metaphor of technology as toy is aligned with that of prior technology consumption studies (Celsi, Rose and Leigh 1993; Hoffman and Novak 1996) that have explicated the joyous feelings that technology consumption can evoke, and is parallel to those of

studies that have pointed to the self-expressive role of technology utilization (Murdock, Hartmann, and Gray 1992; Schau and Gilly 2003; Kozinets 2008), what the current context reveals is the extremely gendered nature of this metaphor among the poor. Without exception, the perceived playful aspect of technology was absent in all the female informants' responses, indicating that in the given context, where women have to shoulder the maximum load (e.g., bringing home money, bringing up children, and seeing that food is available, clothes and vessels are washed and dried despite the extremely limited essential resources like water, which they have to engage in regular fights to have access to), have virtually no time for play. Women are also handicapped by cultural notions of women being less than men, which is bred into their bones. Thus, the notion of "technology as play" is gendered. For the few female informants who can access television or radio (either their own, their extended family's, or the neighbours'), the "play" if one must call it that, is passive: accepting what the media gives, a passivity that is in stark contrast to the active play that the males engage in, as is exemplified in the excerpts above.

Data analysis further revealed that perceptions of others' agency in forbidding the playful consumption of technology is sometimes salient. For example, in the case of the foraged set of headphones, informants mentioned then having to look for such headphones in the community. When the headphones were free and could be borrowed to listen to music, depended on the mood the owner, others wishing to use them, and so forth. Interestingly, minor differences in the same type of product (for example, whether or not the product comes packaged with headphones), or personal limitations (for example, inability to repair a phone) could relegate one model of a good to the toy domain, and another model to the tool domain. This is exemplified in Hiren's varied perceptions of the three different phones that he uses:

Arundhati: Tell me about your phone

Hiren: Which one? I have three (laughs).

Arundhati: Three? You use all three together?

Hiren: No. This one (indicates the one in his hand), I bought five months ago, from a shop nearby… This is an old phone, i.e., it is an old model …they have only a few of these old models, because these models have now become band (banned)…because these are not in vogue anymore [I realized that by "banned" he actually meant "out-moded"]. Do you get me? There was once a time when phones used to cost Rs 3000. Now, if people give Rs 1200, they are getting music, images. What "value" does phones like these [the one in his hand] have (today)? These have no value. This does not have anything. Just "phone" [calls] comes and goes. That's why these have been band. I got this new at Rs100….I have two other phones, but they are not working anymore, so I don't use them…I haven't got around to repairing them, cause I have some (financial) problems: I have recently moved into this rented place….One's LCD is destroyed. Repairing that would cost Rs500. Buying a phone was cheaper. This (the one in his hand) is band…has FM, but I can't hear it, cause the shop keeper couldn't give me the headphones with the phone at that price….Even though I am poor… I have had this great desire to always use 2-3 phones, whether calls come or not [laughs]. Didn't matter whether the phones were cheap or expensive. I never have desired that I should have expensive phones, just 2-3 phones... That one [indicates one that is kept on a shelf], I bought due to "shauk". That's a bit expensive. I could click pictures, listen to songs too. [His wife inserts: "He used to sit with that phone all the time]. I used this one to make calls and that one to click pictures with, or to take with me if I had to go to a family gathering somewhere. But my child tossed that one into the water. I did what I could, but

fixing it completely with cost me at least Rs550, which I can't afford right now. That has also become a "simple phone" now."

Beyond the different factors that turn an "expensive" toy into a "simple phone now", what is interesting here is the way Hiren tries to maintain his social status in a digitally divided world. Until his "shauk" phone became a "simple phone," and Hiren used the symbolism of the shauk phone, but the service of ordinary phone. This was to balance between the needs of establishing status in " a family gathering somewhere," yet taking care that this phone did not get damaged by over-use (because he wouldn't be able to replace it). Thus the "simple" phone was recruited for its services, and for reducing wear of the "shauk" phone.

"An uncaring demander (Shylock/Jezebel)"

In contrast to the emotional lift offered by technology perceived as toys, the succor offered by some technology came at a high price, placing technology in the domain of "an uncaring demander" (upper right hand section of Figure 1). For instance, while electricity is supplied in Kolkata by the government at the rate of 3.5 to 4 INR/unit, all the informants in Kolkata were charged 14 to 15 INR/unit by their landlords. This hiked up modification of a resource (technology) in the "government → electricity→ landlord → electricity → tenant" network in which one powerful mediator (the landlord) influences the electricity perception of the informants. The much touted metaphor of technology being the magical savior misses the illegal changes that can occur to the price of the technology by a powerful mediator, and thus misses the feelings toward technology deriving from the costs associated with what the "saving" that technology does. Consider the following excerpt:

Maro: “Ooh! How hot it is growing already, sister! The hot months are coming and my head is being been caught by worries. Again we have to reduce our food!”

Arundhati: “Why would you need to do that?”

Maro: “The fan will be running more, na? So much “light” bill, where am I going to give it from? If I want this (the working fan), I have to give up that (the food). That’s why when the hot months come, we have to reduce our food.”

Arundhati: “How do you do that?”

Maro: “Ei, any fish-meat, that stops. We live on lentil-rice for those months.”

The fan and its use of electricity for Maro, is a money-grabbing, uncompromising mistress. For while he desires to be soothed by technology’s ministrations in the hot summer months, he can obtain this only if he succumbs to technology’s demands for his money. In order to be relieved from the heat, he must withdraw his moneyed attention from food and focus most of it on the fan, or the electricity. Otherwise he will fall out of favor and the Jezebelian technology will not attend to him anymore.

A similar theme of technology as an uncaring demander is seen in Promila’s perception of her cell phone, with the variation being that instead of her needing something from the technology itself, and for herself alone, she needs something that the technology can give access to her to: an emotional lift of both herself and her family. For her, Technology is a Shylockian hungry, grasping, unyielding, but not unfair, calculator: She speaks of the rare incidents when she gets to speak with her distant children as follows:

"Frequently-frequently we have to insert money into it (the phone). If it is fed money, then the communication (with the children) happens. Otherwise not."

She includes the word, "toh" when she speaks about this frequent feeding necessary. "Toh" is used to indicate something that should be known to the listener, indicating that she perceives that resource guzzling by technology is a well-known fact. However, no complaint comes through about the efficacy of the phone's working (even though its pieces do fall apart when the rubber band holding it all together, breaks), indicating the perception of the phone as an unemotional, but not unfair calculator, since it will work every time you feed it money and when you don't, it won't.

Consumer researchers have explored how consumers behave when displeased with the provider of a service/product. For example, "change of retailer" has been seen as a strategy chosen by consumers when shopping for wedding dress (Otnes, Lowrey and Shrum 1997). In the current context, where discontentment with the essential technology benefits versus costs (e.g., the high cost of electricity or pumped water) abounds, such a change in the "service provider," (example, the landlord) is rarely done for a variety of reasons, as Anurul explains:

"We know that there are slums where possibly the electricity is less expensive, or perhaps the water is pumped to residents more frequently. However, in those places, you have the Jaats, the Gurjars (names of people from other states). Those people, they have the bad gaze. They look at our women folk in a bad manner. Here, irrespective of the problems, we are all "jaath bhai" (brothers united by common language, culture, etc). We fight among ourselves daily, it's true. But at least we are safe here."

So the informants simply tough it out, giving in to technology's demands, or employing myriad other strategies besides resource re-channeling (as in Maro's case) in order to cope. For example, Taposhi copes with technology's money-grabbing nature by using a bulb that uses less electricity. Her knowledge was incorrect, since the bulb that she was using was in fact an electricity guzzler, however, her lay knowledge came from what others in the slum had advised her. But so she was satisfied with using a light bulb that did not "take" too much electricity. Anurul, on the other hand, deals with the money-grabbing nature of technology by expanding his feelings of "ourness". For example, he mentions that he keeps a "simple" phone ("not an expensive one") and so he "doesn't have net," yet he mentions, "We have net." The "we" comes from expanding his "our-ness" to include a cousin of his who lives in the same slum. In this case his engagement with the "net" is merely through observing what his cousin does. The other coping strategy for the perceived money-grabbing behavior of technology is by network re-structuring. For example, the informants from Delhi feel that the electricity "through the meter" (i.e. that obtained legally from the government) is too expensive. So they access technology through their landlord who steals "the line" (i.e. siphons off electricity from government powerlines through illegal means). Here, the technology remains the same, but its illegal routing changes their technology perception in terms of its affordability. This network re-structuring is a voluntary process (i.e they choose the landlord's option instead of "setting up their own meters" or going to a place where the electricity is metered). It is also communal (i.e. it is not just a single person who is involved, but multiple individuals including the landlord). The choice of network-restructuring is influenced by weather conditions. Delhi is one of the hottest places in India during summer and the necessities required during that period (i.e. a "spreading out of the technology") are correspondingly greater.

"A Tool"

The metaphor that is the most nuanced and common in my findings, is technology as a "tool." This refers to technology being perceived as essential (a *"majboori"*) by informants in order to get on with their lives and physically survive. The variance in this root metaphor's inflection stems from the level/type of forbiddance density experienced by the informants combined with their degree of ownership of the technology. For example, the metaphors "My tool," "a fool" and ""non-arable field" all refer to essential technologies owned by the informants, yet they differ in the degree of perceived access to these technologies. "Distanced Houseguest,", "Walled Garden" and "Exclusive Club" are metaphors used regarding essential technologies (with increasing forbiddance density) that are perceived as usable tools chained to the dominant class. These metaphors are explained below with selected evidence from the research dataset to illustrate them.

"My tool"

> Protima: "My phone is a..(shrugs)…I don't know, 'Harshal' or what do you all call it? (Frowns)...I don't know (Shrugs and grows silent)"
>
> Arundhati: "So what made you choose this phone?"
>
> Protima: "I didn't. I went to a shop and told the shopkeeper, 'Brother, I need a phone. Can you give me a good one?' So he gave me a phone."
>
> Aundhati: " 'A good phone'?"
>
> Protima: "Yes. He said, 'Take this, it is hardy, and it is also cheap.' We are poor people, you know. We can't afford expensive phones. Oi…just good enough to get the job done, what else? (Shrugs)"
>
> Arundhati: " 'Just good enough to get the job done'? Do you get work through your phone?"

> Protima: No, no. Oi…for emergency's sake, or in case I can't go to work, to let the maalkin (a subservient term used for the employer) know, in case my child (who lives in her native village with his grandparents) wants to contact me, things like that."

Protima's repeatedly shrugs, and frequently uses the word "oi" -- a verbal equivalent of a shrug and a term used in her case to indicate the lack of importance or specialness of the particular technology. While the functionality of the phone is necessary to satisfy an important need – that for emergencies, to keep in touch with her son, who, due to the distance and costs visits her very rarely. The phone itself is no more than a tool to her, as evidenced in her lack of personalizing it, her lack of interest in knowing what its name is. There exists no phone company or phone model named "Harshal" in India. This misnaming of her phone further underscores the emotional distance that Protima has from her phone. To her, *this phone* in particular, has no meaning in terms of its name (or brand), but is relevant purely by virtue or whether *the phone,* in general, can help her make the basic connections needed within her limited monetary resources to reach her majboori in case of an emergency. Although the themes of dominance of self over technology and the lack of perceived outside agency parallel those that are seen in the metaphor, "technology as a toy," the difference between the two metaphors stems from the emotional connection felt with the technology, as well as the degree of need for the technology. Technology here is simply a means to an essential end, with no emotional ties involved.

However, a piece of technology that the informant considers as "my tool" might also end up being an effortful project to maintain and use. For instance, Promila's husband owns a cell phone that Promila has no idea how to operate. The phone is pieced together with broken parts that are held together with a foraged piece of plastic and rubber band (that has got so loose that it doesn't tie her hair anymore and has to be pieced back together each time the rubber-band breaks). To get the phone working (when she needs to call her children whom she has left behind

in her village) she has to walk over to her friend's place, and charge it in the electrical socket there because she herself cannot afford electricity. Furthermore, that she uses her friend's electricity is constantly kept a secret from her friend's landlord (thus drawing the friend, and her oft visiting neighbours into this collusion) for otherwise, the landlord will start charging his tenant extra for electricity.

Besides using subterfuge, Promila uses the strategy of redundancy to cope with the lack of electricity, by using an oil lamp. However, even this redundancy comes with effort. Promila has moved from using a *"Hurricane"* (a barn lantern) to using an oil lamp, because the former "works on a ribbon" [a wick] that she has to keep buying, while for the latter, she can use a piece of an old saree as the wick. This saree was originally given to her as a gift at her marriage, and once it became old, it did not automatically become a piece of wick. It was first used as a hot pad with which to grasp hot vessels. After frequent use in this capacity, when it was perceived as having become unhygienic, it was then used to swab floors. After frequent use and washes, when the saree-swab had become soft and threadbare, then Promila salvaged the remaining material to serve as lamp wicks). In contrast to alternating between commodity and singular possession (Appadurai 1986; Kopytoff 1986), the biography of this wick here is more nuanced and complex, serving first as a singular possession and then as a utilitarian possession in successively less singularized roles.

"A fool/a dumb animal"

A twist on the "My tool" metaphor is evinced in the "Technology as a Fool/dumb animal" metaphor, where a particular piece of technology that belongs to the informant is perceived as being easily malleable to others' (mostly non-human entities') influence. An acute

example of this metaphor is seen in Raju's perception of his ceiling fan. Raju is a rickshaw puller and lives with his wife, his son and daughter-in-law in a tiny room that has a single door and no windows. A 6X4 feet bed dominates most of the room, leaving just enough floor space for his son and daughter-in-law to spread a sheet to sleep on at night. Their landlord, who "*eats money*" has spent "*the minimum possible*" on the roof, making do with "*just tossing an asbestos sheet on the top*". This act of the landlord sets off an interaction of the technology under consideration (the fan) with other non-human entities (the asbestos sheet that increases heat stress) that subsequently influences Raju's perception of his fan's (non)utility.

> "When I first came to Kolkata (30 years ago), it was not that hot. Now, cars, trucks, dust, sand…[trails off]. Due to the heat, now, I feel, 'where do I flee, flee!'. I saved and saved and got this fan (points to a small fan whirring above us), thinking that after a whole day of sweating in this heat, I will cool down (and so) get to rest a while. But where? All that I used to get when I lay down was this hot air blowing down on me….That asbestos, you see? It brings in heat. No point in increasing the fan's speed. I would only get even more hot air blown on me! So I scavenged for those (points up to some card-board sheets stuck on the asbestos)…They hold the heat, so it is not as hot (in here) any more (as before). Otherwise, the *fan*…!(shakes his head)."

As his comments show, Raju's landlord's decision to use asbestos for roofing changed his perception of the fan from being a creator of a cool oasis to being something completely opposite --that being a passive showerer of the wrath of India's heat onto him. Here, the nature of an unrelated object (i.e. the ceiling) in the fan-ceiling combination changes the cooling benefit

of the technology into a negative (i.e. heating) during the summer, simply because the nature of one of the entities here (the asbestos sheet) seasonally changes.

It is true that in this situation the most powerful mediator was the landlord whose decision made a piece of technology invert its desirable properties. But the role of the landlord is secondary in Raju's perception of his ceiling fan. His comment that "otherwise the **fan**," with emphasis on the word "fan," accompanied by shaking his head, points to his perception of the fan as not living up to his expectations in terms of the work it was supposed to have performed. It is seen to have needed his intervention (in terms of putting up scavenged cardboards) before it delivered what he had expected it to. This perceived subservience of technology (to the combined domination of his landlord's decision to install asbestos that "brings in heat," and nature's characteristics –the extreme heat of Kolkata in the summer) had to be overcome. He harnessed the fan to his benefit when he engaged in network re-structuring, inserting his own actant (the scavenged cardboard) into the network of entities here, thus modifying the net effect to his satisfaction without upsetting his relation with his landlord. He further mentioned removing the scavenged cardboards in the winter so that he could harness the heat drawing property of the asbestos.

For Raju, part of the behavior of technology behavior (which impacts his perception and behavior) depends on the nature of nature (its changeability, its own assemblage, i.e. water in the rainy season, heat in summer and northern winds in winter). This domination by nature has worsened in recent years and scholars have pointed to the unequal impact of the growing "metabolic rift," increasing heat stressed conditions in the region. Much of it has been held as resulting from the elite's use of technology, but impacting the downtrodden class the most (Crowder and Downey 2010; Foster, Clark and York 2010). Raju's case illustrating the metaphor

of technology as a fool highlights this environmental[10] inequality experienced by informants and shows how they subserviently try to minimize the impact of this rift without directly opposing the dominant class.

Something similar to mastering, or "dominating a technological possession by thoroughly learning its operations, strengths and weaknesses" (Mick and Fournier 1998) is seen here as a coping strategy. But for informants this is not so much a response to stress from the perceived paradoxes of technology, but more from trying to create environmental justice for themselves. Unlike the technology mastery practices documented by Mick and Fournier (2008), the "mastering" of a technology by informants is achieved less by focusing on the one piece of technology under consideration (for example, the fan), and more by taking into account (through lay knowledge, from experience, through others' advice) the properties of the associated actants that create the unwanted result. In the case of the fan, this involves the asbestos roof under which the fan whirs and the lack of windows in the room as well as the acceptance that the landlord is not going to do anything to better the current conditions. It also involves drawing in other actants (for example, scavenged carton sheets that "hold the heat") to change the unwanted effects of the fan. For those less capable (either because the forbiddance density is incredibly high or because of artefactual structural limitations), technology mastery may also be pursued through continuous physical labor, as the following comment highlights:

> "This tin roof! That fan is of no use. In the daytime, I leave the door open and some of the heat eases, But in the night time we close the door, and then we feel really very hot. Whole night, I pour water in this house. I pour water down (on the

[10] I follow Adamson, Evans and Stein (2002) and use the word "environment" here to denote both nature, as well places where people engage in the various activities of their livelihood.

floor), and swab the floor, pour water- swab-lie down, pour water –swab -- lie down.": Geeta (a housemaid)

"Non-arable field"

In contrast to the walled garden metaphor that is discussed next, where the technology under consideration is seen as someone else's property (as a result, there is subterfuge and guilt involved in its consumption), the third inflection of the "my tool" metaphor, "non-arable field", denotes technology that is owned by the informant. Yet the dominant class makes reaping its benefits difficult through obstacles that they put in the way. This makes benefiting from this technology seem like trying to farm non-arable land that one owns or has access to. Instead of guilt and subterfuge coming forth in its consumption (as in the case of the walled garden that is discussed next), here the feelings are of righteous indignation and frustration in being denied access to the benefits of something the informant owns. The following is an illustration of this metaphor, where Pallav speaks about his accessing the cooking gas cylinder (supplied by an agency of the Indian government) that he has a subscription to:

They make it very difficult, these people. You get the message on the phone that 'the gas has been delivered,' but you don't get the gas for 15 days after that. And then when you complain in the gas' office, they say 'yes, yes, you'll get the delivery in the next 2 days.' They do this so that people get bitterly irritated, so that people get angry. They don't have any work, these people. They just sit the whole day in the cool shade of their office. For us, who are daily wage laborers, one day's visit to the gas office means we don't earn anything that day. Yet we have to go to that office, day after day, smiling with our teeth out, talking gently, gently, trying to reason with them. Otherwise, if they wish, they can make things difficult and then there will be no cooking gas in the house for months

In this situation, ownership of (or subscription to) a product does not ease access to the product. While the ownership might provide the consumer with some agency (in the sense, that his ownership gives him the right to go and ask for the product), his ability to do much about access is curtailed by those in power's decision, those human actors generating a thick Kafkaesque forbiddance density. Extant literature has noted that when consumers cannot change a stressful situation through behavioral strategies, they use emotion – another coping strategy. While management of emotions is definitely the strategy used by Pallav here to cope with the situation, it is not so much of "a coping through reassessment of the situation aimed at making the situation seem less stressful" (Duhacheck 2005; Lazarus 1993; Luce 1998; Luce, Bettman, and Payne 2001; Mick and Fournier 1998; Sujan, Sujan, Bettman and Verhallen 1999), but more of an "emotional labor" (Hochschild 1983) through a suppressing his *"bitterly irritated"* state coupled with "*smiling with teeth out*" and gentling his demeanor. Without this emotional labor, he will not get the needed gas.

