Producing TV(s): The Multitudinous Life of Television in South India

by

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Dedication

To my parents, Janaki and Rambabu Chirumamilla, who put up with my odd anxieties to try and come to terms with the constitution of the world that had made them, and thus grasp the world which had made me. To my sister, Siri, who believed that I could get this degree done far more than I ever did.

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Abstract

This project considers how television, materially and discursively, became embedded within everyday South Indian media life. Instead of taking the national broadcaster, *Doordarshan,* and the domestic space as central to the everyday experience of television in South India, I instead examine a broader range of non-domestic spaces, such as the television repair shop and the video parlour, in order to better discern the people, spaces, networks and forces that were necessary to imbue the television (and the television set) with its qualities of everydayness and ordinariness. Television's becoming ordinary, I argue, occurred through spaces and practices of instability, rather than the imposed certitude of corporate or state-run broadcasters or within the closure of the domestic realm. These instabilities have had considerable effect on how everyday mediated life in South India life is managed, articulated and produced.

In the first chapter, I explore the space of the television repair shop to gauge how the changing materialities of the television set exposes wider changes in labor practices and prevailing notions of technological obsolescence and innovation. The second chapter examines how the technologies of video and the VCR were crucial to generating television's mundane desirability by materially binding cinema to the portability and possibilities of the television set, breaking it out of its associations with the state broadcaster. In the third chapter, I examine the efforts by the Central Government to implement a conditional-access system on cable television distribution in India in the early 2000s, and consider how this effort presaged contemporary

desires for media infrastructures that could render media consumers and their choices

individually and universally legible across the chain of distribution. I furthermore consider how

we can understand policy documents not merely as bureaucratic instructions, but as bearers of

aspirational governmental affect---affect that has material consequences and enactments.

In the final chapter, I examine a recent effort by the Andhra Pradesh government under

Chief Minister Chandrababu Naidu to build a statewide optical-fiber broadband network, AP

Fiber. I consider how cable television was enrolled into this project of digital infrastructure,

despite its material unsuitability for AP Fiber's aspirations, and how television viewers were re-

imagined as customer-citizens. I also examine the contemporaneous effort by the Central

Government to digitalize television across India . I consider how rhetorics of "convergence"

undergirded both projects, and examine how desires for digitally-mediated convergence reside

uneasily alongside the potential for surveillance.

In the coda, I articulate the need for a more dialectical reasoning of television's presence

within everyday South Indian life, and consider scholarly strategies by which this might be

achieved.

Introduction:
To Think Through the Ordinariness of Media Things

Television, far from home

"There wasn't any work, before." Chinna the television repairman said, refusing tea as we sat on chairs and plastic stools at an awkwardly-placed large wooden table in the front courtyard of my grand-uncle's house in a village in coastal Andhra Pradesh, rain drumming steadily through the slowly-decaying roof, while my grand-uncle and his friends—all men– listened to the conversation, interjecting with their own memories of when TV had shown up in the village. The early 1990s, everyone agreed on, though the exact year was a matter of some debate.

"Before ETV[1] came," Chinna continued, "there wasn't any work for the TVs. I mean, every day they would turn it on for 1/2 hour, wouldn't disturb it, and then they would switch it off and go to sleep. What happens nowadays is that whenever you switch it on something in Telugu will come, so they just put on some program. When the TV's running for 24 hours, what happens is that some part is going to go bad. And that's why mechanics benefited when ETV came."

The transformation that Chinna illuminates here—that at one point, the television was a thing without pervasive purpose in people's everyday lives, switched off and kept aside, and that it had to (and did) *become* something that people were willing to run for 24 hours, "just putting on some program"—is one that is integral to the lives of all everyday media objects, to those

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[1] *Eenadu Television*, a major Telugu-language cable television channel.

devices that sit in the background of our daily media interactions, of the ongoing activities that constitute our sense of an unremarkable normalcy. The myriad stories embedded within television's *becoming* a device that could sit comfortably within the rhythms of Telugu viewers' daily lives are ones that have not been explicated—to say nothing of the more basic questions of what viewers thought of watching on television and when.

Chinna's description of early television experiences—where viewers "would turn it on for 1/2 hour, wouldn't disturb it, and then...switch it off and go to sleep"—indicates that television's place within people's lives was hardly stabilized as a constant at its introduction. The constancy of ordinariness was something that had to be created. But what could produce this sensibility of a medium-always-available, always worth keeping on? And how has the nature of what constitutes an ordinary media object changed (or *been* changed)?