"A tool chained to the dominating class"

A major portion of the forms of technology, or benefits from technology, that the subsistence market perceives as essential (for example, cooking gas and electricity and certain essentials that require it to run – fan, light and pumped water) are also engaged with as if that form of technology were the resource of the dominating class. To them, such technology seems like a privilege of the non-poor class: a walled garden that they feel guilty when breaching or an exclusive club where they have to part with a lot of money, and get existing patrons' help to be a part of it. Such extreme external control may also be perceived as a technology endowed with an agency of its own, with the latter thus being deemed as a distanced houseguest.

a) The walled garden:

This metaphor represents technology as a something normally beyond one's reach, but something that informants can see the dominating class benefitting from. As in the wall –scaling children in the Selfish Giant story, my informants are able to illicitly experience the pleasure that the technology provides, yet are driven away when the resource owner is around. Take the example of Suchitra, a stay–at-home wife of the caretaker of a three story apartment block in the heart of India's most populated city, Kolkata. The caretaker, his wife Suchitra and their toddler are allowed to live rent-free in a small room on the ground floor of the apartment. The rest of the floor serves as a garage for the other apartment's cars, restricting the family's use of it. Their electricity bills are also taken care of by the owners of the apartments in that block. All of these factors influence Suchitra's perception of a necessary technology such as electricity.

> Suchitra: The other day, K's father [refers to one of owners of the apartments] scolded my husband, 'Why is the common area's bill so high? I am not going to pay this!' But wherever we live, whether there is an electric meter or not, we are careful about our electricity usage. My husband, he feels very bad, he loses face when he is told things like this. He tells me, 'Just because we are living in another's house [technically, living at someone else's expense], that we will live as we wish, we will use electricity as we wish, that is not correct.' That's what my parents have taught me too. There are many evenings when I am lying down alone in bed, I keep the lights off. I do the same if I go to the washroom, or take a bath. That's what my husband feels is right. Even if I wash my vessels, I do so in the dark…It is not that I don't get any light at all, cause the street lights are over there, just across the road. I don't switch on the light even when I go to the bathroom, cause I try to seb (save) as much as I can. Or if I am at home, and there are lights outside (in the garage area), the lights come in through the window, then I don't switch on the lights inside. That's why it seems that I often stay in the dark.
>
> Arundhati: So what about the TV? Has K's father said anything about your spending electricity to watch TV?
>
> Suchitra: He hardly stays here, so he doesn't know. But because I switch on the TV, that is why I try to seb electricity in other directions. If I started using electricity in all directions, then the bill for them will be much higher….I try to keep fans and

> lights off as much as I possibly can. A little TV, maybe…I know that the TV will hike up the electricity bill, that's why I keep the lights and other stuff off, so that the TV, a little…Suppose something important has happened, then to see that. I also like to watch the news. That's when I watch TV.

Suchitra's repeated references to how she saves electricity stems from not an "Earth Hour" perspective, but from being conscious of using a technology that someone else is paying for, a technology that she and her husband do not feel is theirs, a resource of the dominating class. This is reminiscent of children illicitly staying in the walled garden, (for example, consider her response, "he doesn't know"), but at the same time, making sure that they are not over-using the fruits and smelling too many flowers or in general, wallowing in the garden. Instead, they try to take just enough to give them sustenance, and if they take more, they justify it. The guilt that Suchitra feels in switching on her TV and thereby using someone else's resource is evident in the myriad ways that she tries to manage that guilt by saving electricity from being spent in "other directions". This guilt management also comes through in her trying to provide a legitimacy to the act of watching TV, thus raising it from the status of simple entertainment, to doing something weightier like watching the news or trying to learn more about "something important" that might have happened.

The accommodation, or "changing tendencies, preferences, routines" (Mick and Fournier 1998) that Suchitra does has been noted in her coping strategies. However, here the accommodation is not so much "according to the perceived requirements, abilities or inabilities of a technological possession", but more in trying not to provoke the dominant class while using their technology. Here, like Polymers that unfurl and expand in width when stretched, Suchitra engages in an auxetic response to resource domination, drawing upon her flexibility and

acceptance of the way things are, on what she has learned from her husband, and elders. She gives up things that she is used to, that she is comfortable with and uses street lights for her needs instead. She also engages in minimizing the use of technology, stealthy use of technology and legitimizing the use of the technology.

b) An exclusive club

The second manner that the metaphor of technology as the dominant class' resource emerged was through the image of an exclusive club. An example of this image emerged in Sangeeta's access description for the basic material required to get her cooking stove working, kerosene:

> Arundhati: *So where and how do you cook?*
>
> Sangeeta: *I cook outside, 'cause my house (the single room that she lives in) is very small, toh…If I cook inside this room, it is very difficult (to breathe)…I cook here on this Janata.*
>
> Arundhati: *Janata…?*
>
> Sangeeta: *That's a kerosene stove...the kerosene has to be bought in black.*
>
> Arundhati*: In black…?*
>
> Sangeeta: *Oi, we don't have ration card here, na. We have to cook twice a day, 'cause unlike you people, we don't have a fridge…That's why, we have to buy at*

INR40-45 per litre, we have to buy in black…Without that, we won't even get to eat (laughs), if we are not able to buy (in black).

Arundhati: *So, have you thought of getting a ration card?*

Sangeeta: *That's very tough. To get one, ei one has to go talk to the Panchayat one day, go to the BDO one day, one has to do this, one has to do that, run here, run there, feed this guy money, feed that guy money. One has to run around a lot. My ration card is in my village. I heard that my card has lapsed, only my dad's remains. We get some kerosene from there, when we go to our village after one-two months, maybe. But in the village, we get one – one and half liter per month, unlike here in the city, where that amount is given every week. So here, in the city, you all get more than double of what we get in the village. But what use is that to me? I don't have a ration card. So here, those among you people who have a card, I tell them from before maybe, to get their kerosene in their card and give it to me at the price that I would get in the black market. You all get it at INR 15 per litre.*

The amount of kerosene that is adequate to cook for a family is only available in the city. On asking around among the educated class, I realized that while the same amount is supposed to be reaching those in the villages too, but rampant illegal siphoning off occurs at various levels, so that by the time the kerosene reaches the villages, the amount that the villagers get is very meagre. Thus, for the poverty stricken migrants to the city, access to kerosene is not available, for they do not have the required credentials (a ration card) to gain access. However, they can have access through the patronage of those in the dominant class (who have access) through paying a fee, and a high one at that. The alternative – procuring a ration card – can only occur

through running to a lot of places and greasing a lot of palms. In this sense, it is not a garden that they can access through the simple means of scaling the wall when the owner is not looking, but an exclusive club. They simply cannot enter it without patronage of the existing members and by paying a very high membership fee. Furthermore, the path to the necessary technology will always have to be through established classes' patronage, for the fee paid is not a one-time fee, but something to be paid every time they need access, pointing to a never ending impediment to maintaining the access that they have acquired.

c) A houseguest:

The third interplay of forbidden density and technology impact within the ambit of "Technology as a tool chained to the dominating class" is one where much of the interaction is perceived to be between the informant and the technology. While the dominant class is the mediator that controls the access of the technology, the perceived role of the dominating class is muted. While this may seem to be similar to the perceived interaction in the metaphor of "Technology as a Fool", it in fact is an inversion of it. Consider, for example, a larger piece of the earlier excerpt involving Ronu:

> Arundhati: *It's so hot in here! Is there no light?*
>
> Ronu: *No, there's no light. Light "toh bodhoye" (pauses). There...the water is running (na) through the motor? That's why the light has got cut off. (Starts fanning my face with a hand fan).*
>
> Arundhati: *So how long will the motor run?*

Ronu: *Ei. It (the light) comes around 7:30 -7:45 pm.*

"Bodhoye" refers to an unknown, a possibility, reflecting a complete distance from knowing the "light's" comings and goings. The added word "toh" furthers this distance. Unlike the perception of technology being malleable to other entities' influence as in the metaphor of technology as a fool, here, technology is granted the agency of a wilful houseguest. The distancing through the joint use of "toh" and "bodhoye" points to an uncaring attitude toward the impact of electricity, relegating technology to the domain of a possibility, an "outside" technology, not their own, one that, even though it is necessary, is unpredictable and comes and goes as it pleases, like a distanced house guest. The wilfulness with which the technology enters and leaves Ronu's house is reminiscent of the behavior of an un-caring houseguest. Ronu has learned to live with the non-caring attitude of this technology with an airy attitude of her own toward this particular technology's presence (or absence). The "it comes" above shows a surety in its returning, a return that the informant has no hand in. "That's why" points to Ronu's justification as a coping strategy in that it leads to a feeling of being able to predict the action of something not in their control, given them the assurance that this resource, (as necessary house guest) will be back. The distancing strategy excludes this technology in this specific context from being a master, but it is definitely valued, like a houseguest – one who may bring value.

The other strategy seen here of coping with the whims and fancies of technology (powered by those of the landlord) is that of having a non-tech substitute ready, thus creating redundancy for a particular aspect of technology The immediacy with which the hand-fan was produced instead of a make-do alternative like a newspaper or a magazine, reflects an acceptance

of the permanence of the structure's way of non-functioning, and resourcefully doing one's best with that acceptance.

"Distancing" has been mentioned as a coping strategy (Mick and Fournier 1998) for the stress from the perceived paradoxical nature of technology where consumers either "develop restrictive rules for when or how a technological possession will or will not be used" or "physically placing the technological possession in a distanced or unobservable site" (Mick and Fournier 1998, p 133) to avoid consumption. In my context, an essential technology like electricity is not the informants' possession. Furthermore, their access to this technology is controlled by their landlord. Hence, neither of the two distancing strategies mentioned in extant research can play out here. In the current context, "distancing" is used to denote not forming an attachment to the consumption product, or an easy acceptance (i.e. one without overt complaints) of the non-control of this technology product. For consumers here cannot avoid the consumption of an essential product like electricity in their daily lives, yet by maintaining distance, this allows them treat that technology as a distanced house guest, who must be respected but toward whom they don't wish to form too strong an attachment.

"An Albatross"

Consider the following excerpt:

> Arundhati: *Do you have a computer?*
>
> Hiren: *No, where is the money (for it)?*
>
> Arundhati: *If someone gifted you to you, would you like it?*
>
> Hiren: *No. We live in a rented house. Computer-Shumputer are not for us.*
>
> Arundhati (totally astonished): *Do Kolkata laws forbid computers in rented homes?*

Hiren: *Laws? No. Rented house, you know? Any moment, the landlord will ask us to leave. Then where will we go, lugging things like computers around? It's also a tiny place. Should we live in the house? Or should the computer? And moreover, our house is made of mud, and my wife and I go out to work whole day. Are things like computer things that should be left lying around in the house when we are out for so long? Who knows when what thought will come to whose mind and what they will do (in our absence)?*

Studies have shown that temporal uncertainty leaves those dominated feeling "numb, muted, dead" (Capranzona 1985 p. 44), and arises from a very powerful psychological control by others (Skidmore 2003). The excerpt above suggests that uncertainty is a way of life for my informants. Instead of feeling overwhelmed by it, they reject those pieces of technology that would restrict them from coping with the precarity embedded in their lives. Those living in slums in India are not protected by rental agreements and thus the landlord can evict them whenever s/he wishes. This precarity of living place (as well as the dimensions of living space) renders a computer as nothing more than a burden to Hiren, both in terms of burden of space and burden of weight (as reflected in his word choice, "lugging".) Added to this is the burden of worry created by the fact that they live in a "mud house" that can be broken into anytime. They live in a locality where they need to allow for the precarity of the slum co-residents' minds, through an acceptance that people might suddenly decide to break in through their fragile mud walls and take expensive things like computers. His incredulous "are things like these things that should be left lying around the house?" questions my common sense in having such an expectation. That both he and his wife go to work every day, in a context of living in a easily broken into mud

house, one that is not their own, a place where no one's mind is predictable, all of these go into making a computer appear as a burden to him. He does mention that "we have a TV." However, the "we" is not the same "we" of the computer, as in in this case, his "we" is expanded to his extended family (though they don't see it as an "extended" family, but as family). He speaks of the TV that is at his parents' place which is all right to own since his sister-in-law stays at home the whole day and so it can't be stolen. All of this also implies that for them, a product can change from a coveted one to a burden in a space of an instant, not because the functionality of the product has changed in any way (something that extant studies of technology perceptions focus on), but because the product owners' life condition changes, due to someone else's decision.

"A Stonewall"

The interplay of the maximum forbiddance density offered by the dominating class and certain "blocking" properties of particular pieces of technology in reaching one's life goals generates the metaphor of technology as a stonewall. Life goals may be myriad. For Protima, a house maid who has been driven away from one slum to another because of the drunken behavior of her husband, her life goal is to just continue live in peace in the slum that she is currently in, and to bring up her two children there. However, for her, a television is a potential stonewall: She fears that her husband, when drunk, could play the television at an extremely loud volume that would irritate her landlord, and she would be driven away from this slum again. So she has chosen not to own a television.

For Sushma, a cook living in Delhi, television is a stonewall that blocks growth. She has brought herself up to the relatively elevated position of a cook from the "low" position of working as a housemaid over a long period of time. She would like her daughter (who is currently only six years old) to go "even higher", something that "the system" will absolutely forbid unless her daughter studies very hard. Sushma's life goal is to see her daughter "well educated" and established in life. Owning a television would stop this from happening, for the varied variety of entertainment that "television nowadays shows" would keep her daughter engaged with it for hours, disregarding her studies. So, she too has decided to do without a television in the house.

Technology as a stonewall that blocks reassurance is also seen in Leela's case. The acrid fumes that are emitted from the kerosene used in her cooking stove forces her to cook outside her poorly ventilated house. Her landlord will not do anything to create better ventilation in her house. However, this shift prevents her from seeing whether her daughter (a young girl of four) is safe inside the house, leaving her to rely only on the sense of sound for reassurance. The stove that she formerly used to cook in, was very efficient in cooking things faster. Yet she switched from that one to one that was less efficient, simply because the former efficiency came with a "constantly buzzing sound", something that prevented her from hearing her daughter's cry for help, if there ever was one.

The Forbiddance density continuum is described by three technology metaphors, "Fort Knox", "Mystery", and "Spare Tire" indicating that there are some technologies which have no positive or negative impact on certain informants' lives simply because they have no access and or no knowledge to this technology. One of the most important factors in maintaining the

existing distance, besides the system's forbiddance, is the necessity of the informants perceiving themselves as an economic resource for their families.

The metaphors in the forbiddance density continuum are different from the metaphor, "Distant Star" (in a place outside the various interactions in figure 1). The Distant Star metaphor represents those technologies that the informants covet, but accept that they would never own or access in the near future due to financial or health constraints. The type of technology involved ranged from very specific items (e.g., sewing machine, constant electricity, gas stove) to just one among a constellation of many other things, the whole assemblage being needed to make one feel "settled" (e.g., "land, a house and a car")

"Fort Knox"

"Fort Knox" refers to the technology that is not available to my informants at all. While they may be aware that it exists, this technology is completely out of their reach. As markers of the dominant class that they have to stay away from, some technologies have a system in place that repels the informants if they try to get close. Consider the following interview excerpt of Kaushik, a daily wage laborer who paints houses:

> *"I used to work at a place on a computer. I was capable of taking out prints of maps and things. But, if I had to earn more, I had to know to do more with the computer. That, there was no way for me to do…everything is in English, you see. We are poor people. We have studied in government schools. And you know how government schools function. Half the time, the teachers don't even come. So the little English that I knew wasn't*

enough to help me do more with the computer. So I quit that job and started whitewashing houses. This pays me more."

The system in place that repelled Kaushik from progressing beyond a certain level with the computer was the lack of education coupled with the fact that more serious work with computers needed a higher level of English language skills than he would ever have. While he had the feeling that there were riches to be made if he could access the higher levels of a technology like the computer, he realized that he would never be able to achieve that. The sheer impossibility of penetrating the Kevlarian walls that lack of education, and lack of time and poverty erect, puts certain technology in a Fort Knox-like position for informants like Kaushik.

"Mystery"

"Mystery" is the metaphor for those technologies that the consumers have no experience with. Yet, unlike the lack of experience stemming from the forbiddance of the system, as in the metaphor, Fort Knox, here the very lack of knowledge/experience with the technology precludes any assumptions as to whether or not increasing amount of forbiddance density has any role to play; thus the technology's "mystery" status. Existing technology literature that has referred to technology as a mystery has often done so in terms of negativity or positivity. Here, my informants highlight that a mystery can by uninteresting, as in Taposhi's case or one that gradually became interesting, as in Sushma's case.

Arundhati: *You mentioned that your husband knows how to operate a computer. Can you operate a computer?*

Taposhi: *No. How can I know to do that?*

Arundhati: *Have you seen his computer?*

Taposhi: *Yes, he sometimes brings it home.*

Arundhati: *What does your husband do on it?*

Taposhi: *Don't know. (Shrugs)*

Arundhati: *Has he shown you things in the computer?*

Taposhi: *No.* (gets irritated). *Do people like us have the time to see stuff in things like those, tell me? I return home from work and then I have to run to collect water from the timekol* [a timed water outlet], *then I have to cook, then take care of our child. If people like us sit around with things like those, how will things* [life] *work, tell me?*

This conversation is similar to a host of other conversations that I have had with people in subsistence markets. Technology, like computers, is something that's a mystery, yet not something that invokes much of an interest. The effort of everyday living taking precedence over learning anything new. The continued maintenance of the mystery could well be a result of the "energy buffering" that my informants have to do, to get by another day. Taposhi's repeated reference to "people like us," when juxtaposed against "things like those," highlights her perception that her world (the world in which "people like her" live) is a different one from the one that I, the investigator, inhabit. Mine is the world where things like computers belong, a perceived distanced demarcation that is underscored by her choice of using the adjective "those" things instead of "these"

things, a difference that is more salient in the actual language of her speech, Bengali (i.e. "oi shob jinish" versus "ei shob jinish").

A variation of this is found in Sushma's case, where she highlights a gradual shift of a computer from being an uninteresting mystery to an interesting one over the course of time and a chance incidence.

Arundhati: *What's this? (I point at something that looks like an interesting gadget)*

Sushma: *That's a computer. Madam had given it, last year, on my daughter's birthday…Working, working, I don't know where some wire of it has got disconnected, I don't know what has happened, but it doesn't work anymore, at all. Even after I put in a battery, I replaced the old battery with a new one. Madam had given this last year, but it has not been used, it was just kept, just like that. After that when we tried to get it to work, that is when we realized that it doesn't work. I went to (mentions a place). Everyone said, something – I don't know what it is – has stopped working. That's why I told (a young adult in the place that she works), twice, thrice, I told him to see what is wrong. Madam had tried many, many times to get me to learn computers. But then (she was 17 years old then) I didn't care to learn. Now I wish I could learn.*

Compared to the other informants in this investigation, Sushma lives a relatively comfortable life. With the amount that she makes by cooking in several houses in India's capital city, she can afford to rent a house that is "pukka" (made of bricks and cement instead of with mud and leaves.), and has access to regular electricity and water. While she was still a child, her parents had been duped by her uncle and aunt into sending her to Delhi from her their native village with the promise of educating her and giving her a good future. However, she had been made to do all the housework instead, a servile existence from which she had been rescued and fostered by a professor (whom she refers to as "madam"), someone that she has been extremely grateful to, ever since. The "madam" had

educated her until Sushma reached Grade X, and had also tried to get her to learn computers. But at that time, Sushma wanted to start working and "have her own life," and had no interest that would not immediately answer her dream of "having her own life." It took the running around that she had to do to fruitlessly try to fix a non-working toy gifted to her daughter by someone that Sushma loved so much that made computers interesting enough of a mystery to her to now want to "very much" learn computers.