In his book *Television and Everyday Life*, media scholar Roger Silverstone writes

> Television accompanies us as we wake up, as we breakfast, as we have our tea and as we drink in bars. It comforts us when we are alone. It helps us sleep. It gives us pleasure, it bores us and sometimes it challenges us. It provides us with opportunities to be both sociable and solitary...We take television for granted in a way similar to how we take everyday life for granted...Our experience of television is of a piece with our experience of the world: we do not expect it to be, nor can we imagine it to be, significantly otherwise.[2]

Silverstone's assertion that we could not imagine television to be "significantly otherwise" from our everyday experience of the world rings true in the media-saturated contemporaneous moment in India. But Chinna's comment—delivered as part of a longer rumination on his own beginnings

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[2]Roger Silverstone, *Television and Everyday Life*. London: Routledge, 1994, p.3

and work as a television repairman—highlights a living awareness that television was indeed imagined and materially experienced in different ways over the course of its entry into South Indian media life. The television, in other words, had to be *made* unexceptional in a particular way to facilitate its constant integration into daily life. The punctuated viewing practice Chinna describes—a practice that is then transmogrified into something else altogether—was not, in his telling, a practice that facilitated the widespread uptake of television by viewers.

Lynn Spigel, whom Silverstone cites as a scholar who has thought about the ways in which we have had "to learn how to incorporate the medium [of television] into our lives," writes in her book *Make Room for TV* that television's absorption into white, middle-class American daily life in the 1950s was not only (or even primarily) a direct result of corporations marketing prowess and the whims of network executives. Instead, Spigel argues that television's increasing popularity in the postwar period "was rooted in modern American culture and its long-standing obsession with communication technologies."[3] This obsession, Spigel documents, took complicated shape through a wide range of venues, viewers, and contemporaneous media, such as popular print magazines that imagined the various ways in which the television might be incorporated into domestic life. The discursive object of television, she reminds us, was constructed in a diverse range of fields: "architecture, interior design, pedagogy, social science, psychoanalysis, and others."[4]

Central to the accounts that Spigel works with is an assumption that television is a medium intended to fundamentally shape the *domestic* space and family-based sociality. David Morley, for example, writes in *Family Television* that

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[3]Lynn Spigel, *Make Room for TV: Television and the family ideal in postwar America.* Chicago: University of Chicago Press, 1992, p.7
[4] Spigel, *Make Room for TV,* p.8

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...television can be seen to provide in one sense an alibi, in other sense a context, for

encounters between family members, where the content of the television programme they

are watching together may often simply serve as a conversation. In this kind of instance,

television is being used for something which is more than entertainment. It is being used

as a focus, as a method for engaging in social interactions with others. So, far from

simply disrupting family interaction, television is being used purposefully by family

members to construct the occasions of their interactions, and to construct the context

within which they can interact.[5]

This move to center domestic life within the study of television was not limited to the Anglo-American context. The first section of Purnima Mankekar's foundational 1999 study of Indian television, *Screening Culture, Viewing Politics*, is titled *Fields of Power: The National Television Family*. She furthermore argues that in India "during the late 1980s and early 1990s, the 'viewing family' was constituted as the primary target audience for television, which was then put to the task of constructing a 'national family.'"[6] But the actual television *set*—the device essential for the creations of broadcast programming and the "national family" to begin entering and molding the domestic space and the relations contained therein—was also liable to show up in other, far less family-friendly, environments during this same time period. Bombay-based reader Rupchand Assanmal's letter in the October, 7, 1983 issue of *Screen*—titled "Video or vulgarity menace?"— illustrates the point rather vividly:

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[5]David Morley, *Family Television: Cultural Power and Domestic Leisure.* London: Comedia, 1986, p.11
[6]Purnima Mankekar, *Screening Culture, Viewing Politics: An Ethnography of Television, Womanhood and Nation in Postcolonial India*, Durham: Duke University Press, 1999, p.47.

``Like the private liquor cells, where one can get adulterated liquor, unlicensed video

parlours have sprung up to entertain one with all kinds of films. With the coming of this

new menace, the cinema industry is finding itself in doldrums.

Along with these parlours, there have been restaurants, libraries and even spacious

garages which have been screening films on video. What is our government doing to

check this menace? Teenagers and children are found in such parlours, thus neglecting

their studies. But this is not all. Just to wean the audience away from video, some clever

producers have made films like "Aao Pyar Karen" [*Come, let's make love*], and "Private

Life," vulgar posters of which are seen pasted everywhere."