"Spare tire"

This metaphor, on the minimal end of the forbiddance density continuum refers to technology that may be important, but personal agency makes the particular form of technology substitutable. For example, while cooking technology is important to Yasmin, and although she owns a gas cylinder (a coveted mode of cooking among my informants), she often eschews it in favor of a traditional wood fire. For her, the fire burns strongly enough so the food gets cooked very fast, and this in turn leaves her free to do other work (or watch television).

A parallel form of "technology as a spare tire" metaphor is reflected in many of my informants' choice of treatment when their children fall sick –they choose to use the powers of unseen forces via a tantric rather than use medicines. There are various factors at play in relegating medical technologies to the role of a spare tire, to be used only when other means fail. Firstly, going to the tantric is an established way of doing things in the village, and my informants carry that culture to the city with them. Next is the fact that their poverty makes the doctors' fees expensive ("*These doctors, they are like leeches, the way they suck money out of you,"* is a common refrain). Third is the culture of listening to similar others' advice, and this advice is usually in the form of *"batash legeche; ektu phuk diye esho"*. While the literal

translation of this would be the funny “the air has touched; go and get blown on,” what it essentially encapsulates is the way they perceive illness. Illness is perceived as the result of the “evil eye” of people who died in unnatural ways (for example, by suicide, or by being murdered). The spirits of such people are believed to hang around in areas where they met their untimely death. Travelling through such areas in the afternoons and the evenings (inauspicious times) or on Thursdays and Saturdays (inauspicious days) specially is perceived to make a person vulnerable to the effects of the evil glance. Illness is perceived as being caused when this evil glance “touches” a person (usually through the wind in the air). A recovery from illness is thus perceived to be achieved, not through a visit to the doctor and “swallowing down some pills”, but by dissipating “the evil air that is touching the person” through the recitation of mantra (words/verses perceived to have magical power) in combination with blowing on the affected person’s head. In brief, in the domains of wellness/illness, the choice of the marvels of modern technology, in terms of medicines, surgery, and so forth are kept as the last resort (usually), due to a combination of money involved and cultural beliefs about the causes of illness.

Using alternative resources to cope with the rising costs of essential technology products have been noted among the poor (Tienda, and Aborampah 1981), but the focus has been on alternative uses that have been this-worldly. Where marketplace threats are concerned, positive general beliefs about the benevolence of the world have been noted before as a resource for coping (Wilson and Darke 2012). In the current context, however, where the belief in the benevolence of the world is negative (i.e. the world is seen as malevolent), consumers sometimes curve their trust radius over into the spirit world to help them cope in an unequal world.

Standing in stark contrast to the variety of technology metaphors from the involuntarily poor group are the few technology metaphors unearthed from those who are poor by choice. These are the metaphors that are explicated next.

Situating the Metaphors (poor by choice group):

A Caveat

Consider the following interview excerpt:

Arundhati: What comes to your mind when I say, "technology"?

R 1: *According to…* (then proceeds to tell me what his Guru says about technology).

The very first words uttered in response to my question of what *he* feels, suggests that R1's personal opinion seems to be dissolved in the teachings of his Guru (one with over a million followers). A similar response occurred without exception, among all my informants in the "poor by choice" category. (eg: *"Buddha dev says…," "What does Krishna say in the Gita? He says…," "If you read the third chapter in the Mundaka Upanishad, you'll find…"*), the only variance being in the "solvent" of one's opinion. This could be a person, a spiritual organization, or teachings of ancient seers available through scriptures.

Consumer researchers have implicated the self, with its variations (Belk 1988; Ahuvia 2005; Firat and Venkatesh 1995), in all consumption phenomenon. In contrast, the present context could be one where, in Durkheim's terms, the "common consciousness" (in the sense that the Guru's perceptions are common among all his/her followers) has very well swallowed

the "individual consciousness" (Durkheim 1893/1984, p 84). Thus the findings from this group of informants are offered with the following caveat --it is impossible to assert that the data contains the informants' personal perceptions, or whether they even *have* personal perceptions.

On the one hand, it is quite possible that my data contains the actual technology perceptions of the informants, with the informants' opinions having merged with that of their Guru's. This merging is explicable in part by the initiation process (also a "self-testing" period) into many traditional monastic orders as well as individual renunciations in India. Perhaps due to the commonality in the essential beliefs of the philosophies—Hinduism, Buddhism, Jainism and Sikhism -- originating in India, all of them hold the ego and its resulting desires to be at the heart of suffering. In the current context, among the monks adhering to Indian philosophies, whatever academics have held to be "the self" (Rogers 1959; Belk 1988) is systematically, consciously and voluntarily dissolved during the initiation period. First, one abandons one's ties to one's families and friends, one's name, one's clothes, and even conducts one's own funeral (without the body). Many wear ashes throughout life, as a constant self-reminder of the inevitable, final state of the body irrespective of its birth status, lifelong desires and efforts expended to meet those desires. As my findings in this section show, the monks make constant efforts to overcome the state of existing desires (the "sadhana" word reflects the continuity required of these trials). An even more difficult thing to do, one that is perceived as requiring several lifetimes to achieve, is the overcoming of the subsequent rise of the ego and the resulting desires, for every thought is perceived as leaving an impression (samskara) in the "mind stuff" (explained further on page 93) that serve as "seeds" for ego and the resultant desires to develop again. An Indian philosophical explanation of how a seemingly pious monk suddenly ends up doing something egoistic (a fall from grace) is the existence of past samskaras that served as seeds for ego and desires. However,

after the discarding of one's perceived self-identifiers, comes the second stage in the dissolution of extant notions of the self – that of surrendering one's ego. While the latter, as I understand from my various informants, is a "many lives" project; it begins by the monks having to go out in the society and beg for a living, surviving only the alms that they are thus given, for a set period of time. Each day, they are expected to beg till the moment that they feel that they have just enough for that day, and keep nothing for the next day.

These systematic and focused attempts at dissolution of the extant self could explain why the "I" is swallowed, or is dominated by the "we". While extant technology perception theorizations have not taken into account the possible phenomenon of the "I" being completely subsumed by the "we", this supreme dissolution of one's self as subsequent excerpts will show, has consumption implications. The "we" is a state where the "I," in the form of "my opinions," no longer exists, or exists minimally, and where decisions are taken based on the teachings/directives of the Guru (or that of the spiritual organization, or of the ancient seers). In the ideal situation, based on Indian philosophies, this should result in seeing all as one, resulting in an intensification of empathy. Thus what would affect any other person would also be felt by the person who has reached this state of "we-ness." But as historical as well as current events show, a limited or bounded "we-ness" can also result in violence against others. On the other hand, it is equally likely that the responses were in keeping with the role of being a renunciate, and so the "true" personal perceptions were deliberately undisclosed.

An explanation of the variety and types of technologies used by the sadhus is necessary here before I go further. The monks tied to spiritual organizations or with any "Math" or temple range in the number and types of technology that they use. Some spiritual organizations or Maths

have a lot of wealth (some have enough to loan money to particular state governments in India), whether in kind or monetarily through donations. Four of the eight informants who were attached to spiritual organizations belonged to relatively wealthy "Maths". These informants had work-based access to all kinds of complex technologies, including tablets, cameras, laptops, cell phones, etc. These pieces of technologies are used for work that is specific to the organization, for example, executing live recordings of spiritual talks and then uploading those onto YouTube or the Facebook page of that organization. Technologies such as these are shared only among the sadhus of the organization. Some of the sadhus, whose specific role at that time within the organization (this role changes) includes being accessible to "bhakts" (devotees/followers), also receive "pranami" (small denominations of money) during interactions with the bhakts, and buy what they want through the accruing of the pranami over time. These may also include technology for their personal use, and at times are shared with people outside the organizations.

In contrast to these sadhus, those who are attached to very small maths or temples as well as the Ramta Yogis have limited access to technology. Similar to the sadhus from the bigger maths, they too buy what they need for their personal use from the "pranamis" received. In all these latter cases, the maximum of technology they admitted to owning was a cell phone. I say, "admitted to owning" because I met these sadhus (the non –Ramta Yogis) in public-accessible areas of the temple/math and had no way of knowing what they used in their rooms. However, I understood from the devotees who served them in their rooms that the cell phone is the most that they use in terms of complex technology.

Among the nine Ramta Yogis that I interviewed, three of them owned cell phones that they said were used to be in touch with other members of their sect. Two of the Ramta Yogis belonged to the sect of Tantricism. They denied having the need for complex technologies. The

"technology" they used was a bundle of rags wrapping a bundle of "magical" bits and pieces around a long stick that they dipped in water before either blessing or toying psychologically with those who came to them for their blessings. The remaining four Ramta Yogis claimed that they had nothing that we would call technology (even the weed that they smoked was wrapped in leaves or in emptied out cigarette rolls). All the technology they need, they said, is "inside the head".

In sum, in contrast to the informants from the "involuntary group", the sadhus ranged in their ownership of complex technologies, depending on whether they were associated with a wealthy Math or not. However, as my chapter will show, none of the sadhus (no matter how poor) experienced the forbidden density that was palpable among those who were involuntarily poor. The possible reasons for this could range from the Sadhus having access to what they needed, when they needed it (for the sadhus belonging to the relatively wealthy Maths), to continuously working at not even feeling the need for what those in the involuntarily poor group perceived as important. With the earlier caveat and the technology ownership details in place, I offer the second finding that help situate the three metaphors of technology unearthed in this context.

Salience of "The Impermanence of Things"

R9 is a sadhu who frequents the banks of the historically significant "Old Ganga" in India. The ancient river is now reduced to a narrow canal and flows through a congested and noisy sacred area in the heart of one the densest cities of the world, Kolkata. It is amidst this din and clutter that R9 chooses to meditate. As with most sadhus, not much is known about his past,

except that in this case I know that he used to be the lone heir of a well-to-do family from one of Bengal's small towns. The words in single quotes below were uttered in English:

> Arundhati: *Urmila (my contact person) tells me that you've left a world of affluence…?*
>
> R 9: *I am not roaming about aimlessly, right? Home, why will I leave? Because before me, there is better 'option', a better 'target'.*
>
> Arundhati: *Better target…?*
>
> R9: *Where I used to be before, for them, even 'life', that is not the 'target'. For them, eating, wearing clothes, sleeping, 'just' (existing)…That's all that's there in their minds. Gaari* (car), *bangla* (Bungalow), *this thing, that thing…Is that freedom?...That is Bandhan* (enslavement).
>
> Arundhati (I indicate the crowded shops lining the Old Ganga): *Do you find your mind free from things here?*
>
> R9: *See, your mind,* (indicates Urmila) *her mind, my mind, no matter… it's always with something or the other. If you 'watch' it, you will notice, your mind, it doesn't stay still. 24 hours, it holds on to something …Whenever our* (the sadhus') *minds go here and there, we try to bring it back to God. This is our Sadhana* (spiritual practice aimed at moksha, or liberation of soul). *Each and every person's mind holds onto something or the other…. If one's mind* (desire) *moves from one material thing to another, in there, right at the beginning there, is a mistake. For us (*sadhus)*, what we consider material, 'solid', that is Atman, Brahman, That alone exists* [i.e. is permanent]. *Other than that Brahman, whatever we are seeing, these things will come and go, come and go. Even this body, we say, "it has come; it will go." But one thing will remain, constant. That we say, atman, soul, Brahman, whatever. We are 'searching for that only'. We are trying to 'reach' there. That is our aim, 'target'. And these other things that are coming, even Bhagavad-Gita says that* [quotes a passage from the Gita], *it means this body – like we throw away old clothes and wear new clothes, in the same way, my body too will become old. I once was a baby, then I was a child, then I became a youth, I have grown up, one day I will go away* [die]. *This* [the body] *is changing. This will not stay on. That's true for everything that we experience, except for one thing that is unchanging. What is that? There* ***is*** [stress in original] *something.*

As the above excerpt reveals, R9 perceives an extremely strong sense of ownership of the mind versus a sense of agency (Gallagher 2005; Tsakiris and Haggard 2005) as underscored by his "your mind, it doesn't stay still…whenever our minds go here and there." The distinction between "Sense of ownership" and "sense of agency" in the case of the body has been explained and utilized in the field of cognitive sciences to predominantly understand cases of schizophrenia. "Sense of agency" of the body refers to the individual's perception of agency in his/her body's movements, for example, "I am moving my hand". In the "Sense of ownership," this perception of agency is missing, although the perception of "the body is mine" persists, as in the case of an external agent acting on it (for e.g.: "my body is being pushed on the swivel chair by my friend"), or due to other reasons (for e.g.: "suddenly, my head spun, and I fell down.").

However, unlike extant understandings on the "sense of ownership" of the body, where the mind is concerned, R9 exhibits a mentally agentic response, suggestive to a Western reader of a synchronic yet conflicting duality of mind, one form being wayward, the other form being the agentic controller. I say, "suggestive to a Western reader" for, from the Indian philosophical[11] perspective, there is no conflict here. For a Western reader, a brief explanation of the "reigning in" of the mind, as mentioned in the interview excerpt above, may be required here. In contrast to Western beliefs of the mind versus matter dichotomy, Indian philosophies, be it Hinduism, Jainism or Buddhism, see the mind as just one form of matter or vice versa, the difference being simply in the degree of grossness of form. Mind and matter are seen to just be different forms of nature, from which the real self (Purusha) stands apart. The mind (Chitta) is

[11] I have used the term "Philosophy" instead of "religion" here due to several reasons, the primary reason being Indian philosophies do not have a sacred and profane differentiation. Thus, "religion" as a separate realm does not exist here. All that exist are philosophies (spoken together as "Dharma") that are aimed at helping man live his successive lives to reach the end goal of self realization, Thus, killing one's beloved uncle, brothers, etc under certain conditions might be as much one's Dharma ,(as is mentioned in the Bhagvad Gita) or a step in realizing the true nature of self, as might be renouncing everything and meditating in the hills. Such a killing would rarely be considered sacred among the non-Indian religions.

deemed to be not intelligent, but simply an insentient instrument through which the actual self (Purusha qualified) "catches" the perceived external world[12]. In fact, the Bhagvad Gita refers to the mind as one of the senses, albeit the most important one. It is a foundational sense in that eyes and ears produce no sensations without it. It is the control of the mind that is at issue and in that sense the mind is merely matter. The seeming intelligence of the mind is believed to simply be the reflection of the intelligence of the actual self that is using the instrument of mind. The "catching" of the external world is believed to create "ripples" or whirlpools (Vrittis) in the mind-stuff. These never ending whirlpools in turn prevent us from perceiving our real self (Purusha) the same way that disturbances inside a lake prevent one from getting a clear view of the bottom of the lake. Thus the permeating belief among the Indian philosophies is that experiencing the real self –with its inherent divinity –can be achieved simply by the cessation of the whirlpools in the mind. In order to do this, the actual self has to control, through various means, what this instrument of mind "catches".

The above interview excerpt also reflects a strong perceived agency of things, in that things keep the mind forever tied to them. These "things" are anything that creates, maintains, or intensifies the "whirlpools" in the mind, including past experiences. The intense "thing agency" perception was revealed by all of my informants, resulting from all of them having left home and cut their ties to all things that had been tied to their past identity to that point. The sense of ownership of the mind as well as the perception of agency of things, as this chapter will show, have a role to play in this set of informants' technology metaphors, and have been overlooked by extant technology perception theorizations. The revelation of "thing agency" is aligned with

[12] The different philosophies within what is known today as "Hinduism" differ in their beliefs as to whether there is a world external to the self at all, but expounding on that will take the focus away from the goal of this dissertation.

recent studies questioning the anthropocentric bias in conceptualizing people-things relations (Mauss 1954; Munn 1983; Appadurai 1986; Latour 2005; Gell 1998; Malafouris 2013).However, in the excerpts given, there is an added element of a struggle --- as is revealed in the words, "whenever our minds go here and there," and "we try,"---- to shift the locus of control from things to a more "solid" non-thing. The "solidity" that the informant refers to, is something that he perceives as "permanent". For him, this "permanent" ("solid") thing is the eternal consciousness. In terms of permanence, this is perceived as being more "solid" than other, distracting things that are perceived as less "solid" because they are perceived as being impermanent.

Shifts in "thinginess" (Schudson 2015) have been seen among the practitioners of Inconspicuous Consumption. However, contrary to my study's findings, those consuming inconspicuously within these frameworks engage in such shifts in order to cling on to their superior class status (LaVallee 2007; Berger and Ward 2010; Hutson 2010; Ekhardt, Belk and Wilson 2015), or to indulge in a newly found reverence for natural products and humanity (List 1992), or to manage guilt (Terrero 2009) as well as togetherness values and unemployment fears (Kelman and Failer 2002). In sum, the shifts are from one thing to another thing. Among voluntary simplifiers, on the other hand, the shifts are in number (i.e. from more things to less things), however, with an eye to having more time, usually for family and immaterial joys in life (Gregg 1936; Elgin and Mitchell 1977; Alexander and Ussher 2012; McDonald 2014). The excerpts above reveal, however, that here the struggle to shift the locus of control from thing to non-thing is engendered through a salient perception of the impermanence of things. Hence, instead of a movement away from one material thing automatically implying a movement towards another material thing (Hodder 2012), instead of the notion that humans beings are

forever trapped in "a coalition of tools" (Clark 2003, p.136-7), in the current context, a movement away from material things implies a disentangling from things in general (through a realization of their impermanence), a freedom from "bandhan," through a perceived movement towards the ultimate truth, toward what is felt to be "solid," albeit immaterial.

As his evinced by his comment on what he feel is "solid," R9 questions the validity of what is commonly perceived as the self. This questioning is not along Batesonian lines of the self being "a total system, trees-eyes-brain-muscles-axe-stroke-tree" (Bateson, 1973, p. 318). Instead, R9 (as well as all the other informants in this section) perceives the popular notions of self to be an ego-sustaining illusion, as is reflected in his dismissive linking of common notions of existence, with a car and a bungalow.

This notion of the self being an illusory "whirlpool" in "one infinite mass…that is in constant flux" (Swami Vivekananda, 1893) is common among the renunciates in India. Durkheim has held that in such situations, where one's "individuality is zero" due to the dominance of collective consciousness over individual consciousness, one cannot "arise" (Durkheim 1893/1984 p. 84). As the following section will show, however, the informants' perception of the kind of "arising" that is of value, differs from Durkheim's conceptualization of it. This difference in the perception of what is worthy of being lifted influences the type (and paucity) of technology metaphors unearthed in this context.

Metaphors of Technology (Poor by Choice Group)

"A Siren Song"

As the excerpt above reveals, R9 equates all things, including technology, to a siren song, one that draws the mind forever into an enslavement of things, a *Bandhan.* However, this enslavement is not seen from the perspective of stressful living or resource depletion of the world (as in the case of some voluntary simplifiers), but more as something that prevents him from moving towards his "target," the One that he perceives as the only thing "solid." Unlike Ulysses' strategy of tying himself to his ship's mast with additional preventive buffers, however, R9 chooses to deal with the siren call by leaving the zone of its reach and focusing his mind on what, to him, is real. While explaining his choice of his robe colour, an extremely bright shade of saffron, not the obvious choice of someone wishing to dissolve into non-existence, he revealed yet another strategy of eschewing the lure of all things (technological or non-technological), i.e using constant reminders:

> *This is saffron fabric. The colour is of fire. What does fire do? It burns everything. So, the environment that I will have, the desires that I will have, so that too –this is the way we think – we are burning away those, I am burning away my desires. This way of thinking is reminded by the saffron colour we wear. What am I? There is a shloka in Geeta* [cites it], *means when you think of a particular thing, you are belonging with that thing, for you are nothing beyond your thoughts. Who is Modi* [India's prime minister]*? If not for Modi's thoughts, would you know him as "Modi"?... I may have 5 houses and 5 cars, but if my thoughts are not about them, you are not among them, you are not mulling over them. Or, I don't have 5 things, or I don't have anything, yet I am living with, " I want this and I want that, I am not getting this or that," then to you worry comes, your thinking is full of those things, you are belonging there (in the world of things). The difference is just that. So, for me, this saffron brings that thought: as fire burns away everything, I have to burn away my desires.*

Here, "the desires that I will have" indicates an acknowledgement that the rising of desires is a continuous phenomenon to him, one tied to the changeable environment around him. The latter is evident in his stating, "the environment that I will have." Yet, while much has been made of the species-differentiating human's "total reliance" on technological artefacts

(Hollenback and Schiffer 2010) and how people remain inextricably entangled with things (Hodder 2012), the above excerpt points to constant efforts towards disentangling oneself from things. In contrast to humans being "profoundly embodied agents," based on Western anti-Cartesian thinking (Clark 2007, p.275), for R9, the self as nothing beyond one's thoughts. This perception possibly spurs his disentangling efforts. To achieve this disentanglement, R9 uses reminders to constantly try and "burn away" the tie to those things (desires), freeing his mind from the domination of "thing agency".