Video, instead of television, is the focus of this reader's ire, yet the material point I wish to make

stands—to watch a videotape, one (usually) needed a television set, and the environment of the

video parlour was hardly one that reflected the domestic environment imagined as central to the

experience of television. (Let us put aside the other intriguing assertion in this letter—that illicit

films were not just *on* video, but also *competed with* video to draw back cinema-going audiences

who had strayed.) Television sets were among the objects acquired by police on their raids of

video parlours, as illustrated in an article from the December 7, 1984 issue of *Screen* describing a

series of raids on small video parlours in Bombay. I paraphrase some of *Screen*'s findings here:

From the Ganesh Video Centre in Pipe Lines, Saki Naka: Tamil and Malayalam cassettes

were seized...The proprietor and gatekeeper were arrested; the 250-strong audience had

been watching a Hindi film, *Kamyaab*. From Vijay Electronics in Santacruz (East), 427

cassettes of Hindi and English films, a National VCR, a National TV, "and some other

small equipments" were seized. The owner was arrested.

In belaboring this point—that the television set was encountered in locations outside the home and contexts far from the containment of the domestic—I wish to open up the terrain of what we might consider the "ordinary" or expected environment of television. That the domestic environment—and the imagined family audience—was one that the national broadcaster *Doordarshan* explicitly targeted is not in question here. But whether the domestic environment was the one in which television was *most often* encountered and experienced is a somewhat different question. What would the story of television look like if, instead of taking the state broadcaster and its maxims—a focus on the domestic environment, an emphasis on Hindi-language broadcast content—as the focal point of our inquiry into television, we instead considered the other stories that the television *set* itself could lead us to?

The world of "television" would exist in a markedly broader space than the imagined "living room", encompassing video parlours, television repair shops and the offices of municipal broadband projects, to name just a few non-domestic locations. Doordarshan's programming choices would be one option in a mutating world of regional-language video, scrappy cable networks, and (eventually) privately-operated regional-language television channels and media conglomerations.

If television viewers were on the one hand imagined to encounter the television primarily through broadcast content and within the domestic environment, imaginations of what constituted television *production* were similarly constrained. In *Below the Line*, media scholar Vicki Mayer writes that

> The study of media production through its human subjects and their real-life experiences help bound the definition of the television producer as creative and professional...In one sense, producers were extraordinary individuals, possessing creative capabilities

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countering the forces that turned other workers into a faceless mass. In another sense, producers were ordinary members of the professional class. Lacking a gender, race or other cultural features, the professional producer worked in a closed system defined by shared class objectives.[7]

My study of television moves away from this imagination of producers, as a distinct (or unmarked) professional class. My interlocutors—who were all men, mostly from the dominant-caste Kamma and Reddy groups—engaged in aspects of television not linked to production or consumption. Local cable operators, television repairmen, local-access channel creators—even the employees of the AP Fibernet municipal broadband project—were not individuals who would necessarily be demarcated as "creative professionals," yet they were crucial to ensuring that television could maintain its semblance of continuity within viewers' everyday lives and rhythms. What sort of imagining of television would take their labor and lives as central to the experience and availability of the medium?

In her book on undersea cable infrastructure, *The Undersea Network*, media scholar Nicole Starosielski—writing about imaginations of the Internet and the realities of cable infrastructure—observes:

Although the Internet is often imagined as a clean and durable technology, something that will eventually be extended everywhere at little cost, this vision fails to register the extensive financial, social and environmental investments required to establish new systems and maintain existing ones. Taking this into consideration, we might think about

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[7]Vicki Mayer, *Below the Line: Producers and Production Studies in the New Television Economy*. Durham: Duke University Press, 2011, , p.7

the Internet not as a renewable resource but as a precarious platform, especially as

moving our data to the cloud often entails increased dependence on undersea links.[8]

Television, I think, could also benefit from a similar project of re-imagining and de-centering. In

moving away from the national broadcaster and the space of the home for my analysis of

television, I instead think through the potential of television's portability, its entwining with

popular cinema (through the equally under-appreciated technology of video), the way in which

its technological transformations were embedded within transformations of labor and knowledge,

and how television (at least, in its South Indian incarnation), portended issues and challenges we

might be tempted to think of as newly formed in our digital moment.

The ordinariness of television, I argue, was not a quality produced through its association

with domesticity, or even the state's efforts to bind the medium to itself. Rather, the ordinariness

of television—the possibility of it becoming an unremarked-upon piece of daily rhythm and

routine—was produced through its tense co-existence with other media such as cinema, was

forged within other ways of knowing and working with technological devices and systems, as in

the repair shop. To come to terms with the making of television's ordinariness is to necessarily

venture outside of the home and the closure of the domestic environment. This being said, we

should not then detour straight to the studio, or to the "creative professionals" we most

commonly associate with the labor of making media. Distribution has as much to tell us as

production or reception, and most of my account of television is drawn from workers who would

most comfortably situate themselves within the work of distributing television (whether sets or

signals) to the viewer.

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[8]Nicole Starosielski, *The Undersea Network.* Durham: Duke University Press, 2015, p.13-14.

Bringing television sets into unremarkable being

In emphasizing "ordinariness" in this introduction, I draw inspiration from the philosopher Stanley Cavell, who writes in his essay "The Uncanniness of the Ordinary" that "I might describe my philosophical task as one of outlining the necessity, and the lack of necessity, in the sense of the human as inherently strange, say unstable, its quotidian as forever fantastic."[9] The banality of contemporary television in India was a thing produced through material and discursive contention, divergence and mutation. Ideas of what television ought to be (for the Indian people? for development? for entertainment? for both those things and neither?) were debated over within Doordarshan, to say nothing of what was being shown on televisions outside of Doordarshan's purview.

As William Mazzarella writes, examining the Kheda Project, a local television broadcast service in rural Gujarat that was later subsumed to Doordarshan and the National Network:

> Recall the SITE producer who laments arriving too late in a village full of enthusiastic viewers. Behind the apparent regret lies the true perversity of expertise: the expert would secretly arrive too late to put his expertise into practice than arrive on time and have to contend with the unruliness of an open-ended social engagement.[10]

Putting television within people's lives—the act of rendering television ordinary, we could call it—was not, as Mazzarella lays out, an act that was clearly defined or easily executed, even with the might of the government. Of this period of television's development—roughly from the 1950s to the late 1980s—Manjunath Pendakur[11] writes that it represented a new kind of

[9]Stanley Cavell, "The Uncanniness of the Ordinary," *Tanner Lectures on Human Values,* 1982, p.84-5.
[10]William Mazzarella, "'Reality must improve': The perversity of expertise and the belatedness of Indian development television," *Global Media and Communication* 8, iss. 3 (2012): 238.
[11]Manjunath Pendakur, "Political Economy of Television in India," in *Transnational Communications*, edited by. Gerald Sussman and John A. Lent, p. 234-5.

collaboration between the elite and the government, as the purpose of the national communicative infrastructure was turned from one that was meant to serve the very poorest in society to one that would answer the demands of the (then) newly-emerging elite "middle classes."

The introduction of color television broadcast captures the changeling nature of what the government deemed necessary for "ordinary" Indian citizens quite well. Initial telecasting in color, per Penadakur[12], began with the 1982 Independence Day celebrations at the Red Fort in Delhi, along with three premier international events: the Seventh Conference of the Non-Aligned Nations Movement (chaired by Gandhi), the Commonwealth Heads of Government Meeting, and lastly (and most spectacularly), the 1982 Asian Games in New Delhi. It was in service of promoting and spreading the visual spectacle of these events that the Central government embarked upon its project of rapidly expanding the television network—and thus embedding it within its citizens' everyday lives—in the early 1980s.

Pendakur[13] describes Vasant Sathe (the-then Minister of Information and Broadcasting), answering criticism about this push into color broadcasting (at the expense of other governmental services such as a national adult education program and a community health workers' program) by claiming that "educational programs would be more convincing in color," and that peer nations such as Nigeria, China and Sri Lanka had already moved on to color. There was an extensive infrastructural push[14] to realize the vision of color broadcast accessible by the majority of India's population (despite what little help it would do in meeting their immediate concerns). The number of television transmitters across India had increased eightfold between

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[12] Pendakur, "Political Economy of Television in India," p.242-3
[13] Pendakur, p.243.
[14] Pendakur, p.244.

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1973 and 1983. 133 transmitters were added in two years after 1983 and the Asiad, and by 1988 there were 258 transmitters, reaching nearly 72 percent of the country.

Pendakur[15] points to the "supremacy" of television within the national plans of the period, particularly the Fourth (1969-1974), Fifth (1974-1979) and Sixth (1980-1985) Plans. The Fourth Plan witnessed the biggest jump in financial allocation for broadcasting—both radio and television—whereas the Fifth Plan saw television's allocation overtake radio's for the first time (509.8 million rupees for television, compared to 384 million for radio). The Sixth Plan would see this allocation further increased to 869.5 million rupees.