"A tool"

a) Sufficient versus Perfect

As a treasurer of the monastery he is part of, R2 has access to considerable funds. Furthermore, as a monk, he mentions with fond exasperation the disciples wanting to shower him with the latest gadgets, wanting to "take care of me, saying 'take this, keep that.' This is important, that is essential." Yet his description of the procurement of an mp3 player (one of the technologies that he owns) highlights the tool-like role of technology in his life:

> R2: *We often go to classes in the auditorium that you saw* (An auditorium that holds talks on spiritual values)*. At times, I see there is a good class going on, I would want to listen to the talk again, so then I need an mp3 player. So, when I asked around in shops and looked around in shops, it was for Rs 6000 or 7000. But the purpose this has* (points to my voice recorder), *this would have a slightly better quality, no doubt, it would have a better quality, but then, I logged onto Flipkart and I saw that Phillips has one, which is Rs1500 in cost. My purpose is being solved with that. I don't want that much 'sharpness'* [Refers to "clarity" in Bengali]*. What will I do with a 'better" product? There is no end to such things. So I chose that.*

So while the mp3 player to him was an important tool, an aid to record and play back something that would help him in his Sadhana, he opted for sufficiency in making his choice.

While it is possible that the principle of sufficiency directed his product choice, it is equally possible that buying the lowest price one may just be a means of justifying or excusing enacting his desire for this gadget, perhaps without even realizing it himself. Not happy with the prices obtained from the shops, he used the internet –a piece of technology that, with its infinite results, can fan consumers' desires –to arrive at this point of sufficiency. While he is aware that the offerings of a particular aspect (in this instance, that of sound) of a particular piece of technology is myriad (as is evident from his comment, "I don't want that much 'sharpness'"), the paradox of choice (Schwartz 2004) didn't seem to befuddle him. He referred back to the bare essentials of his purpose for needing the mp3 player ---that of playing back something for spiritual upliftment and settled for the piece that solved his purpose. In sum, for him, the mp3 player was a tool, but it did not have to be the most "perfect" one there is.

However, this non-need of perfection reverses when he procures something for the ashram, or for some "vital" work on behalf of the ashram, in which case, he mentions, he will buy "the best that solves the purpose" within a reasonable budget, and "not on the basis of the cheapest." This suggests that during procurement, he evaluates technological "tools" on the combined basis of two dimensions – function and price – and thereby perceives them as three kinds: "sufficient tool", "best tool within a budget", and by implication "best tool" that exists without any budgetary considerations. Despite having access to enough options (especially through his rich devotees), his choice of procuring a technology tool for himself is based on the principle of Sufficiency. This finding is the opposite of studies that have compared how consumers consume when consuming for themselves versus when consuming as part of a group (Aaker and Lee 2001; Jiewen and Chang 2015) and is more aligned with consumer behavior in the context of gift giving where the best for others is given priority over what we would buy for

ourselves. Beyond product features, technology for the self is consumed here with an eye to avoiding entanglement, as is evident in R2's justification for rejecting a better product even though he can acquire it: "there is no end to such things".

b) Limited; Good desires (and good means of fulfilling them) versus bad

R1 (from page 86) continues: *...for our development, we need spirituality and we also need science. We need both. Science gives us "external comfort." Spirituality gives us our "**inner*** [stress in original] *comfort." For spirituality, we have to see that the tendencies that we have inside us – "good and bad, both qualities are there –so good qualities, we have to cultivate." There, suppose there is something, and we feel, I want that. And want to the extent that "anyhow I have to take it." Spirituality will say, "No, don't do that. Don't do that by A-satya* [Non-true] *means. Take it by Satya* [true] *means." And what will desire say? "I need it by any means." Both of these will create a conflict in his/her mind. So then, spirituality teaches us, "don't be A-satya. That desire of yours-- control it. There is a reason behind this. Go to that reason, and motivate the desire." This is the thing about spirituality. And science, the way it is giving us external comfort, so those are also there. But the different external comfort that science is giving us, among those, we have to be judicious about which ones we will take and which we should use where. For example, if we talk about the atom bomb, it gives us huge amount of electricity. Instead of doing that, we are using it to harm human beings, to kill human beings. No scientist wanted this. Albert Einstein too didn't want this, that his discovery be used in this way, the way it was on Japan. So science has both sides to it. We have to take its good side. We have to reject the bad side. This way of thinking, we have to maintain.*

While I didn't ask R1 about spirituality, he inextricably linked it to technology in his response about his perceptions when I asked him about technology, implying that for him, technology is a useful tool as long as there is spirituality to temper its use. Even though he perceives technology is a valuable tool (as his demonstrated by the use of the terms, "we need"

and "we have to") to him, this value has limitations, for as a tool, technology addresses only one aspect –the physical side --of a perceived dual "comfort" that he perceives that man requires to exist. While he does view technology is a paradox, it is not that he advocates a "coping" strategy, but a conscious rejection of "bad side", one that helps desire take what it wants through "A-Satya" means, and instead an adoption of the "good side," one that helps achieve the goal through "Satya" means. Technology is viewed not just through the means to achieve it (good/bad means) but also the ends it serves. In a variation from the findings from Mick and Fournier's 1998 study, for my informant, the bad and good seem to be perceived from society's perspective not from how bad or good it is for him personally.

"Gold, Frankincense and Myrrh"

R6, my contact tells me, used to be a highly qualified doctor who renounced the usual world and became a monk in one of the spiritual organizations in India. She explains her work in the organization in the following terms:

> *The aim itself of this organization is,* [cites a Sanskrit shlok]. *This means, "liberation of one's own soul. That path is through doing good for the world." That is why, the social activities here, we don't call [them] 'charity'. We do not do daan* [a loose translation is charity-donate-give to someone less than you] to anyone who is poor; *we do seva* [serve them]. *Daan means, "I have things. He is 'needy', so I am doing Kripa* (charity out of feelings of pity) *to him. I am giving you." Our way of thinking is different. We serve, thinking,* (cites a Sanskrit shlok). *My God is also there. "The poor is God", this phrase* [names her Guru] *used to use. "The fool is God, the poor is God," So that is the way I visualize them when I am doing anything related to them, that is how I serve them. What is the difference? If I stayed in a temple, I would be doing the same puja* [worship]*, with flowers and sacred leaves. Here, the worship is not happening with flowers and sacred leaves, but s/he needs medicine, so I am worshipping using medicine. S/he needs education, So I am worshipping using education, S/he needs an operation, so I'm worshipping by operating on her/him. That's it.*

Practicing the perception of divinity in everyone, R6 refers to technology (among other things) here as items of worship of that divinity, through the poor that she serves. This is similar to the "maximum solidarity" that Durkheim referred to, emanating from the phenomenon of the collective consciousness completely enveloping one's total consciousness (Durkheim 1893/1984 p.84). Much of the extant focus on the impact of intense consciousness of a collective identity has been on its influence on self-definition (Brewer and Gardner 1996), interpersonal judgement (Lamont 1992; Nippert-Eng 2002) and mobilization of joint action (Turner 1969; Polletta and Jasper 2001), all predominantly revealing a preoccupation of people with an "us" versus "them" bifurcation. In contrast, this infinite expansion of the group consciousness (as is evident in R6's "anyone who is poor") revealed here, doesn't allow for such consistent "boundary work" (Nippert-Eng 2002; Lorber 2006; Jenson 1995; Lamont 1992), but facilitates soul work. This soul work is achieved, in part, through technology. However, instead of deploying technology in response to an "empathic solidarity" that "merged consciousness" is perceived to engender (Heise 1998 p 197), the informants perceive their offer of technology as an act of servitude ("seva") to the divinity, that is, to their minds, the collective consciousness.

Muting the Siren Call: Staying at the tool level

With his focus on "networks of entanglement," Hodder (2012) overlooked the agency of those entangled, an oversight addressed by the findings in this section of the chapter. In the current context, the entangled human agent works towards disentangling himself/herself and towards maintaining that disentanglement. The disentangling strategies so far revealed have been

drowning out the siren song, using desire-burning reminders continuously, maintaining the principle of sufficiency, and using objects as items of worship. Beyond these strategies, is the one that all of the informants, without exception, practice – Floating. This strategy is highlighted in the following excerpt of R3, a monk who belongs to a spiritual organization that is highly involved in charitable work:

> *You may be surprised by this, but here, that I am in this ashram, that I am working here, printing, quality has to be good, the books have to be sent here and there, I am doing all this, right? If tomorrow, the order comes from* [names the organization centre,] *that "go from here," I will drop all of this here and go to another place. This* ***itself*** [stress in original] *is my sadhana.* [names his guru] *used to say one thing –"The boat is in the water, no problem. The water should not be in the boat." This means, I am here, floating on the water, no problem, but if the water comes into the boat i.e. if attachment comes into my mind, then I will not be able to leave it* [be detached]. *So that has to be practiced all the time.*

The informants perceive "floating" as a strategy that can occur only when they detaches themselves from the fruits of their work. This is perceived to be achievable by viewing all of their work as someone else's work. As R5, a Buddhist monk who recently returned from doing relief work in one of the monsoon-ravaged states of India explained:

> *Budhdha-dev says, "Desire is like the ghee* [clarified butter]*"that we put in the holy fire. Using it only feeds the fire* [of constant wants], *and makes it continue to burn. Then how do we stay in this world and not feed the fire?* W*e always think, "whatever I am doing, I am not doing my work, I am doing Buddha's work… Whatever little I am doing, I am not doing it for myself, I am doing it for Him." So when something is not* ***mine*** [stress in original], *my attachment will not come towards it, yes? Attachment will only come when I say "that's mine", isn't that so? The maid in your house, no matter how much good food you give her, or how well you pay her, she might love your child, might be affectionate towards him, but she will always know that "my son, who is in the village, he is mine." How is that possible? The way it is possible for her, for us too, it is the same way. We have to practice detachment all the time.*

In sum, the poor in the dissertation are comprised of two groups whose poverty stemmed from starkly different reasons and degrees of choice. The choice to embrace poverty (voluntarily

poor group) or feel ground under it (involuntarily poor group) was, at the core, influenced by what the respective notion of self was tied to. Among those who chose material poverty, there appeared to be a non-identification with the body. The self was perceived as a consciousness that was beyond the body and mind. This de-linking of the self from the body was matched by a non-salience of the frustrations of lacking fulfilment of the needs of the body. Contrastingly, those who were poor due to circumstances strongly identified with the body in the sense that the needs and aspirations of the body (e.g., food, shelter and clothing), and the ties related to the body (e.g., the relations are those of my parents and children, whose bodies are tied to mine –through marriage or through blood, who belong to the same place that my body is located, who experience the same hunger that my body does) were all salient. Accordingly, perceived forbiddances were exerted on them by the dominant class. The social relations in this group were linked to the ties of the body, whereas the social relations among the voluntarily poor group was linked to their trying to experience a "higher" reality.

While those who were poor by birth were separated from the means of production due to life's circumstances, those who chose to separate themselves from the means of production are held in reverence because of their ability to renounce things. As a result, while additional profit stemming from surplus labour is forever denied to the first group, part of this profit is often offered as a gift to the second group by the dominating class. All of this influences how the domination that impacts the technology engagement in both groups is perceived –domination by society, or domination by desire. However, the "service" of the voluntarily poor group towards the involuntarily poor group at times helps to transfer the gifted profits from surplus labour from the first group to the second group.

In contrast to the resource domination felt by the informants in the "poverty by circumstance" group, those in the "poverty by choice" group perceive a "thing domination" and a "mind domination", together conceived of as an "illusion domination". While both groups are poor, it is this difference in perceptions of the type of domination that spurs the kind of consumption (or detached consumption) strategies that the informants engage in. The informants from the "poor by choice" group constantly practice disentanglement by invoking the salience of the impermanence of everything around them, including one's own body; identifying with one's thoughts rather than with things, and viewing the "truth" as not in the buttressing of one's self, but in "dissolving" in the ocean of the eternal self, that they perceive as the only truth.

CHPATER FIVE: DISCUSSION

Extant theories on technology consumption have been predominantly situated in the context of the relatively "free" individual in the Gobal North, and on "high technologies" (Mick and Fournier 2008; Kozinets 1998; Bhattacharyya 2014; Giesler 2006; Fischer, Otnes and Tuncay 2007; Belk 2013; Bardhi and Eckhardt 2012). Such a focus has been decried in recent years (Hill and Martin 2014; Varman and Vikas 2006, 2007; Edgerton 2007). Furthermore, existing theorizations of technology perception, adoption and usage has been centered around the axis mundi of "technology as a means of production." Such a focus overlooks the social relations of production, and how these may impact technology engagement. This dissertation highlights the severe impact that control --legitimate or illegitimate, partial or complete --- over the means of production (not limited to technology) by the dominant class has on the technology engagement of those who are involuntarily poor. For instance, Kozinets (2008) and Mick and Fournier (1998) look at technology as a tool and as something that we embrace in various ways or reject. On the other hand for the poor in this dissertation, there is no opportunity to embrace many technologies for reasons outside of their control. Rather than the affluent world view of these studies, this dissertation is in a subaltern context where the "choice" of technologies is highly constrained.

Heeding the plea for *"a novel way of looking at the technological world,"* (Edgerton 2007; p 209), the current dissertation focusses on consumption of "use-based" technologies (ibid.) and investigates technology consumption under conditions of "unfreedoms" (Sen 1999) among BOP consumers in India. The unfreedoms in this context are resource constraints, lack of social power and voice, and the prevelance of systemic corruption. This dissertation also reveals that at the BOP, desire itself might be experienced as an unfreedom.

This dissertation's study of the technology metaphors unveils the myriad ways that coercive power (Gaski 1984), class-based perceived legitimate power (Raven 1992), dominators and the dominated, as well as one sided "negotiated order" (Strauss 1978), impact technology perceptions and consumption. The metaphors also encapsulate the technology consumption experience among those who feel dominated by the fear of desire, and thereby consume in ways overcome desire.

Among those who are involuntarily poor at the BOP, technology is perceived according to the varying inflections of its effects through the "forbiddances" put in place by powerful mediators (Latour 2005) during consumers' access or consumption of technology. Thus technology metaphors among this section of the BOP have been found to vary within and across the different levels of the technology agency effect (*Shauk*, *Majboori*, No effect, Drags down and Blocks), depending on the degree of "forbiddance density" experienced. "Forbiddance density" refers to the informants' perceived intensity of barriers imposed by the human mediators associated with technology as well as the types of forbiddance (whether easily negotiable, negotiable at a high cost, or completely non-negotiable) that these mediators exert. Such forbiddance is not simply a static obstruction, since the obstacles here may be intentioned as well as dynamic in varied ways depending on the amount of push-back from the informant

The technology metaphors that emerged through the mutual inflections of increasing forbiddance densities and the different agentic roles of technology were Toy, Shylock/Jezebel and Distant Star (at the level of *"Shauk"*); My tool, A Fool/Distanced House Guest, Non-arrable field, Walled Garden and Exclusive club (at the level of "*Majboori"*); Albatross (at the level of "Drags Down") and Stonewall (at the level of "Stops"). Three metaphors emerged at the level of consumers' unconcerns with the technology agency effect: Spare Tire, Mystery and Fort Knox.

A similar study conducted among those who are voluntarily poor among the BOP shows that the "power" that is negotiated during technology consumption might also be one that goes beyond that exerted by other human beings, the societal system or consumption objects, and instead rests in the domain of perceived illusion (*Maya*) brought about by one's own desires. Within this group of informants, technology perceptions mostly stem from how strongly the tug of desire or the locus of control is perceived to exist in the particular consumption object (versus somewhere beyond people and things). The technology metaphors stemming from this section of the BOP are thus contrastingly few: A Siren Song (where the tug of object desire is strong), A Tool (where the locus of control is felt to be within the self) and Items of Worship (where the tug of desire is for the divine, with the object being simply the route to it).

Implication for technology perception, adoption and consumption

Much of the consumer behaviour studies literature explores technology consumption and usage with the assumption that the adopted technology is owned by the consumer, even if it is for a set period of time, as in the case of access-based consumption (Bardhi and Eckhardt 2012). Thus, consumer technology theorists have mostly explored technology perceptions, adoption and consumption through a de-linked, individualistic lens. Even when scholars have looked at consumption in a communal context, the assumption has largely been that all participants are empowered equally, or would simply experience that which they seek. This dissertation highlights the fact that dominated consumers experience various "pockets" of sovereign power every day and thus augments existing theories on technology perceptions by widening the scope of the theorizing lens that has so far focussed on the dyadic "consumer and product attributes"

microcosm (eg Rogers 2003; Hall 1979; Kozinets 2008; Mitra 2010; Mick and Fournier 1998; Davis 1989). This broadened view includes the role of class-based societal domination in structuring BOP consumers' technology perceptions (and thereby their adoption and consumption decisions). Such domination lends a precarity to the BOP consumers' ownership, access and use of various technologies. This is turn influences their technology perceptions and usage such that these consumers may not engage with the technology available at all, or engage with it in unexpected ways.

A group's role in the creation of the perception of value that is highlighted in this dissertation coheres with other studies that have eschewed the "single object-single consumer" relations (Malinowski 1920; Scarboroto 2012; Schouten and McAlexander 1995; Schau, Muniz, and Arnould 2009). However, in these studies of value perceptions, all in the group are affected by the values that they create. In contrast, through a separation of dominant and non-dominant agency, this dissertation unveils the phenomenon of dominated consumption where the involuntarily poor BOP consumers' experience or valuation of a product depends on the dominant class' use of it or other products. Distinct from the phenomenon of consumption working through modelling (Bandura 1986, 2001; Rogers 2003) or through perceptions of relative deprivation (Frank 2011), "dominated consumption" is the phenomenon where much of the functioning of the essential resources that the dominated consumer have access to, require the co-operation of mostly dominant others. Depending on the level of that co-operation, there might exist power-based disparity in the value that is received by the different consumers in the entire assemblage, something that has been overlooked by theorizations on value creation in a group context. Specifically, perceptions of a piece of technology among the BOP consumers can change based on the actions/non-action/push-back of those not affected by the resultant change

in value. Such a power-based disparity of valuation of products might even occur within the dominated class, as is evidenced by the highly gendered occurrence of the "technology as a toy" metaphor.

Forbiddance density might even work indirectly such that power exerted by the dominated class in one sphere of life might impact technology consumption decisions of the BOP consumer in another, seemingly unconnected, sphere. For example, Hiren's landlord's decision to build his tenants' houses with mud (as opposed to the landlord's own house that is made of brick and mortar) influences Hiren's decision to not accept a computer even as a gift. Mud houses, as opposed to brick and mortar ones, are easily broken into by thieves. For Hiren, owning a computer would be a burden instead of an emancipator, and this perception of the laptop is based on his landlord's decision on choice of house building materials. The nonlinearity of technology perceptions influences, somewhat similar to the "butterfly effect" (Lorenz 1972), calls into question the presumption of a lack of disruption between access to a desired piece of technology and its consumption in extant theorizations on technology experiences (Rogers 2003; Hall 1979; Kozinets 2008; Mitra 2010; Mick and Fournier 1998; Davis 1989; Bardhi and Eckhardt 2012; Prahalad 2012). For instance, the literature that exclusively focusses on BOP consumers highlights *affordability* as the primary barrier to technology adoption (Prahalad 2012, Nakata and Weidner 2012; Anderson and Markides 2007, Pitta, Guesalaga, and Marshall 2008). Other important barriers that are held to be crucial obstacles to be overcome in order to enhance technology adoption among the BOP are *awareness, access* and *availability* (Prahalad 2012). The inherent assumption in such assertions is that, if these barriers are removed, the product will be adopted and consumed at the BOP. This

dissertation problematizes such assertions by demonstrating that societal domination might subvert all the impact of the 4A's mentioned above.

Additionally, by refracting technology agency effect through the prism of the system's forbiddance density, this dissertation helps to bring in expanded and nuanced conceptualizations of technology perceptions. These nuances have been masked by the conflations in the extant functional or symbolically oriented approaches that are implicit in the "product attribute" lens of technology perception, adoption or consumption (eg Rogers 2003; Hall 1979; Kozinets 2008; Mitra 2010;Mick and Fournier 1998; Davis 1989). The nuanced reading of metaphors offered in this dissertation pushes the conceptualizations of technology beyond ideologies, paradoxes, or utility (Kozinets 2008; Mick and Fournier 1998). It also challenges the assumed static nature of barriers to technology adoption by showing the intentioned and dynamic nature of the barriers to technology adoption experienced by those who are involuntarily poor.

The varied ease of access stemming from the varying densities of forbiddance created by power also contradicts binary conceptualization of "barriers" in extant technology adoption theorizations (i.e. either a barrier exists or it doesn't), and shows the emotion-laden, quality-oriented, myriad perceptions of barriers to technology consumption experienced by those who are involuntarily poor. These qualitative, nuanced perceptions of barriers in turn impact feelings associated with a particular piece of technology. For example, this dissertation demonstrates that a perception of "technology as a tool" need not automatically be equated with feelings of mastery over that piece of technology (Kozinets 2008; Mick and Fournier 1998) but needs to be further interrogated to bring out the varied nuances of one's power over the tool. Such nuances subsequently impact one's consumption of the tool and the feelings associated with the consumption experience. As an instance, even while technology might be perceived as a tool,

guilt and emotional discomfort might be associated with its consumption, feelings under-stated in extant literature. Distinct from the occurrence of guilty pleasure (Belk, Ger and Askegaard 2003), or that of "guilt in ownership" (Douglas 2002, p vii), or guilt of overconsumption (Roberts 2008), the current context highlights guilt and emotional discomfort that occurs when necessarily using others' resources, to consume one's own products. At the product level, this can lead to the non-use (or limited use) of an essential piece of technology, even while having access to it, just in order to manage guilt or emotional discomfort. Thus, in contrast to the implicit assumption of univocality in the meaning of "access" in access based literature (Bardhi and Eckhardt 2012), this dissertation highlights the need for concurrence in the polysemy demonstrated in the notion of "ease of access": someone might have a physical "ease of access", but not an emotional one, depending on their role in an uneven exchange relationship.

The findings in this dissertation also contrast sharply with most technology perception theorizations that have been based on an assumed constancy in the nature of technology while in use. This dissertation instead shows that technology products used by the dominated class might varyingly change their impact based on the entry of additional actors (for example, changes in the environment, changed decisions of the dominant class, etc) in the assemblage. Such fluctuating technology natures in turn bring about varying perceptions and consumption of the *same* piece of technology at different times, lending a precarity to the role of a particular piece of technology in the BOP consumers' lives. Thus a product's shift from being coveted to being a burden in the space of an instant, need not stem from the malfunctioning of the product, as is assumed in the product design literature, but rather from the involuntary poor's life-conditions that are subject to changing decisions by the dominant class. As Raju's technology perceptions illustrate, a ceiling fan might be a blessing when the temperature is relatively cool. Yet, when the

landlord decides to replace Raju's straw roof with one of asbestos, he perceives the same ceiling fan in negative terms, especially during soaring summer temperatures. Similarly, Savitri loved her salvaged television set until the point that her landlord suddenly decided to throw her family out (BOP tenants are not protected by any rental agreement in India). The television then became a burden to lug about while Savitri and her family searched for an alternative home.

This dissertation also brings to light the phenomenon of "subservient consumption", or consumption that is focussed on not displeasing the powerful other. This phenomenon throws into sharp relief the fact that technology choice among the BOP is a way to gain peace of mind during the forced consumption of adverse ways of living brought about by others' domination. For instance, while Leela perceives a particular stove to be more efficient, she opts for a less efficient one simply because even while using it, she can hear if her young child cries out. Her landlord's decision to build the tenant's home with poor ventilation forces Leela to cook outside her home. She manages to be at peace for her daughter's safety while acquiescing to the dominant class' decision of the way she should live, by using a less efficient technology for cooking. The technology choices made by those under domination are less about rebellion, and more about BOP consumers subserviently restructuring their technology preferences in order to live within the dominating system. The lack of legalities protecting other (possibly non-product related) aspects of a dominated consumer's existence impacts his/her use or non-use of a particular piece of technology. Under such conditions, this dissertation qualifies the pentad of avoidance-confrontation-accommodation-partnering-mastering (Mick and Fournier 1998) where consumption of technology is concerned, by removing "confrontation" and adding "stealing", "network restructuring", "making redundant" as additional strategies. Ronu's easy retrieval of a hand fan, Yasmin's use of a wood fire and a large number of informants' dependence on the

spirit world during ill health exemplify BOP consumers' making technology redundant in different spheres of their lives through using non-technological substitutes. Furthermore, many informants in Delhi connive with their landlords to acquire electricity at affordable rates since they find that the government's rates are too expensive. The landlord restructures the physical "government → consumer" network of electricity transmission by inserting his/her own "line" (an intermediary diversion that is invisible to the government) into this network. S/he then provides the tenants electricity at affordable rates through illegally tapping into the government-provided electric lines. The landlord thus earns an income at no extra cost to him/her, and the tenants keep quiet about the illegality since the alternative is unaffordable to them.

Furthermore, the dominant class' decisions also result in forcing those among the dominated class to closely co-ordinate their use of technology according to the life routines of dominated others living alongside them. Thus, this dissertation offers community as a barrier to technology adoption. The oppressive power of one's community in structuring consumption has been noted before (Douglas 2002). However, this dissertation moves beyond the power of the community norms (Rogers 2003; Ger 1997; Ruth and Hsiung 2007) and highlights a consumer's sensitivity to the physical discomfort of others in the community that a person's use of a piece of technology (under certain times) might bring about, especially when the dominant class has made the community's world approximate a closed system. Thus, Protima makes sure that she finishes her work as a maid much before noon so that she can rush home and finish cooking as soon as possible. A few people in the slum that she lives in, sleep in the afternoon and switch on their fans when they do so. So Protima tries to avoid using her woodfire during that time, for the poor ventilation in the slum and the lack of space means that those choosing to sleep wouldn't be able to do so, due to their fans sucking in the smoke from Protima's woodfire. This might also

prevent Protima from her aspiration of living in one place in peace. The slum co-dwellers in turn co-operate by being understanding on the rare occasions that Protima is held back from rushing back home by her employer. In sum, non-use of technology at a particular time may be linked to someone else's use of a completely dissimilar technology at the same time, especially if these consumers are living in close quarters, due to structural limitations (in material terms) imposed upon them all by the dominant class.

Through this demonstration of the joint effort and co-ordination that a simple technology consumption episode might require, the study challenges the assertions of technology being a magical saviour, for at times the "saving" that the technology provides only occurs after making it an effortful project. Such effort disputes the assertion that technology has "faded into the background" in modern times (Borgmann 1984, p 3; Druckrey 1994, p 11). This finding of the immense materiality of technology (in contrast to its purported invisibility) extends Mick and Fournier's (1998) thoughts, by showing that the materiality of technology is not situated solely in the nature of the piece of technology but also stems from a combination of the power-based allocation of resources, the societal structures that the involuntarily poor have to contend with, as well as their thwarted aspirations.

Implications for Consumer Agency

The consumer agency literature has mostly been based around the concept of consumers versus producers/marketers. This dissertation expands the concept of consumer agency to also include agency over objects and over other humans influencing consumers' access to products. It

also entertains the idea of objects' agency over persons. Implications for each of these relationships are detailed in separate sections below.

Object domination: Implication for Desire and Anti-consumption. Through an elaboration of the gradations of barriers that exist between BOP consumers and technology, the metaphorical approach adopted in this dissertation throws into relief the inadequacy of extant dual-moded conceptualizations of human/object agency as represented by thoughts from Technological Determinism, Social Construction of Technology, and Technology Opportunism. Following Fleischmann (2007), the current findings instead lay out the spectrum of human agency over technology and vice versa. However, while Fleischmann's argument stemmed from the "boundary" state of intelligent cyber frogs, this dissertation highlights the role of the varying success (or failures) of BOP consumers' constant negotiations with the dominant class' decisions in leavening or reducing human agency over objects by varying degrees.

This dissertation also problematizes assertions that an object's agency (through the meaning given) resides solely in its use (Tilley 2001). In contrast, my findings show that an object can acquire meaning or agency through its non-use (as in the case of "technology as Fort Knox"), or restricted use (such as in the case of technology as "the walled garden", or an "exclusive club"). Each of these metaphors embodying technology, modifies consumers' behaviour towards the piece of technology.

The literature on desire and the libidinal economy (Lyotard 2004) has underscored that at times the secondary agency that objects are said to possess (Gell 1998) overpowers humans' primary agency. Indeed, it would seem that humans so identify with their things (Baudrillard 1996 [1968]), or so crave "the social behind the personal" that objects provide (Belk et al 2003, p. 343) that they gladly allow this object dominance. This often has disastrous results for the

respective consumers (Faber and O'Guin 1988; Manning 2001). This dissertation, through its examination of the societal "marginals", such as the sadhus, unearths the methods of humans regaining the power of primary agency. Thus, this dissertation contributes the burgeoning scholarship on quality of life and consumer well being (see Mick, Pettigrew, Pechmann and Ozanne 2012 for a review)

People are believed to consume to achieve "an altered state of being" (Belk et al 2003, p.344). Much of consumer research has focussed on how people consume to achieve these altered states at various levels of the supposed hierarchy of needs (Maslow 1954).There has been limited focus, however, on how people consume to meet the need at the re-conceptualized peak of Maslow's hierarchy, viz self-transcendence (Maslow 1996). The current dissertation addresses this gap, as well as adds to the literature on consumer agency (over objects) by detailing the processes of trying to achieve this goal. These practices are those of immateriality in contrast to the practices of materiality explored in most consumption studies.

The literature on anti-consumption also addresses the problem of consumer agency over objects. In fact, the study of anti-consumption practices has been held to be crucial to furthering our knowledge of people and the society (Lee, Fernandez and Hyman 2009) as well as providing answers to a sustainable society and planet (Lee, Cherrier and Belk 2013). Not surprisingly then, in the recent years, there have been growing calls for anti-consumption studies. (Lee et al 2013) specifically calls for studies of *"acts, practices, and lifestyles located outside of the values, norms and behaviors that guide consumerism"* (ibid. p 187), a call that I, through its study of those who are voluntarily poor, address. While anti-consumption studies have focussed on practices of not consuming, my dissertation extends this stream of research by explicating the processes of "un-consumption", or continued consumption (as opposed to non-consumption) that

is aimed at unravelling the intricate ties that desire weaves between humans and objects. Through "un-consumption," these marginals finally taper their consumption to the point that they return to the base of the hierarchy of needs, i.e consume to just meet the basic survival needs, channelling their desires instead into achieving "self-realization" While such a return to the base of the hierarchy of needs may seem contradictory to Maslow's initial formulations of this hierarchy (Maslow 1943; 1954), this return is explicable when seen in the light of Maslow's later thoughts on the subject. Based on his study of peak experiences, Maslow later replaced self-actualization at the peak of the hierarchy of needs with "self-transcendence," with the former being a "transitional goal," enroute to the latter (Maslow, 1999 [1961], p 125). This new construct of "self-transcendence" is perceived by Maslow as being different from all the previous needs, for its function is to erase identity. Such a function is the opposite of all the other needs in the hierarchy (*ibid*. p 125). As Maslow so evocatively puts it, "…*the greatest attainment of identity, autonomy, or selfhood is itself simultaneously a transcending of itself, a going beyond and above selfhood. The person can then become relatively egoless."* (ibid. p. 117). He further emphasizes, *"[Such a person]… tends to be motivated by values which transcend his self… My satisfaction with achieving or allowing justice is not within my own skin . . . . It is equally outside and inside: therefore, it has* ***transcended the geographical limitations of the self*** [emphasis added]. *Thus one begins to talk about transhumanistic psychology."* (Maslow, 1969, p. 3–4). Given that at the level of self-transcendence, a person is at the level of an erasure of ego, desires that keep the ego alive would seem meaningless. All that would remain as needs for such a person is to keep the body going through physical sustenance (the lowest need in the hierarchy) in order to stay alive and experience self-transcendence (the highest need in the hierarchy) while being alive.

An alternative explanation for the above phenomenon can also be offered by eschewing the existence of a hierarchy at all where human needs are concerned. As Belk (1999) has pointed out, practice of "non-essential" things like art, sculptures, and so forth at a time when man was still a hunter-gatherer lies as testament to the co-existence of essential and non-essential needs. Thus there is no conflict in the Sadhaks' practices of self-transcendence while paying intermittent attention to only one other need –that of survival of the physical body.

Such practices, reflecting a lack of desire to find the social through objects (Belk et al 2003), are possibly facilitated within the informants through their perceptions of the non-fixity of individuals. That is, individuals are perceived as "*temporary composites in ongoing processes of substance flows*" (Berger 2012 p 336). Specifically, instead of the hope (of an altered state) that is seen to ever fuel desire (Belk et al 2003), what this dissertation reveals is the certainty among the sadhus that no visible state, however altered, is permanent. This perception possibly dulls the need for achieving altered states through objects. Such practices may also perhaps be facilitated by society's willingness to help the sadhus (who are held in highest esteem in India) in contrast to those who are involuntarily poor.

This dissertation, through its study of those who are poor by choice, highlights alternative meanings of empowerment, routes to happiness and modes of consumption far removed from the hegemonic meanings so far insisted upon by the ideology of rampant consumption. Similar to Riviere's (1984) observation of the people of the Amazon, my informants from the voluntarily poor population draw their power from their non-links to identifiers. Once they have decided to live the life of a sadhak, they feel empowered in the freedom perceived in delinking themselves from whatever had primarily identified them throughout their lives. These features include their name, their achievements, their blood relations, their friends, their property and their residence.

However, in contrast to those of Amazonia and most consumers elsewhere who seem to draw their potency from the assimilation of external goods (or people parts in the case of the Amazonians) (Overing Kaplan 1981; Overing 1996), the voluntarily poor informants in this dissertation seem to draw their power from maintaining a detached association with the alterity, focussing on a sort of "inner" engineering instead.

Scholars of alternative economies have pointed out that *"exchange is not necessarily monetized and/or underpinned by motivations for profit"* (Campana, Chatzidakis, and Laamanen 2014, p 277). This is underscored by the findings in the "poor by choice" section of the dissertation. However, many of the studies in alternative economies underscore resistance to capitalistic hegemony as the underlying motivation for such economies to exist (Williams 2005). In contrast, my findings show that consumers may gift technology products or services simply as acknowledgment of the perceived inherent divinity in every human or as a means to self-expansion. Additionally, the principle of sufficiency noted among my voluntary poor informants corroborates that which is often seen among voluntary simplifiers (Etzioni 1998). However, in a slight variation, the sufficiency practice that this dissertation reveals seems to be less motivated by preserving harmony in the outer environment, and more by preserving harmony in one's internal environment. This is illustrated by the reason R2 gave for rejecting a superior audio player in favour of one with less clarity even though he can afford the better one. He recognizes that there will always be something better than the best that he could buy. He feels that the desire to want more than what he feels is "sufficient", could send him into a never-ending entanglement with things. Such an entanglement would trap him in perpetual slavery to desire (overcoming which is underscored as a basic goal in Indian philosophies, be it Hinduism, Jainism or Buddhism), instead of giving him the kind of freedom he seeks.

Capitalistic market domination: Implications for agency in the market. Some of anti-consumption research suffers from an elitist bias. For example, one element of the research agenda in anti-consumption research calls for future research to "*explore the differences between selectively practiced anti-consumption (e.g., politically motivated brand avoidance) and generally practiced anti-consumption (e.g., a lifestyle choice such as voluntary simplification)*" (Lee et al 2007, p 147). My dissertation, through its study of the technology consumption and perceptions of those who are involuntarily poor, offers an alternative perspective to anti-consumption motivation. For example, while mediation of relationships has been held as one of the primary reasons for consumption (Douglas 2002), this dissertation shows that the reason for non-consumption go beyond a lack of interest in this mediation. Previously theorized motivations for anti-consumption have been limited to the zone of environmental protection, expression of identity, ensuring fairness in competition, political statements, creation of unique and personalized experience (Albinsson, Wolf and Kopf 2010) and value for money (Black and Cherrier 2010). My dissertation shows instead that consumers may reject a consumer good and at times even opt for something less efficient instead, in response to structural domination. This is exemplified by two examples given earlier in this chapter: Leela's choice of her kitchen stove and Hiren's rejection of a computer even as a gift. Unlike the focus on the resistance (Williams 2005; Thompson and Arsel 2004) of an empowered consumer being the main motivator of anti-consumption, my dissertation shows that non-consumption can arise due to disempowerment felt in a social relation. For example, a person may not consume when he or she feels that their consumption would create a leakage in the resources of others, and thus they don't consume (or minimize consumption) to "plug" that leak, thereby saving face, managing guilt or respecting

the social boundaries set by the empowered class. As an instant, as the wife of the building's care-taker, Suchitra stays rent-free. This, along with the "serving" role of her husband, makes her "less" than the other occupants of the building, and she and her husband are told off when the electricity bills of the common areas are high. To manage the guilt of using a resource that she feels is not hers, as well as to avoid being told off again, Suchitra restricts her consumption of electricity to the bare minimum. Distinct from anti-consumption as a form of resistance, these practices (Leela's, Hiren's and Suchitra's) are instead acts of subservient consumption, or consumption practices that help consumers persevere under societal domination and preserve harmony with the dominating group.

Thus, through its detailing of the technology consumption practices of two different kinds of poor groups ("poor by choice" and "poor by circumstances"), my dissertation shows that both internal and external factors can motivate anti-consumption. This addresses the debate in the anti-consumption literature about whether anti-consumption is motivated from within or without (Lee et al 2007).

Human over human domination: Implications for Coping. To a certain extent, it is true that objects have an innate agency (Hoskins 2006). In fact, Joyce, Bustamante and Levine (2001) have detailed how subordinate groups use this intention-absorptive power of objects to act against domination. My findings, however show that the agency projected by the dominated class into objects may not be permanent. Under the combined onslaught of the environment and the dominant class's decisions, the agency of the dominated class that is channelled into objects may simply fizzle out. In essence, in contrast to a large proportion of technology studies that have envisioned human agency over technology as a play between human and object, this

dissertation shows that among the poor, the differing degrees of agency of humans over technology are more a play between human and human. Except for the metaphors of technology as "Toy", "My Tool" and "Spare Tire", each of the Technology metaphors unearthed among those who are involuntarily poor in this dissertation substantiates the important role that the dominant humans play over the extent of agency that the dominated consumers have over different kinds of technology. To take just a couple of examples, the "wall" created in "technology as a walled garden" metaphor is created by the dominant class , as is the exclusivity of the club in the "technology as an exclusive club". Both of these metaphors signify that the agency that the dominated consumers have over the related technologies are mediated by the dominant class. This mediation grows increasingly strong as we shift away from the metaphors on the extreme left in figure 1.