The expansion of the television network was directly tied to the lightening of import restrictions on electronics components—color television and its components were a particular focus of these liberalized import laws. These shifts in electronics trade policies, unsurprisingly, directly impacted the material availability of television sets. Suddenly, they were everywhere. *TV & Video World*, a magazine dedicated to television and video equipment reviews and culture, began publishing in December 1983. There was enough interest (and equipment to analyze and review for its base of subscribers) that by April 1984 it could publish a guide to buying VCRs (followed the next month with a guide to buying color TVs.) Arvind Singhal and Everett Rogers note that the number of television sets in India increased from 2.8 million in 1983 to 6.8 million in 1985, with an estimated five television sets being sold every minute in 1988.[16] To those audiences who could afford a television set (or those entrepreneurs seeking to make a living from it), television sets were suddenly (and dramatically) far more available than they had been in previous decades.

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[15]Pendakur, p. 245
[16]Arvind Singhal and Everett M. Rogers, *India's Information Revolution.* New Delhi: Sage Publications, 1989, p 67.

The availability of television sets—whether to be placed in homes, community viewing centers or video parlours—substantially increased following the Indian government's lifting of restrictions on electronics imports in the early 1980s. Atul Kohli (echoing Pendakur's analysis of Indira and Rajiv Gandhi's communication policies) theorizes this period of "liberalization" not so much as the government stepping back from regulatory responsibilities and allowing the amorphous "market" to act as it would, but rather as a period of transformed and intense state intervention. Kohli argues that the Indian government abandoned its "left-leaning, anti-capitalist rhetoric and policies"[17] to instead develop interventions that prioritized economic growth and imagined Indian capitalists and industrialists as allies to be embraced.

Consumer electronics manufacture in India was dominated by television until the 1990s.[18] Until the government's wider "pro-business" policy shift in the late 1980s and early 1990s, the manufacture of television sets in India was widely the responsibility of the "small-scale industries" sector. The importance given to small-scale industries in electronics practice, Eswaran Sridharan writes, distinguished the Indian electronics-manufacturing industry from the Korean and Brazilian industries in significant ways. Sridharan also observes that this emphasis on small-scale industrial production of television sets led to a kind of "uncompetitiveness" trap in the 1970s and 1980s: the domestic industry was unable to avail itself of bulk purchasing of components and parts, and ignored moves towards using transistors and IC (integrated circuits) in television sets because their assembly required partial automation of the manufacturing and testing processes. These automated processes were introduced to Indian television manufacture by the largest *private* television manufacturing firms, Weston and Dyanora (as opposed to the

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[17]Atul Kohli, "Policies of Economic Growth in India, 1980-2005: Part 1, the 1980s," *Economic and Political Weekly*, v.41 no.13 (Apr. 1-7, 2006), p.1252.
[18]Eswaran Sridharan, *The Political Economy of Industrial Promotion*, p.145.

myriad number of smaller state-run television manufacturers that graced that pages of *TV and Video World*).[19]

Economist KJ Joseph writes that television manufacture in particular seemed to take off after the policy changes were implemented in the early 1980s, with televisions growing from 36% of the Indian consumer electronics sub-sector in 1981 to 71% in 1987. Joseph also observed that the single item of television comprised nearly 28% of India's *total* electronics manufacture in 1989.[20] This increased output was made possible by an increase in imports—rather than televisions being manufactured entirely within the country, kits (in either "complete knock-down" or "semi knocked-down" form) were imported from European and East Asian corporations and assembled within India. Joseph writes that this contributed to the increasing rate of imports in India, contributing to a drain of foreign exchange out of India.[21] In a different register, the foreign "kit" nature of increasingly-available television sets in India was alluded to in advertisements scattered throughout *TV & Video World*, where—for example—a December 1985 advertisement for Orson colour television sets claimed that "We've implanted a little bit of Japan in India." Another advertisement in the same issue, for the Hotline 2001 Digital Television, described the set as "a stunning West German Digital technology, that has rocketed present-day entertainment electronics to the computer age!"[22]

Singhal and Rogers observe that while India's television audiences expanded rapidly as a result in the mid 1980s—accompanying these transformations in policy and television sets' general availability—television viewers still only constituted about 12 percent of the population

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[19] Sridharan, p.173.
[20] K.J Joseph, "Growth Performance of Indian Electronics under Liberalisation," *Economic and Political Weekly*, v.24, no.33 (August 19, 1988), p.1916. https://www.jstor.org/stable/4395237.
[21] Joseph, p.1919.
[22] *TV & Video World*, December 1985.

by 1988.[23] Singhal and Rogers also note the television manufacturing industry experienced a slump in sales, following the government's re-imposition of duties on imported electronic components. However, they also noted that by this time, there were several *hundred* small-scale television manufacturers in the country,[24] a number that would come down substantially by the 1990s and the entry of multinational manufacturers such as Samsung, Sony and LG into the Indian market.

Making the mediated region manifest: caste and capital in coastal Andhra Pradesh

And yet, for all this investment on the national scale into embedding Doordarshan within the everyday media practices and patterns of people's everyday lives, my interlocutors did not necessarily pinpoint Doordarshan or the National Network as particularly important *to them* or their recollections of how television had made its way into their work and leisure. To my interlocutors, it was the regional and local that took precedence: the availability of Telugu-language programming, or the rumors and perceived chutzpah behind the rise of various local media barons and personalities. Part of this perhaps had to do with the nature of the area in which I was conducting my research: the Krishna and Guntur districts of coastal Andhra Pradesh, and the particular dominant caste community to which most of my interlocutors and myself belonged, the Kammas.

As S.V. Srinivas has observed, the relationship between the Telugu-language media industries and the coastal region's landowning caste communities was a longstanding one. Srinivas writes that the early Telugu film industry was an "industry of peasants,"[25] drawing from

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[23]Arvind Singhal and Everett M. Rogers, *India's Information Revolution.* New Delhi: Sage Publications 1989, p.60.
[24]Singhal and Rogers, p.84.
[25]S.V. Srinivas, "Making of a Peasant Industry: Telugu Cinema in the 1930s-1950s," *BioScope: South Asian Screen Studies*, vol.1, no.2 (2010), p.172. doi: 10.1177/097492761000100207.

Harish Damodaran's[26] observation that—among a host of other industries like machinery manufacture and sugar mills—landowning castes invested the proceeds of their farms into the cinema industry, building cinema halls as well as investing in feature film production and distribution. This interest and investment in media industries was multifaceted. Kamma capital—usually rural capital—formed the basis of major regional newspapers, television networks, and cinema producers. The tight linkage of caste, capital and entrepreneurial endeavors is not exclusive to Andhra Pradesh. Sharad Chari's account of the knitwear factories of Tirupur[27] in the neighboring state of Tamil Nadu bears similarities in regard to its observation that the agrarian Gounder caste—through marriage and social relations—controlled capital inflows and the means of production in the factory town. Industrialization did not necessarily entail a breaking of caste linkages and benefits.

In a working paper for the Overseas Development Institute, political scientist K. Srinivasulu[28] notes that though the Kammas comprised only 4.8% of the Andhra region's population in the 1921 Census of India (the last in which a breakdown of caste groups was included), they controlled most of the important political positions and owned much of the land (by some estimates, nearly 80% of the land in the Krishna and Guntur districts of coastal Andhra Pradesh). Kamma landholdings and power were especially concentrated in the current-day coastal areas of Andhra Pradesh, where my research was conducted. Dalel Benbabaali[29] notes that the social mobility of the Kamma caste in the post-Independence period bore a specific kind

[26]Harish Damodaran, *India's New Capitalists: Caste, Business and Industry in a Modern Nation*. New Delhi: Permanent Black, 2008, p.98-100.
[27]Sharad Chari, *Fraternal Capital: Peasant-Workers, Self-Made Men, and Globalization in Provincial India*, p.114-5. Stanford: Stanford University Press, 2004.
[28]K. Srinivasulu, "Caste, Class, and Social Articulation in Andhra Pradesh," Overseas Development Institute,
[29]Dalel Benbabaali, "Caste Dominance and Territory in South India: Understanding Kammas' Socio-Spatial Mobility," *Modern Asian Studies*, v.52, no.6 (2018), 1938-1976. DOI: 10.1017/S0026749X16000755.

of spatial character: even after migration to the cities, Kammas rarely let go of their rural

landholdings, maintaining ownership and investment in their properties and the surrounding area.