A protracted uneven-ness in this interplay between humans can lead to stress (Alwitt and Donley 1996; Henry 2005). How consumers cope with stressful events has long intrigued consumer researchers (Carver, Scheier, and Weintraub 1989; Lazarus and Folkman 1984; Almeida, Wethington and Kessler 2002; Duhachek 2005). Almost all coping studies are focussed on strategies employed during a single stressful situation (Mick and Fournier 1998; Luce 1998; Luce, Bettman, and Payne 2001; Mick and Fournier 1998; Sujan, Sujan, Bettman and Verhallen 1999). Consumers, in essence, have been seen to cope through having the power to change the adverse situation either through their behaviour, through mentally re-framing the situation in non-adverse terms, or through denial. In short, existing literature on consumers' handling of adverse situations is pre-occupied with the deflection of the adverse situation, either mentally or behaviourally. The literature in limited about situations where consumers have neither the power to change the stressor, nor the ability to change their feelings towards the stressor. This is

specifically true in the case of theorizations of consumers' coping with technology. For instance, the behavioural strategies theorized to help people cope with the paradoxes of technology (Mick and Fournier 1998) reflect the assumptions that technology is all that people have to cope with during their technology consumption, that people have a choice in whether to use a particular technology, a choice in the type of technology, that people have the freedom to choose from a wide range of coping strategies and that the most attractive coping strategy will not be curtailed by dominating forces. Furthermore, the strategies employed are limited to functions of "product, situation or person" (Mick and Fournier 1998 p 127), overlooking the link of the strategies employed to the domination by powerful others.

Certain additional insights on coping with long term stressful situations have been offered by the literature exploring the coping strategies of vulnerable populations (eg Hill 1992; Crockett, Grier, and Williams 2003; Mathur, Moschis and Lee 1999; Pavia and Mason 2004; Viswanathan, Rosa and Harris 2005). Yet many of these coping studies are situated in the West where consumers are aware of their rights, have a basic "consumption adequacy" (Martin and Hill 2012), and have the resources to execute a "metamorphosis" or an "empowerment of self" (Hill and Stamey 1990).

Other studies conducted in the West have repeatedly shown that the stress of a lack of agency in lives have lead humans to adopt destructive behaviour. Sharff (1998) has noted "widespread drug abuse, violence and early pregnancies" while feelings of desolation, hopelessness and powerlessness are common in the face of "imbalances in exchange relationships" (see also Alwitt and Donley 1996; Henry 2005). In essence, "negative affective states" are believed to be the default response to most stressful situations (Lazarus and Folkman 1984; Lazarus 1991; Duhacheck 2005), including anxiety and withdrawal (Hill and Stamey

1990), distancing or fantasizing (Hill and Stephens 1997; Hill and Stamey 1990; Hill 1992). Such utter desolation was markedly limited in my findings. My dissertation, through its focus on consumers who have to live with societal domination from birth without having adequate resources for metamorphosis, shows coping strategies beyond those seen in prior theorizations of temporary stressful episodes. It sheds light on the understudied mechanics of maintaining non-negativity among the poor.

Part of the non-negativity may arise from ignorance. That is, centuries of domination might affect the ability to identify that there is a person behind the consumption phenomenon that a stand can be taken against, as the phrase "got cut off" where it came to electricity's sudden disruption poignantly illustrates. Here, all agency is accorded to the technology and none to the humans involved with the technology. Such findings problematize Foucault's (1979 [1976]) assertion that resistance is co-extensive with power. The sheer lack of aggressive actions to change what is unacceptable (or even to perceive that something is unacceptable) may well be instead a function of Foucault's "regimes of truth" (1976), a socially shaped acceptance of the "naturalness" of class disparities.

Beyond this possible cause of the non-negativity, my data highlights the practices of consumer resilience, through which consumers try to maintain an internal homeostasis that enables them to survive under constant domination throughout their lives. Through these insights, I add to our understanding of human resilience. Human resilience studies have been seen to be an imperative for the new millennium (Bonanno 2004; Luthar, Cicchetti and Becker 2000). Resilience studies have so far focussed primarily on adaptive strategies of children of schizophrenic parents (Bonanno 2004). They have thus unearthed autonomy, high self-esteem and family and wider social characteristics (Masten and Garmezy 1985; Werner and Smith 1982,

1992) as “protective factors” that aid resilience. The limited research on adult resilience has focussed on single aversive events and have emphasized such personal characteristics such as hardiness (Florian, Mikulincer and Taubman, 1995), narcissism or self-enhancement and the ability to repress unpleasant thoughts (Weinberger, Schwartz and Davidson, 1979; Weinberger, 1990). My dissertation moves the focus from personality characteristics that aid resilience, to methods of resilience such as acceptance (instead of resistance), redundancy of consumption products important to consumers, and engaging in growth responses, such as drawing on the values learned from elders. Such values encompass being graceful about drawing upon one’s flexibility and acceptance of the way things are, and about non-negatively giving up things that one is used to, and using the little that is available instead. This is distinct from the attitude of Fatalism, where a person simply accepts his/her lot with utter resignation and where the general worldview is often negative and hopeless. In contrast, in the current context, acceptance is not the only strategy. Nor is the status ascribed to fate. Here, the involuntarily poor informants use strategies to help them live a life of relative peace under adversity. Those who are voluntarily poor also use the strategies of “unconsumption”, as well as detached attachment, or “floating”, to stay in consumption situations that are stressful (in that these have the constant potential to pull them away from their life goals).

Acceptance has been seen as a coping strategy towards loneliness and inevitable death among those who are terminally ill (Rokach and Brock 1998; Dunkel-Schetter 1984). The lack of negativity has been seen as an essential part of resilience (Bonanno, Noll, Putnam, O’Neill, and Trickett 2003; Keltner and Bonanno, 1997). However, in such studies, “acceptance” has predominantly meant reframing illness in positive terms, unlike in the current dissertation where

practices of acceptance occurred despite those the involuntarily poor never framing their negative consumption experiences positively.

Limitations of this study and Suggestions for Future Research:

The primary limitation of the study was that the involuntarily poor BOP informants were all Bengalis. As mentioned in the chapter on Methodology, the culture within India is extremely diverse, and it is quite possible that the technology metaphors among the BOP in another culture within India itself are different. Beyond this limitation, there is a second, related one: Many Westerners have been influenced by Indian thoughts (for example Buddhism and Vedantic Hinduism). Many of them live in their home countries where the dominant discourse on desires, objects and consumerism may be different from that in India. The confluence of the two factors might lead to technology metaphors that are different from those identified among the voluntarily poor sadhus sourced in India. These metaphors remain unexamined by the current dissertation. Both of these limitations are possible areas for future explorations.

BIBLIOGRAPHY

Aaker, J. L., & Lee, A. Y. (2001). " "I" seek pleasures and "we" avoid pains: The role of selftz-regulatory goals in information processing and persuasion." *Journal of Consumer Research*, *28*(1), 33-49.

Adamson J, Evans M.M and Stein R (2002). *The Environmental Justice Reader: Politics, Poetics, and Pedagogy*, Tucson: University of Arizona Press

Agence France-Presse (2013), "India, China struggling to bridge the 'digital divide': Study," http://gadgets.ndtv.com/internet/news/india-china-struggling-to-bridge-the-digital-divide-study-352919, 11th April 2013, Retrieved 23rd December 2015.

Aggarwal, P., & McGill, A. L. (2007). "Is that car smiling at me? Schema congruity as a basis for evaluating anthropomorphized products." *Journal of Consumer Research*, *34*(4), 468-479.

Ahuvia, Aaron C. (2005), "Beyond the Extended Self: Loved Objects and Consumers' Identity Narratives," *Journal of Consumer Research*, 32 (June), 171–84.

Albinsson, P. A., Wolf, M., & Kopf, D. A. (2010). "Anti-consumption in East Germany: consumer resistance to Hyperconsumption," *Journal of Consumer Behaviour*, *9*(6), 412-25.

Alexander, Samuel, and Simon Ussher (2012) "The Voluntary Simplicity Movement: A Multi-National Survey Analysis in Theoretical Context." Journal of Consumer Culture, 12(1), 66–86.

Allen, D. E. (2002). "Toward a theory of consumer choice as sociohistorically shaped practical experience: The fits-like-a-glove (FLAG) framework". *Journal of Consumer Research*, 28, 515−532.

Almeida, David M., Elaine Wethington, and Ronald C. Kessler (2002), "The Daily Inventory of Stressful Events," *Assessment*, 9 (1), 41–55

Alwitt, Linda F. and Thomas D. Donley (1996), *The Low- Income Consumer, Adjusting the Balance of Exchange,* Thousand Oaks: CA. Sage

Anderson, J., and C. Markides (2007), "Strategic innovation at the base of the pyramid," *MIT Sloan Management Review,* 49 (1), 83–8.

Andreasen, Alan R. (1975), *The Disadvantaged Consumer*, New York: The Free Press

Appadurai, Arjun (1986), "Introduction: Commodities and the Politics of Value," in *The Social Life of Things: Commodities in Cultural Perspective*, (ed) Arjun Appadurai, Chapter 1, Cambridge University Press: Kindle Edition.

Arnould, Eric J. (1989), "Towards a Broadened Theory of Preference Formation and Diffusion of Innovation: The case of Zinder Province, Niger Republic," *Journal of Consumer Research*, Volume 16, September 1989, 239-67

Arnould, Eric and Linda Price (1993), "River Magic: Extraordinary Experience and the Extended Service Encounter," *Journal of Consumer Research,* 20 (June), 24-45.

Arnould, Eric, Linda Price and Risto Moisio (2006) *"*Making contexts matter: selecting research contexts for theoretical insights" in *Handbook of Qualitative Research Methods in Marketing*, ed Russell W Belk, Massachusetts: Edward Elgar, Chapter 9, p 110

Arthur, W. Brian (2009). *The Nature of Technology*. New York: Free Press. p. 28

Asbell, Bernard (1963), *The New Improved American*, New York: McGraw-Hill

Badiner, A. H. (2002). *Mindfulness in the Marketplace: Compassionate Responses to Consumerism,* Berkley, California: Parallax Press

Bagga, Bhuvan (2011), "Delhi government flush with funds but no 'project in hand'", *India Today*, September 12, available online at http://indiatoday.intoday.in/story/cash-rich-delhi-government-can-not-find-projects-to-fund/1/150913.html

Bandura, A. (1986), *Social foundations of thought and action: A social cognitive theory,* Englewood Cliffs, NJ: Prentice Hall

Bandura, A. (2001), "Social cognitive theory of mass communication," *Media Psychology*, 3(3), 265–99

Bardhi, F., & Eckhardt, G. M. (2012), "Access-Based Consumption: The Case of Car Sharing," *Journal Of Consumer Research*, *39*(4), 881-98.

Barzun, Jacques (2000), *From Dawn to Decadence:1500 to the Present*, New York: Harper Collins

Bateson, G (1973) *Steps to an Ecology of Mind*, London: Granada

Baudrillard, J (1996[1968]), *The System of Objects*, New York:Verso

Beard, Charles A. (1927). "Time, Technology, and the Creative Spirit in Political Science". *The American Political Science Review,* 21 (1), 1–11

Belk, R. W. (2014). "You are what you can access: Sharing and collaborative consumption online." *Journal of Business Research*, *67*(8), 1595-1600.

-------- (2013). "Extended self in a digital world." *Journal of Consumer Research*, *40*(3), 477-500.

-------- (2011), "Philosophies for less consuming societies," in *Beyond the Consumption Bubble*, (ed) Karin M. Ekström, and Kay Glans, New York: Routeledge, 205-20

-------- (1999), "Leaping Luxuries and Transitional Consumers," in *Marketing Issues in Transitional Economies*, Rajiv Batra, ed., Norwell, MA: Kluwer, 1999, 39-54

-------- (2011), "Philosophies for less consuming societies," in *Beyond the Consumption Bubble*, (ed) Karin M. Ekström, and Kay Glans, New York: Routeledge, 205-20.

------- (1988), "Possessions and the Extended Self," *Journal of Consumer Research,* 15 (2), 139–68

Belk, R. W., Ger, G., & Askegaard, S. (2003), "The Fire of Desire: A Multisited Inquiry into Consumer Passion," *Journal of Consumer Research*, *30*(3), 326-51

Belk, Russell W., Melanie Wallendorf, and John F. Sherry Jr. (1989), "The Sacred and Profane in Consumer Behavior: Theodicy on the Odyssey," *Journal of Consumer Research*, 16 (February), 1–38.

Belk, Russell W., John F. Sherry, Jr., and Melanie Wallendorf (1988),"A Naturalistic Inquiry into Buyer and Seller Behavior at a Swap Meet," *Journal of Consumer Research,* 14 (March), 449-470.

Bell, G. (2006). "Satu keluarga, satu komputer (one home, one computer): Cultural accounts of ICTs in South and Southeast Asia", *Design Issues*, *22*(2), 35-55.

Benedict XVI (2009), *Vatican address on 42nd World Day of Peace, available online at* http://w2.vatican.va/content/benedict-xvi/en/homilies/2009/documents/hf_ben-xvi_hom_20090101_world-day-peace.html

Berger, J., and Ward, M. (2010). "Subtle Signals of Inconspicuous Consumption". *Journal of Consumer Research*, *37*(4), 555-569

Berger, P. (2012). "Theory and ethnography in the modern anthropology of India," *HAU: Journal of Ethnographic Theory*, *2*(2), 325-57.

Berman, Morris (1983), *All that is Solid melts into Air: The Experience of Modernity*, London: Verso

Best, K., & Tozer, N. (2013). "Scaling digital walls: Everyday practices of consent and adaptation to digital architectural control." *International Journal of Cultural Studies*, *16*(4), 401-417.

Bhattacharyya, A (2014) ,"Eyes in the Sky: New Narratives in Consumers' Technology Consumption", in *North America - Advances in Consumer Research*, Volume 42, eds. June Cotte and Stacy Wood, Duluth, MN : Association for Consumer Research, Pages: 417-18

Birtchnell, T. (2011). "Jugaad as systemic risk and disruptive innovation in India" *Contemporary South Asia*, *19*(4), 357-372.

Black, I. R., and Cherrier, H. (2010), "Anti-consumption as part of living a sustainable lifestyle: daily practices, contextual motivations and subjective values," *Journal of Consumer Behaviour*, *9*(6), 437-53.

Bolter, J.D, (1984), *Turing's Man*, Chapel Hill: University of North Carolina Press.

Bonanno, G. A. (2004), "Loss, Trauma, and Human Resilience: Have we underestimated the human capacity to thrive after extremely aversive events?" *American psychologist*, *59*(1), 20-8

Bonanno, G. A., Noll, J. G., Putnam, F. W., O'Neill, M., and Trickett, P. (2003), "Predicting the willingness to disclose childhood sexual abuse from measures of repressive coping and dissociative experiences," *Child Maltreatment*, 8 (4), 1–17

Boorstin, Daniel J (1978), *The Republic of Technology*, New York: Harper and Row

Borgmann, A. (2009). *Technology and the character of contemporary life: A philosophical inquiry*. Chicago:University of Chicago Press.

Brewer MB, Gardner WL. (1996). "Who is this "we"? Levels of collective identity and self representations". *Journal of Personality and Social Psychology,* 71(1), 83–93

Campana, M., Chatzidakis, A., & Laamanen, M. (2014), "Special Issue on Alternative Economies Journal of Macromarketing, 2017," *Journal of Macromarketing*, *34*(3), 408-9.

Campbell, Angus, Conserve, Philip E., and Rodgers, Willard L. (1975), *The Quality of American Life,* Ann Arbor, MI: Institute for Social Research

Canham, Erwin D (1950), *Awakening: The World at Mid-Century*, New York: Longmans, Green

Caplovitz, David (1967), *The Poor Pay More*, New York: Free Press.

Cardwell, D (1995), *The Norton History of Technology*, New York: Norton & Company

Carver, Charles S., Michael F. Scheier, and Jagdish K. Weintraub (1989), "Assessing Coping Strategies: A Theoretically Based Approach," *Journal of Personality and Social Psychology*, 56 (2), 267–83

Castells, Manuel (1996), *The Rise of the Network Society, Vol. 1, The Information Age: Economy, Society and Culture*, Cambridge, MA: Blackwell

Celsi, R. L., Rose, R. L., & Leigh, T. W. (1993). An exploration of high-risk leisure consumption through skydiving. *Journal of Consumer Research*, 20 (June), 1-23.

Chae, B., Xiuping, L., & Zhu, R. (2013). "Judging Product Effectiveness from Perceived Spatial Proximity," *Journal of Consumer Research*, *40*(2), 317-335.

Chakravarti, Dipankar (2006), "Voices Unheard: The Psychology of Consumption in Poverty and Development," *Journal of Consumer Psychology*, 16 (4), 363–76.

Clark, A (2003), *Natural-born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*, New York: Oxford University Press.

Clark, A (2007). "Re-inventing ourselves: The plasticity of embodiment, sensing, and mind." *Journal of Medicine and Philosophy*, *32*(3), 263-282.

Cohn, Bernard S. 1987. *An Anthropologist among the Historians and Other Essays*. New Delhi: Oxford University Press., 228-31

Cotte, J., Ratneshwar, S. and Mick, D. G. (2004). "The Times of Their Lives: Phenomenological and Metaphorical Characteristics of Consumer Timestyles." *Journal of Consumer Research*, *31*(2), 333–45.

Crapanzano, Vincent (1985), *Waiting: The Whites of South Africa*. New York: Random House.

Crockett, David, Sonya A. Grier, and Jacqueline Williams (2003), "Coping with Marketplace Discrimination: An Exploration of the Experiences of Black Men," *Academy of Marketing Science Review*, 2003 (4), 1-18

Cross, F. L., ed. (2005). "Francis of Assisi". *The Oxford dictionary of the Christian church.* New York: Oxford University Press.

Crowder K and Downey L (2010). "Inter-neighbourhood migration, race, and environmental hazards: modelling micro-level processes of environmental inequality," *American Journal of Sociology,* 115(4), 1110–49

Davis, F. (1989). "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Quarterly*, 13(3), 319–40

Dobres, M.A. and Robb, J. (2000). *Agency in Archaeology*. London: Routledge.

Donner J, Rangaswamy N, Steenson MW, Wei C (2008) " 'Express yourself' and 'stay together': the middle-class Indian family," in *"The Handbook of Mobile Communication studies",* ed. Katz J, MIT Press, Cambridge, 325–338

Dordick G.A. (1997). *Something Left to Lose: Personal Relations and Survival among New York's Homeless*. Philadelphia, PA: Temple Univ. Press

Douglas, Mary (2002). *The World of Goods: Towards an Anthropology of Consumption*. *Vol. 6*. Kindle Edition: Psychology Press.

Druckrey, Timothy (1994), ‘‘Introduction,’’ in *Culture on the Brink: Ideologies of Technology,* eds. Gretchen Bender and Timothy Druckrey, Seattle: Bay, 1–12.

Duhachek, A. (2005), “Coping: A multidimensional, hierarchical framework of responses to stressful consumption episodes,” *Journal of Consumer Research*, *32*(1), 41-53.

Dumont, Louis, and David F. Pocock (1957). “Village studies.” *Contributions to Indian Sociology* ,1, 23–41.

Duneier M. (1999). *Sidewalk*. New York: Farrar, Straus & Giroux

Dunkel-Schetter, C (1984), “Social support and cancer: Findings based on patient interviews and their implications,” *Journal of Social Issues*, 40 (4), 77-98.

Durkheim E. 1893 (1984). *The Division of Labor in Society*. Transl. WD Halls. New York: Free Press

Edgerton, D. (2007). *Shock of the Old: Technology and Global History Since 1900*. Oxford University Press: Kindle Edition.

Elgin, D and Mitchell, A (1977), “Voluntary Simplicity”, *The Co-Evolution Quarterly*, Summer 1977, 5-18.

Elgin, D. (1981). *Voluntary simplicity: Toward a way of life that is outwardly simple, inwardly rich*. New York: Quill.

Ellul, Jacques (1964). *The Technological Society*, Translated by John Wilkinson. Random House, (Note to the Reader, p. xxv).

Epp, A. M., Schau, H. J., & Price, L. L. (2014). “The Role of Brands and Mediating Technologies in Assembling Long-Distance Family Practices.” *Journal of Marketing*, *78*(3), 81-101.

Etzioni, A. (1998), “Voluntary simplicity: Characterization, select psychological implications, and societal consequences,” *Journal of Economic Psychology*, *19*(5), 619-44.

Faber, R. J. and O'Guinn, T. C. (1988), “Compulsive consumption and credit abuse,” *Journal of Consumer Policy*, *11*(1), 97-109.