International migration did nothing to quell this: as Sanam Roohi[30] has noted in her study of U.S.

based Non-Resident Indians' investments in Guntur, investment and "development" projects

funded by diasporic Indians from the region were sharply delimited on caste lines. Kamma

diasporic capital was utilized in the maintenance of Kamma-held properties in a Kamma-

dominated district. Of Roohi's interlocutors, the sharpest critics of the state-diaspora partnerships

that colored local investment were marginalized Dalit activists, who observed acidly that

diaspora investors were "not actually doing any development, because development was about

'uplifting' everyone, particularly those considered backward, whereas the NRI Kammas were

only interested in 'uplifting their own caste.'"[31] Development, in other words, was simply a

contemporary way to maintain a longer-standing caste hierarchy in the area.

The Dalit-Bahujan intellectual Kancha Ilaiah Shepherd has written of landowning castes

such as the Kammas that they functioned as "neo-Kshatriya" connecting links between the

dominant Brahmin-Baniya castes and the lower castes and Dalit-Bahujan communities.[32] The

continuance of Brahminical dominance, Shepherd writes

would have weakened substantially as a result of spreading modernity into the villages

but for the emergence of the neo-Kshatriya cultural forms. Thus, the neo-Kshatriyas have

become the saviors of Brahminism. However, they are also operating as a rootless social

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[30]Sanam Roohi, "Transnational citizens as 'development partners' in Coastal Andhra." In *Provincial Globalization in India: Transregional Mobilities and Development Politics*, eds. Carol Upadhya, Mario Rutten and Leah Koskimaki. New York: Routledge, 2018.
[31]Roohi, p.98.
[32]"Brahmin" and "Kshatriya" are references to the Hindu *varna* system of social division, drawn from the text of the *Manusmriti*. "Brahmin" refers to priests, "Kshatriyas" are warriors, "Vaishyas" are merchants, and "Sudras" are menial labor. Dalit-Bahujan peoples fall out of the categorization altogether, and are marginalized and discriminated against on this supposed basis. See Richard G. Fox, "*Varna* Schemes and Ideological Integration in Indian Society," *Comparative Studies in Society and History*, vol. 11, no.1 (January 1969): p.27-45.

force. They are reluctant to own up to the culture of Pochamma and Maisamma in which they are actually rooted; at the same time they are rebuffed by Brahminism which does not want to extend to them the status of the *dwija* [twice-born] castes. Despite this they continue aggressively to identify themselves with Brahminism and with the Hindutva that it is producing in order to subvert democratic relations in the political and economic structures that are basically the by-products of Dalit-Bahujan socio-political subsystems.[33]

In highlighting Shepherd's assessment of the Kammas' troubled (and quite violent) insistence on linking themselves to structures of Brahminical dominance, I wish to point out the necessity of thinking through the relations between the ties of cultural "traditions" and contemporary practices of media industry and finance. Even in a mundane manner, most of my interlocutors relied on informally-disbursed loans, capital from their family landholdings (usually medium-sized, mostly under 10 acres), and contacts through friends and family to begin their small businesses.

The recognition of my surname as a Kamma one visibly settled some of my interlocutors when I came to their doors seeking to ask them questions, and the throwaway remark I sometimes received of knowing "someone like you" (who had usually succeeded at some unremarkable entrepreneurial endeavor) points to the pervasive, punishing banality of caste's structuring of everyday life. If this is an everyday story of television in Andhra Pradesh, it is also—in some ways—a glimpse into how a particularly Kamma-dominated media industry came to be rendered the default through which television for the Telugu-speaking public would have to be engendered.

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[33] Kancha Ilaiah, *Why I Am Not a Hindu: A Sudra Critique of Hindutva Philosophy, Culture, and Political Economy*, p.38. Calcutta: SAMYA, 2002.

The majority of my interlocutors—multi-system operator owners, local cable operators, and the authorized service center proprietors and engineers—were also Kamma. Part of this perhaps has to do with the limitations of the snowball sampling method that I used to find persons who would speak to me—Kamma cable operators tended to know other Kammas in the business—but part of it is perhaps also a reflection of the nature of the regional-language media industry (film, television or otherwise) in India. The industry—as slick and contemporary as the technologies themselves could get—still relied on older forms of kin networks and finance to sustain itself, despite the lingering specter of formalized corporations finally setting down roots in cable television. Caste was how these networks (and the accompanying lines of credit and assistance that flowed through them) were structured.