Fernyhough, C (2006), “Metaphors of Mind,” The Psychologist, 19(6), 356-358.online access http://thepsychologist.bps.org.uk/getfile/2236

Firat, Fuat A. and Alladi Venkatesh (1995), “Liberatory Postmodernism and the Reenchantment of Consumption,” *Journal of Consumer Research*, 22 (December), 239–67.

Fischer, E., Otnes, C. C. and Tuncay, L (2007), “Pursuing Parenthood: Integrating Cultural and Cognitive Perspectives on Persistent Goal Striving,” *Journal of Consumer Research*, 34(4), 425-40

Fleischmann, K. R. (2007), "The evolution of agency: Spectra of bioagency and cyberagency," *The Information Society*, *23*(5), 361-71.

Florian, V., Mikulincer, M., and Taubman, O. (1995). "Does Hardiness contribute to mental health during a stressful real-life situation? The roles of Appraisal and Coping," *Journal of Personality and Social Psychology*, 68 (4), 687–95

Foster J.B, Clark B and York R. (2010). *The Ecological Rift: Capitalism's War on the Earth.* New York: Monthly Review Press

Foucault, Michel *(1979 [1976]). The History of Sexuality Volume 1: An Introduction. London: Allen* Lane

------- (1977). *Discipline and Punish: The Birth of the Prison*. Kindle Edition:Vintage.

------- (1976), "La fonction politique de l'intellectuel", trans. C. Gordon, "The political function of the intellectual", in *Radical Philosophy*, no. 17 (Summer 1977), 12-14

Fournier, S. (1998). "Consumers and Their Brands: Developing Relationship Theory in Consumer Research." *Journal of Consumer Research*, *24*(4), 343-373.

Fowler, B. (2001). *Iceman: Uncovering the Life and Times of a Prehistoric Man Found in an Alpine Glacier*. Chicago: University of Chicago Press.

Frank, Robert H (2011), "Relative Deprivation, Inequality and Consumer Spending in the United States," in *Beyond the Consumption Bubble*, eds Karin M. Ekström, and Kay Glans, New York: Routeledge, 165-73

Gallagher, S. (2005). *How the Body Shapes the Mind*. New York: Oxford University Press. Chapter 8

Gaski, J. F. (1984), "The theory of Power and Conflict in channels of Distribution," *The Journal of Marketing*, 48 (3), 9-29.

Gay, L.C (1998), "Acting up, Talking Tech: New York Rock Musicians and Their Metaphors of Technology", *Ethnomusicology*, 42(1), 81-98

Gell, A (1998), *Art and Agency*, Clarendon: Oxford University Press: Kindle Edition

Gentner, D and Stevens, A (1983), *Mental Models*, Hillsade, NJ, Erlbaum

Ger, G. (1997), "Human development and Humane consumption: Well-being beyond the "good life."" *Journal of Public Policy & Marketing,* 16 (1), 110–25

Giesler, M. (2006), "Consumer Gift Systems," *Journal of Consumer Research*, *33*(2), 283-90

Gigerenzer, G (1991), "From Tools to Theories: A heuristic of Discovery in Cognitive Philosophy," Psychological Review, 98(2), 254-267

Gitelman, L. (2006). *Always already new. Media, history and the data of culture*. The MIT Press: Massachusetts.

Glucksberg, Sam (2003), "The Psycholinguistics of Metaphor," *Trends in Cognitive Science*, 7 (2), 92–96

Goos, M (2005), "A sociocultural analysis of the development of pre-service and beginning teachers' pedagogical identities as users of technology," *Journal of Mathematics Teacher Education*, 8(1), 35-59.

Gregg, R.B (1936) "*The Value of Voluntary Simplicity*," *Pendle Hill Essays*, Number 3, Pennsylvania: Pendle Hill

Hagan J and McCarthy B. (1998). *Mean Streets: Youth Crime and Homelessness*. Cambridge, UK: Cambridge University Press

Hall, G. E. (1979), "The Concerns-based approach to facilitating Change," *Educational Horizons*, 57 (4), 202–8.

Halweil, Brian and Lisa Mastney (2004), *State of the World* 2004, New York:W.W.Norton

Heeks R (2008) "The ICT4D 2.0 manifesto: where next for ICTs and international development?" IPDM working papers http://www.sed.manchester.ac.uk/idpm/research/publications/wp/di/di_wp42.htm

Heidegger, M (1977), *The Question Concerning Technology and other Essays*, Translated by William Lovitt, Garland Publishing: New York and London

Heise DR. (1998). "Conditions for empathic solidarity". In *The Problem of Solidarity: Theories and Models*, (ed.) P Doreian, T Fararo, p. 197–212. Amsterdam: Gordon & Breach

Henry, Paul C. (2005), "Social Class, Market Situation, and Consumers' Metaphors of (Dis)Empowerment," *Journal of Consumer Research*, 31 (4), 766-78.

Hill, R.P. (2003), "Homelessness in the United States: An Ethnographic Look at Consumption Strategies," *Journal of Community and Applied Social Psychology*, 13 (September/October), 128-137.

------- (1992), "Homeless Children: Coping with Material Losses," *Journal of Consumer Affairs*, 26 (2), 274-87.

------- (1991). "Homeless women, special possessions, and the meaning of" home": An ethnographic case study. *Journal of Consumer Research*, 18(3), 298-310.

Hill, R. P., & Martin, K. D. (2014), "Broadening the paradigm of Marketing as Exchange: a Public policy and Marketing perspective," *Journal of Public Policy & Marketing*, *33*(1), 17-33.

Hill, Ronald Paul, and Debra Lynn Stephens (1997), ‘‘Impoverished Consumers and Consumer Behavior: The Case of AFDC Mothers.’’ *Journal of Macromarketing,* 17(2), 32-48

Hill, Ronald Paul, and Mark Stamey (1990), ‘‘The Homeless in America: An Examination of Possessions and Consumption Behaviors,’’ *Journal of Consumer Research,* 17 (3), 303-21

Hochschild, Arlie (1983). *The Managed Heart*. Berkeley: University of California Press.

Hodder, Ian (2012). *Entangled: An Archaeology of the Relationships between Humans and Things*. Wiley. Kindle Edition.

Hoffman, D. L., and Novak, T. P. (1996). “Marketing in hypermedia computer-mediated environments: conceptual foundations”. *The Journal of Marketing*, 60 (July), 50-68.

Hollenback, K.L. and Schiffer, M.B (2010), “Technology and Material Life”, In *The Oxford Handbook of Material Culture Studies*, (ed) Beaudry,M.C and Hicks, C., Oxford Handbooks Online, http://www.academia.edu/11172442/Technology_and_Material_Life

Holt, D. B. (1995). “How Consumers Consume: A Typology of Consumption.” *Journal of Consumer Research*, *22*(1), 1-16.

Hoskins, Janet (2006), “Agency, Biography and Objects,” in *Handbook of Material Culture,* eds. C. Tilley, W. Keane, S. Küchler, M. Rowlands, and P. Spyer, London: Sage Publications Ltd, 74-85.

Hughes, T.P (1996), “Technological Momentum”, in M.R.Smith and L. Marx (ed.). *Does Technology drive History? The dilemma of technological determinism.* p 101-13, Cambridge, MA: The MIT Press.

Hutson, M. (2010). “Inconspicuous Consumption”. *Psychology Today*, *43*(3), 20

Ingold, Tim (1992) ‘Technology, Language, Intelligence: A Reconsideration of Basic Concepts’, in K.Gibson and T.Ingold (eds) *Tools, Language and Cognition in Human Evolution,* Cambridge: Cambridge University Press

Jennings, H. (2012). *Pandaemonium 1660–1886: The coming of the machine as seen by contemporary observers*. Icon Books. Kindle Edition

Jenson J. (1995). “What’s in a name? Nationalist movements and public discourse”. In *Social Movements and Culture*, ed. HJB Klandermans, pp. 107–26. New York: Routledge

Jiewen, H., & Chang, H. H. (2015). “ "I" Follow My Heart and "We" Rely on Reasons: The Impact of Self-Construal on Reliance on Feelings versus Reasons in Decision Making.” *Journal Of Consumer Research*, *41*(6), 1392-1411

Joerges, B. (1990). “Images of technology in sociology: Computer as butterfly and bat.” *Technology and Culture*, 31(2), 203-227.

Johnson-Eilola, J (1996), "Relocating the value of work: Technical communication in a Post-Industrial Age", *Technical Communication Quarterly*, 5(3), 245-270

Joy, A., Sherry Jr., J. F., Mick, D. G., & Arnould, E. J. (2003). "Speaking of Art as Embodied Imagination: A Multisensory Approach to Understanding Aesthetic Experience." *Journal of Consumer Research*, *30*(2), 259-282

Joyce, A. A., Bustamante, L. A. and Levine, M. N. (2001), "Commoner power: A case study from the Classic period collapse on the Oaxaca coast," *Journal of Archaeological Method and Theory*, 8(4), 343-85.

Karnani, Aneel (2007) "The Mirage of Marketing to the Bottom of the Pyramid: How the Private Sector and help alleviate Poverty," *California Management Review*, 49 (4), 90-111

Kasser, Tim (2002), *The High Price of Materialism*, Cambridge, MA: MIT Press

Kaza, S. (Ed.). (2005). *Hooked! Buddhist Writings on Greed, Desire and the urge to Consume*, Boston and London: Shambhala Publications.

Keay, John (2011), *India: A History*, Grove Press / Harper Collins, Kindle Edition.

Kelman, A., & Failer, B. (2002). "Inconspicuous Consumption". *Chain Store Age*, *78*(2), 60

Keltner, D., and Bonanno, G. A. (1997), "A study of laughter and dissociation: Distinct correlates of laughter and smiling during bereavement," *Journal of Personality and Social Psychology*, 73 (4), 687–702.

Keniston, Kenneth (2004), "The Four Digital Divides" in *Bridging the Digital Divide: Lessons from India*, ed. Keniston, K., & Kumar, D, SAGE Publications, Bangalore

Kim, B. K., Zauberman, G., & Bettman, J. R. (2012). "Space, Time, and Intertemporal Preferences." *Journal of Consumer Research*, *39*(4), 867-880. doi:10.1086/666464

Kline, Ronald (1995), "Construing 'Technology' as 'Applied Science': Public Rhetoric of scientists and engineers in the United States, 1880-1945," *Isis*, 86 (2), 194-221

Kopytoff, Igor. 1986 "The Cultural Biography of Things: Commoditization as Process." In *Story of Objects. The Social Life of Things: Commodities in Cultural Perspective*. Edited byArjun Appadurai. Cambridge; New York: Cambridge University Press

Kozinets, R. V. (2008), "Technology/Ideology: How Ideological fields influence consumers' Technology Narratives." *Journal of Consumer Research*, *34*(6), 865-81.

Krishnan, Murali (2015) "India's ambitious optical fiber broadband network to bridge digital divide in rural areas", *Deutsche Welle*, http://www.dw.de/indias-ambitious-optical-fiber-broadband-network-to-bridge-digital-divide-in-rural-areas/a-18223792, Retrieved 15 Feb 2015

Kurzweil, Ray (2005), *The Singularity is Near*, New York: Viking Press

Lakoff, George and Mark Johnson (1980), *Metaphors We Live By*, Chicago: University of Chicago Press.

Lamont M. 1992. *Money, Morals, and Manners*. Univ. Chicago Press

Landwehr, J. R., McGill, A. L., & Herrmann, A. (2011). "It's got the look: The effect of friendly and aggressive "facial" expressions on product liking and sales." *Journal of Marketing*, *75*(3), 132-146.

Latour, B. (2005), *Reassembling the Social: An introduction to Actor-Network-Theory*, Kindle Edition: Oxford University Press

LaVallee, A (2007), "Inconspicuous Consumption: Hiding the Plasma TV", *Wall Street Journal - Eastern Edition*. 2/1/2007, 249 (26), pD1-D2.

Lazarus, R. S. (1993). "Coping theory and research: past, present, and future." *Psychosomatic medicine*, *55*(3), 234-247.

------- (1991), "Progress on a Cognitive-Motivational Relational Theory of Emotion," *American Psychologist*, 46 (8), 819–34.

Lazarus, Richard S. and Susan Folkman (1984), *Stress, Appraisal, and Coping*, New York: Springer

Le Dantec C and Edwards WK (2008) "Designs on dignity: perceptions of technology among the homeless". *Proceedings of CHI 2008*, p 627–636

Leary, David E. (1990), "Psyche's Muse: The Role of Metaphor in The History of Psychology," in *Metaphors in the History of Psychology,* ed. D. E. Leary, Cambridge: Cambridge University Press, 1-78.

Lee BA and Farrell CR. 2003. "Buddy, can you spare a dime? Homelessness, panhandling, and the public." *Urban Affairs Review,* 38,299–324

Lee, M. S., Cherrier, H., and Belk, R. (2013). "Journal of Macromarketing Special Issue: Anti-Consumption Research and Society," *Journal of Macromarketing*, 33(3), 187-9

Lee, M. S., Fernandez, K. V., and Hyman, M. R. (2009). "Anti-consumption: An overview and research agenda," *Journal of Business Research*, *62*(2), 145-147.

Leonard-Barton, Dorothy (1981), "Voluntary Simplicity and Energy Conservation", *Journal of Consumer Research*, 8, 243-52

Levy, P (2001), *Cyberculture*, Minneapolis: University of Minnesota Press.

Lissack, C (1997), "Mind your Metaphors: Lessons from Complexity Science," *Long Range Planning*, 30(2), 292-298

List, S.K (1992), "Inconspicuous Consumption", *American Demographics*, 01634089, Dec92, Vol. 14, Issue 12

Lombard, C.G (2005), "Conceptual Metaphors in Computer Networking Terminology," *South African Linguistics and Applied Language Studies*, 23(2), 177-185.

Lorber J. (2006). "Shifting paradigms and challenging categories". *Social Problems –New York,* 53 (4), 448–53

Lorenz, Edward (1972) : "Predictability", *American Association for the Advancement of Science*, 139th meeting, 1972, available online at http://eaps4.mit.edu/research/Lorenz/Butterfly_1972.pdf

Luce, Mary Frances (1998), "Choosing to Avoid: Coping with Negatively Emotion-Laden Consumer Decisions," *Journal of Consumer Research*, 24 (4), 409–33.

Luce, Mary Frances, James R. Bettman, and John W. Payne (2001), "Emotional Decisions: Trade-off Difficulty in Consumer Choice," *Monographs of the Journal of Consumer Research,* no. 1, Chicago: University of Chicago Press

Luthar, S. S., Cicchetti, D., and Becker, B. (2000), "The construct of Resilience: A critical evaluation and guidelines for future work," *Child Development*, *71*(3), 543-62

Lyotard, J. F. (2004), *Libidinal economy*. London: Athlon Press

Malafouris, M (2013) *How Things shape the Mind*, Cambridge: The MIT Press

Malinowski, B. (1920), "Kula: The circulating exchange of valuables in the archipelagoes of Eastern New Guinea," *Man*, *20*, 97-105.

Manning, R. D. (2001), *Credit card nation: The consequences of America's addiction to credit*, New York: Basic Books.

Marakas, G.M, Johnson, R.D and Palmer, J. W (2000), "A theoretical model of differential social attributions toward computer technology: When the Metaphor becomes the Model," *International Journal of Human-Computer Studies*, 52 (4), 719-750.

Marcuse, Herbert (1982). "Some Social Implications of Modern Technology". *The Essential Frankfurt School Reader*. Ed. Andrew Arato and Eike Gebhardt. New York: Continuum, 138-162

Markham, A.N (2003), "Metaphors reflecting and shaping the reality of the internet: Tool, Place and Way of Being", Association of Internet Researchers Conference, Toronto, Canada. 16-19.

Martin, K. D., & Hill, R. P. (2012), "Life satisfaction, self-determination, and consumption adequacy at the bottom of the pyramid," *Journal of Consumer Research*, *38*(6), 1155-68.

Marvin, C. (1997). *When Old technologies were New*. Oxford University Press.

Marx, Leo (1997), “Technology: The emergence of a hazardous concept,” *Social Research*, 64 (3), 965-88

--------- (1994), “The idea of "Technology" and Postmodern Pessimism,” in *Does Technology drive History?* ed. Merritt Roe Smith and Leo Marx, Cambridge, Mass. 238-57

Maslow, A. H. (1999/[1961])). “Peak-experiences as acute identity experiences,” in *Toward a Psychology of Being,* Third Edition, (ed) A. H. Maslow, New York: Wiley, 113-25

------- (1996), "Critique of self-actualization theory", in *Future visions: The unpublished papers of Abraham Maslow*, (ed) E. Hoffman, Thousand Oaks, CA: Sage, 26–32

------- (1969). “The farther reaches of human nature,” *Journal of Transpersonal Psychology*, 1(1), 1–9

-------- (1954). *Motivation and personality.* New York, NY: Harper.

--------- (1943). “A theory of human motivation.” *Psychological Review*, 50, 370–96.

Masten, A. S., & Garmezy, N. (1985). “Risk, vulnerability, and protective factors in developmental psychopathology,” in *Advances in Clinical Child Psychology*, eds. B.B. Lahey and A.E. Kazdin, New York and London: Plenum Press, 1-52

Mathur, Anil, George P. Moschis and Euehun Lee (1999), “Stress and Consumer Behavior: Coping Strategies of Older Adults,” *Journal of Marketing Practice*, 5 (6/7/8), 233-47

Mauss, M. (1950). *The Gift*, translated by WD Halls. Abingdon, UK: Routledge. Original edition, “Essai sur le don.”

McDonald, S (2014), “Voluntary Simplicity”, in *The Routledge Companion to Alternative Organization,* (ed) Parker, M., Cheney, G., Fournier, V. and Land, C., Oxon and New York: Routledge , p 210-9

McLuhan, Marshall (1964), *Understanding Media: The Extensions of Man*, New York: McGraw –Hill

McQuarrie, E. F., & Mick, D. G. (1999). “Visual Rhetoric in Advertising: Text-Interpretive, Experimental, and Reader-Response Analyses.” *Journal of Consumer Research*, *26*(1), 37-54.

Mick, D. G., Pettigrew, S., Pechmann, C. C., & Ozanne, J. L. (Eds.) (2012). *Transformative consumer research for personal and collective well-being*. Routledge: Kindle Edition

Mick, D. G., & Fournier, S. (1998). “Paradoxes of Technology: Consumer Cognizance, Emotions, and Coping Strategies”. *Journal of Consumer Research*, *25*(2), 123-143

Milanovic, Branko (2005) *Worlds Apart: Measuring International & Global Inequality*, Princeton University Press: Princeton

Ministry of Communications and Information Technology, Government of India http://deity.gov.in/sites/upload_files/dit/files/Digital%20India.pdf

Mitcham, C. (1994). *Thinking through technology: The path between engineering and philosophy*. University of Chicago Press.

--------- (1979), "Philosophy and the History of Technology", in *The History and Philosophy of Technology*, ed George Bugliarello and Dean B. Doner, Urbana, Illinois.

Mitra, A. (2010), *Alien Technology: Coping with Modern Mysteries*, Kindle Edition: Sage Publications.

Mohammada, Malika (2007), *The foundations of the Composite Culture in India*, New Delhi: Aakar Books

Molina E. (2000). "Informal nonkin networks among homeless Latino and African American men". *American Behavioral Scientist,* 43, 663–85

Mori, M. (1970). "Bukimi no tani (The uncanny valley)", *Energy*,7 (4), 33-35.

Morozov, E (2013), *To Save Everything, Click Here: The Folly of Technological Solutionism,* Public Affairs Books: Kindle Edition

Moustakas, C (1994), *Phenomenological Research Methods*, Thousand Oaks. CA: Sage Publication

Mumford, Lewis (1970), *The Pentagon of Power,* Harcourt: Brace Jovanovich

Munn, N (1983) "Gawan kula: Spatiotemporal control and the symbolism of influence". In E. and J. Leach, eds., *The Kula: New Perspectives on Massim Exchange*. Cambridge: Cambridge University Press, p. 277-308

Murdock, Graham, Paul Hartmann, and Peggy Gray (1992), "Contextualizing Home Computing: Resources and Practices," in *Consuming Technologies*, ed. Roger Silverstone and Eric Hirsch, New York: Routledge, 146–60.

Nakata, C. and Weidner, K. (2012), "Enhancing new product adoption at the Base of the Pyramid: a Contextualized Model," *Journal of Product Innovation Management*, *29*(1), 21-32.

Nardi, B and V. O'Day (1999), *Information Ecologies: Using technology with heart*, MA:MIT Press

Nippert-Eng CE. (2002). "Boundary work: sculpting work and home". In *Cultural Sociology*, ed. L Spillman, p. 79–86. Oxford: Oxford Univ. Press

Norris, P (2001), *The Digital Divide: Civic Engagement, Information Poverty and Internet Worldwide*, Cambridge University Press: Cambridge

Nye, D. E (2006). *Technology matters: Questions to live with*, Cambridge, MA: MIT Press.

---------- (1996). *American technological sublime*. MIT Press.

Oberholtz C. and B. Richard (2015), "Google's effort to bridge digital divide comes up short, report says", http://www.kctv5.com/story/28531592/googles-effort-to-bridge-digital-divide-comes-up-short-report-says#ixzz3v9GsbtGp, updated April 16, 2015. Retrieved 23rd December 2015.

OECD (2001) 'Understanding the Digital Divide', OECD, Paris. www.**oecd**.org/internet/ieconomy/1888451.pdf . Retrieved 1st February 2015

O'Guinn, Thomas C and Russell W. Belk (1989), "Heaven on Earth: Consumption at Heritage Village, USA," *Journal of Consumer Research,* 16 (September), 227-238

Oldenziel, Ruth (1999), *Making Technology Masculine: Men, Women and Modern Machines in America, 1870-1945*, Amsterdam University Press

-------- (1992), "Gender and the meanings of Technology: Engineering in the U.S, 1880-1945," PhD dissertation, Yale University.

Otnes, C., Lowrey, T. M., and Shrum, L. J. (1997). "Toward an understanding of consumer ambivalence". *Journal of Consumer Research*, *24*(1), 80-93.

Overing Kaplan, J (1981), "Review Article: "Amazonian Anthropology"', *Journal of Latin American Studies,* 13 (1), 151-64

Overing, J (1996), 'Who Is the Mightiest of them All? Jaguar and Conquistador in Piaroa Images of Alterity', in *Monsters, Tricksters and Sacred Cows,* (ed) J.Arnold Charlottesville, Virginia: University Press of Virginia

Panda, Tapan Kumar (2007), *Building Brands in the Indian Market* , New Delhi: Excel Books

Pavia, Teresa M. and Marlys J. Mason (2004), "The Reflexive Relationship between Consumer Behavior and Adaptive Coping," *Journal of Consumer Research*, 31 (Sept), 441-54

Payne, R. K. (Ed.). (2010). *How much is enough?: Buddhism, consumerism, and the human environment*. Simon and Schuster. Kindle Edition

Pitta, D. A., R. Guesalaga, and P. Marshall (2008), "The quest for the fortune at the Bottom of the Pyramid: Potential and challenges," *Journal of Consumer Marketing,* 25 (7), 393–401

Polletta F and Jasper JM. (2001). "Collective identity and social movements". *Annual Review of Sociology,* 27, 283–305

Postman, N. (2011). *Technopoly: The surrender of culture to technology*. Vintage.

Prahalad, C. K. (2012), "Bottom of the Pyramid as a Source of Breakthrough Innovations," *Journal of Product Innovation Management*, *29*(1), 6-12

Prahalad, C. K., and A. Hammond (2002). "Serving the World's Poor, Profitably." *Harvard Business Review,* (September), 48–57

PTI (2015)[a], "Microsoft to bring low-cost broadband to 5 lakh villages: Satya Nadella," http://indianexpress.com/article/technology/tech-news-technology/microsoft-plans-to-take-low-cost-broadband-to-5-lakh-villages-nadella-during-meet-with-pm/, September 27th, 2015. Retrieved on 23rd Dec 2015.

PTI (2015)[b], "Google CEO Sundar Pichai expected to visit India this month, meet PM Modi," http://www.indiatvnews.com/business/india/google-ceo-sundar-pichai-expected-to-visit-india-meet-pm-modi-20638.html, Updated 4th December, 2015, Retrieved on 23rd December 2015.

Quack, Johannes (2011). *Disenchanting India: Organized Rationalism and Criticism of Religion in India.* Oxford, New York: Oxford University Press. p. 213

Radjou, N., Prabhu, J., & Ahuja, S. (2012). *Jugaad innovation: Think frugal, be flexible, generate breakthrough growth*. John Wiley & Sons, New Delhi

Radman, Zdravko (1997), *Metaphors: Figures of the Mind,* London: Kluwer.

Rangaswamy, N., & Sambasivan, N. (2011). "Cutting Chai, Jugaad, and Here Pheri: towards UbiComp for a global community". *Personal and Ubiquitous Computing*, *15*(6), 553-64

Rashid, A.T. and Rahman, M. (2009), "Making profit to solve development problems: the case of Telenor AS and the village phone programme in Bangladesh", *Journal of Marketing Management*, 25(9). 1049-60

Ratzan, L (1998), *Making Sense of the Web: A Metaphorical Approach*, Unpublished Doctoral Dissertation, The State University of New Jersey, New Brunswick, New Jersey,

Raven, B. H. (1992), "A power/interaction model of interpersonal influence: French and Raven thirty years later," *Journal of Social Behavior & Personality*, 7(2), 217-44

Ritson, M., & Elliott, R. (1999). "The Social Uses of Advertising: An Ethnographic Study of Adolescent Advertising Audiences". *Journal Of Consumer Research*, *26*(3), 260-277

Riviere, P.G (1984), *Individual and Society in Guiana,* Cambridge: Cambridge University Press.

Roberson, J., & Nardi, B. (2010). "Survival needs and social inclusion: Technology use among the homeless." in *Proceedings of the 2010 ACM conference on Computer supported cooperative work,* ACM, 445-448

Roberts, J.L (2008), "The Rich are feeling "Luxury Shame"', Newsweek, 11/28/08 at 7:00 PM, online edition, http://www.newsweek.com/rich-are-feeling-luxury-shame-85301

Rogers, Carl. (1959). "A theory of therapy, personality relationships as developed in the client-centered framework.". In (Ed.) S. Koch. Psychology: A study of a science. Vol. 3: Formulations of the person and the social context. New York: McGraw Hill

Rogers, E. M. (2003), *Diffusion of Innovations* (5th ed.). New York: Free Press

Rokach, A. and H. Brock (1998), "Coping with loneliness," *Journal of Psychology*, 132(1), 107-27.

Romanyshyn, R. D. (1989). *Technology as symptom and dream*. Psychology Press. Kindle Edition

Ross, Andrew (1991), *Strange Weather: Culture, Science and Technology in the Age of Limits,* New York: Verso

Rozin, P., Hormes, J. M., Faith, M. S., & Wansink, B. (2012). " Is Meat Male? A Quantitative Multimethod Framework to Establish Metaphoric Relationships". *Journal Of Consumer Research*, *39*(3), 629-643. doi:10.1086/664970

Ruth, J. A., and R. O. Hsiung (2007), "A family systems interpretation of how subsistence consumers manage: The case of South Africa," in *Advances in International Management series,* 20, eds. J. A. Rosa and M. Viswanathan, Oxford: Elsevier, 59–87.

Ryan, J. C., & Durning, A. T. (1997). *Stuff: The secret lives of everyday things* (No. 4). Seattle, Washington: Northwest Environment Watch.

Sahlins, Marshall (1974), *Stone Age Economics*, Oxfordshire: Routledge

Salomon, Jean-Jacques (1984), "What is Technology? The issue of its Origins and Definitions," *History and Technology*, 1 (2), 113-116

Sangal, P.P (2015) , "Defining a Poverty Line for India", *Financial Express*, May 22nd , published online at : http://www.financialexpress.com/article/fe-columnist/defining-a-poverty-line-for-india/74725/

Sawhney, H (1996), "Information Superhighway: Metaphors as Midwives", *Media, Culture and Society,* 18(2), 291-314.

Scarboroto, D (2012), "From Co-Creation To Cultures Of Circulation: Understanding Market Dynamics In Value-Creating Networks," Unpublished Dissertation, Department of Marketing, Schulich School of Business, York University, Toronto, Canada M3J1P3.

Schau, Hope J., Albert M. Muñiz Jr., and Eric J. Arnould (2009) "How Brand Community Practices Create Value." *Journal of Marketing, 73* (5), 30-51

Schau, Hope Jensen and Mary C. Gilly (2003), "We Are What We Post? The Presentation of Self in Personal Webspace," *Journal of Consumer Research*, 30 (December), 385–404

Schouten, John, and J. McAlexander (1995), "Subcultures of Consumption: An Ethnography of the New Bikers," *Journal of Consumer Research, 22* (June), 43-61

Schudson, M (2015), "What sorts of things are thingy? And what sorts of thinginess are there? Notes on stuff and social construction", *Journalism*, 16 (1), 61-4

Schwartz, B. (2004, January). *The Paradox of Choice: Why more is less*. New York: Ecco.

Segal, Howard (1985), *Technological Utopianism in American Culture,* Cambridge, MA: MIT Press

Selfe C and R. Selfe (1994), "The Politics of the interface: Power and its exercises in electronic contact zones, " *College Composition and Communication*, 45, 480-504.

Semple D, Smyth R (2013). "Psychomythology*."* in *Oxford Handbook of Psychiatry,* ed David Semple and Roger Smyth, Oxford: Oxford University Press. p. 20.

Sen, Amartya (1999), *Development as Freedom*, New York: Random House

---------- (2005), "Contrary India," *The Economist*, November 18th, available online at http://www.economist.com/node/5133493

Sharff, J. W. (1998), *King Kong on 4th Street: Families and the Violence of Poverty on the Lower East Side*, Boulder, CO: Westview.

Sherry, John F., Jr. (1990), "A Sociocultural Analysis of a Midwestern American Flea Market," *Journal of Consumer Research,* 17 (June), 13-30

Sheth, Jagdish N. (2011), ''Impact of Emerging Markets on Marketing: Rethinking Existing Perspectives and Practices,'' *Journal of Marketing*, 75 (July), 166-82

Simanis, E (2012), "Reality Check at the Bottom of the Pyramid," *Harvard Business Review*, https://hbr.org/2012/06/reality-check-at-the-bottom-of-the-pyramid/ar/1, Retrieved on 23rd December 2015.

Skidmore, Monique (2003) "Darker than Midnight: Fear, Vulnerability, and Terror Making in Urban Burma (Myanmar)." *American Ethnologist*, 30(1),5–21

Slack, J.D (1989), "Contextualizing Technology" in *Rethinking Communication. Paradigm Exemplars 2*, ed: Dervin, B, Grossberg L and Wartella, E. A, Newbury Park, CA:Sage, 329-45

Snow DA, Anderson L. (1993). *Down on Their Luck: A Study of Homeless Street People*. Berkeley: University of California Press

Soskice, J. M (1985), *Metaphor and Religious Language*, Oxford: Clarendon Press, p 15.

Spiggle, S. (1994). "Analysis and Interpretation of Qualitative Data in Consumer Research". *Journal of Consumer Research*, *21*(3), 491-503

Spinuzzi, C (1999), "Grappling with distributed usability: A cultural-historical examination of documentation genres over four decades," *SIGDOC Proceedings 1999*, 16-21

Standage, T. (1998). *The Victorian Internet: The remarkable story of the telegraph and the nineteenth century's online pioneers*. London: Weidenfeld & Nicolson.

Stiegler, Bernard (2012) “Interview: From Libidinal Economy To The Ecology Of The Spirit,” translated by Arne De Boever, *Parrhesia*, No. 14, p9-15,available online at http://www.parrhesiajournal.org/parrhesia14/parrhesia14_stiegler.pdf

------- (1998), *Technics and Time, 1: The Fault of Epimetheus.* Stanford University Press*:* Stanford, California.Translated by Richard Beardsworth and George Collins p. 17, 82

Strauss, Anselm (1978), *Negotiations: Varieties, Contexts, Processes and Social Order*, San Francisco : Jossey-Bass.

Strauss, Anselm L. and Juliet M. Corbin (1998), *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 2nd edition. Thousand Oaks, CA: Sage Publications.

Subrahmanyam, S. and Gomez-Arias, F.T. (2008), “Integrated approach to understanding consumer behaviour at the bottom of the pyramid”, Journal of Consumer Marketing, 25(7), 402-12

Sujan, Mita, Harish Sujan, James Bettman, and Theo Verhallen (1999), “Sources of Consumers’ Stress and Their Coping Strategies,” *European Advances in Consumer Research*, 4, 182–87.

Swami Vivekananda (1893), “Reason and Religion”, in *Complete Works of Swami Vivekananda, Volume 1, Lectures and Discourses.* Available online: http://www.ramakrishnavivekananda.info/vivekananda/volume_1/lectures_and_discourses/reason_and_religion.htm

Szerszynski, B. (2008). *Nature Technology and the Sacred*. John Wiley & Sons.

Terrero, R. (2009). “Inconspicuous Consumption Is In for 2009 and Beyond”, *Travel Agent*, 334(4), p. 10.

Tharoor, Shashi (2007), *The Elephant, the Tiger, and the Cell Phone: Reflections on India, the Emerging 21st Century Power*. New York: Arcade Publications

Thibodeau, P H and Boroditsky L (2011), “Metaphors We Think With: The Role of Metaphor in Reasoning”. *PLoS ONE,* 6(2): e16782. doi:10.1371/journal.pone.0016782

Thompson, C. J., Locander, W. B., & Pollio, H. R. (1989). “Putting Consumer Experience Back into Consumer Research: The Philosophy and Method of Existential-Phenomenology”. *Journal of Consumer Research*, *16*(2), 133-146

Thompson, C. J., Pollio, H. R., and Locander, W. B.. (1994). “The Spoken and the Unspoken: A Hermeneutic Approach to Understanding the Cultural Viewpoints That Underlie Consumers' Expressed Meanings.” *Journal of Consumer Research*, *21*(3), 432–52.

Thompson, Craig J., and Zeynep Arsel (2004), ‘‘The Starbucks Brandscape and Consumers’ (Anticorporate) Experiences of Glocalization,’’ *Journal of Consumer Research*, 31 (3), 631-42

Tienda, M., & Aborampah, O. M. (1981). “Energy-related adaptations in low-income nonmetropolitan Wisconsin counties.” *Journal of Consumer Research*, 8 (3), 265-270.

Tilley, C (2001), “Ethnography and Material Culture,” in *Handbook of Ethnography*, eds. Paul Atkinson, Sara Delamont, Amanda Coffey, John Lofland and Lyn Lofland, London: Sage Publication, 258-72

Tsakiris†, M., and Haggard, P. (2005). “Experimenting with the acting self.” *Cognitive Neuropsychology*, *22*(3-4), 387-407.

Turkle, S (1980), “Computer as a Rorschach,” *Society*, 17, 15-24

Turner R.H. (1969). “The public perception of protest”. *American Sociological Review.* 34(6), 815–31

Umble, D. Z. (2003). *“Sinful network or divine service: competing meanings of the telephone in Amish country.”* In “*New Media, 1740-1915”*, (ed) Gitelman, L.and Pingree, G. B. (2003). MIT Press: Kindle Edition. Ch 6

Underlid, K. (2007). “Poverty and experiences of insecurity: A qualitative study of 25 long-standing recipients of social security.” *International Journal of Social Welfare*, 16(1), 65–74.

Valaskakis, Kimon (1979), *Conserver Society: A workable alternative for the future*. New York: Harper and Row

van Manen, M (1990), *Researching lived experience: Human Science for an action sensitive pedagogy*, Albany: State University of University Press

Varman, R., & Vikas, R. M. (2007), “Freedom and consumption: Toward conceptualizing systemic constraints for subaltern consumers in a capitalist society.” *Consumption, Markets and Culture*, *10*(2), 117-31.

------- (2006), “The Unfree Consumers: Consumption and Freedom under Subaltern Conditions,” *Academy of Marketing Science Review*, 10 (2)

Varman, R., Skålén, P., & Belk, R. W. (2012). “Conflicts at the bottom of the pyramid: Profitability, poverty alleviation, and neoliberal governmentality,” *Journal of Public Policy & Marketing*, *31*(1), 19-35.

Veblen, Thorstein (1901), “Industrial and Pecuniary Employments,” *Publications of the American Economic Association*, 2 (1), 190-235.

Veblen, Thorstein (1904), *The Theory of Business Enterprise*, available online at http://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCMQFjAB&url=http%3A%2F%2Fprecisionmi.org%2Fmaterials%2Fbusinessmat%2Ftheoryofbusenterprise.pdf&ei=PWBCVaTIHIPdmAXG8IGoAg&usg=AFQjCNFJpzqqhdvtzkoco25pgjjrRYWgrA&bvm=bv.92189499,d.dGY

Viseu, A., Clement, A., & Aspinall, J. (2004). "Situating privacy online: Complex perceptions and everyday practices." *Information, Communication & Society*, *7*(1), 92-114.

Viswanathan, Madhubalan, Jose Antonio Rosa, and James Edwin Harris (2005), "Decision Making and Coping of Functionally Illiterate Consumers and Some Implications for Marketing Management," *Journal of Marketing*, 69 (1), 15-31.

Wagner D, Cohen MB. (1991). "The power of the people: homeless protesters in the aftermath of social movement participation." *Social Problems,* 38, 543–61

Wallendorf, Melanie and Eric J. Arnould (1991), "'We Gather Together': Consumption Rituals of Thanksgiving Day*," Journal of Consumer Research,* 18 (June), 13-31

Warschauer, Mark (2003) *Excellent Technology and Social Inclusion: Rethinking the Digital Divide,* MIT Press: Cambridge

Weinberger, D. A. (1990), "The construct validity of the repressive coping style," in *Repression and Dissociation: Implications for personality theory, psychopathology and health*, (ed) J. L. Singer, Chicago: University of Chicago Press, 337-86.

Weinberger, D. A., Schwartz, G. E., and Davidson, R. J. (1979). "Low anxious and repressive coping styles: Psychometric patterns of behavioral and physiological responses to stress," *Journal of Abnormal Psychology*, 88(4), 369–80.

Werner, E. E., & Smith, R. S. (1992). *Overcoming the odds: High risk children from birth to adulthood*, Ithaca and London: Cornell University Press.

------ (1982), *Vulnerable but Invincible: A study of resilient children*, New York: McGraw-Hill.

Wild, S (2013), "Bridging the gaping digital divide," http://mg.co.za/article/2013-08-16-00-bridging-the-gaping-digital-divide, 16th August 2013, Retrieved 23rd December 2015

Wilken, R (2013), "An exploratory comparative analysis of the use of metaphors in writing on the internet and mobile phones," *Social Semiotics*, 23 (5), 632-647.

Williams, A. M (2010), *Metaphor, Technology and Policy: An investigation of the Alberta Supernet,* Unpublished doctoral dissertation, University of Calgary, Alberta.

Williams, Colin C. (2005), *A Commodified World? Mapping the Limits of Capitalism*, London: Zed Books

Wilson, A. E., and Darke, P. R. (2012). "The optimistic trust effect: Use of belief in a just world to cope with decision-generated threat." *Journal of Consumer Research*, *39*(3), 615-28.

Winner, Langdon (1977), *Autonomous Technology*, Cambridge, MA: MIT Press

World Bank (n.d.), (http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21606738~pagePK:64257043~piPK:437376~theSitePK:4607,00.html).

Wright, B. R. E. (1998). "Behavioral intentions and opportunities among homeless individuals: A reinterpretation of the theory of reasoned action." *Social Psychology Quarterly*, 61, 271-86.

Yun, M. H., Han, S. H., Hong, S. W., & Kim, J. (2003)." Incorporating user satisfaction into the look-and-feel of mobile phone design." *Ergonomics*, *46*(13-14), 1423-40.