I do not dwell upon the nature of these kin networks in this dissertation, focusing instead upon the television as an ordinary object to expand our appreciation of the spaces in which it finds itself. However, I want to draw attention to anthropologist Sylvia Yanagisako's call to consider how cultural practices, exclusions, sentiments, and familial relationships structure the work of capitalism.[34] Biao Xiang's study of information-technology workers from coastal Andhra Pradesh also illuminates the necessity of thinking through media/technological labor in India as one that is deeply structured by caste histories, relations and practices. In looking at the paths by which information-technology laborers insert themselves into a global economy, Xiang highlights the importance of marriage relations and dowry distributions in providing the initial capital for information-technology workers[35] to begin their journeys abroad. Globalization does not necessarily mean a disavowal or disposal of these place-bound, embodied forms of

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[34]Sylvia Junko Yanagisako, *Producing Culture and Capital: Family Firms in Italy*, Princeton: Princeton University Press, 2002. p.6-7.
[35]Biao Xiang, *Global "Body Shopping": An Indian Labor System in the Information Technology Industry*, Princeton: Princeton University Press, 2007, p.46-49.

connection, and information-technology labor was not the only form of media-technological work that was structured by these forms of sociality and exclusion.

While the work of television still required local investment and physical presence, stories of relatives and friends abroad or in Bangalore and Chennai were sprinkled throughout my interlocutors' conversations with me, speaking to how deeply embedded a particular narrative of diasporic travel, return and progress animated their everyday lives—or at least, the parts of their lives they wished to reveal to me, someone who embodied all of these things and had (to some surprise, to some uncertainty) come seeking their stories. My own presence as a diasporic researcher returned to an ancestral "home" is deeply embedded within the caste history that I have laid out here, and I can only hope it does not detract from the broader story of television in South India that I am trying to tell.

Televisions you can kick: an infrastructural approach to media studies

In her essay "'Stuff You Can Kick': A Theory of Media Infrastructures," media scholar Lisa Parks defines "media infrastructures" as

> …the material resources that are arranged and used to distribute audiovisual content. These resources extend far beyond the studio and screen, and include raw materials such as the sun, electricity, land, water, petroleum, chemicals, heavy metals, plastics, and spectrum. Without these resources, film and television as we know them would not exist.[36]

Parks' focus on the substratum of materials undergirding the very possibility of media production draws from studies of other sorts of socio-technological entities, ranging from early

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[36] Lisa Parks, "'Stuff You Can Kick': Toward a Theory of Media Infrastructures." In *Between the Humanities and the Digital,* edited by Patrik Svensson and David Theo Goldberg. Cambridge: MIT Press, 2015, p.356.

20th-century power grids[37] to Cold War-era large-scale computing systems[38] to knowledge production within scientific and technical communities[39]. In a similar vein to Parks, I want to briefly consider how these studies of wide-ranging "infrastructures" might open up new ways in which we might theorize what (and who) constitutes the media object, and perhaps more concretely answer the question: what might a materialist ethos towards television be able to tell us about how we—as media scholars and workers—imagine its place in our lives?

The relationship between the grand technological systems we might consider "infrastructure" at a moment's notice (dams, power plants, railroads, and so on) and the generation of "modernist" ideologies throughout the 20th and the 21st centuries has long been a subject of considerable interest to scholars of science and technology. David Nye, drawing from historian of science Leo Marx[40], has written about the association of qualities of the "sublime" with large technological projects in the United States, such as the Golden Gate Bridge and railroads[41]. (One might recall echoes of inaugural Indian prime minister Jawaharlal Nehru's own paeans to hydroelectric dams as "temples of modernity" here.[42])

These studies are also reflected in work conducted by historians and anthropologists in colonial and postcolonial societies on the development of large infrastructural projects and their relation to broader imperatives of politics and governance.[43] Timothy Mitchell, thinking through

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[37] Thomas P. Hughes, *Networks of Power: Electrification in Western Society: 1880-1930.* Baltimore: Johns Hopkins University Press, 1983.

[38] Paul N. Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America.* Cambridge: MIT Press, 1996.

[39] Geoffrey C. Bowker and Susan Leigh Star, *Sorting Things Out: Classification and its Consequences*. Cambridge: MIT Press,

[40] Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America.* New York: Oxford University Press, 1964.

[41] David E. Nye, *American Technological Sublime.* Cambridge: MIT Press, 1994.

[42] See Kathleen D. Morrison, "Dharmic Projects, Imperial Reservoirs and New Temples of India: An Historical Perspective on Dams in India," *Conservation and Society* 8, no.3 (2010): 182-95, for a historical contextualization and critique of the centrality of dams in Indian political and cultural conflict.

[43] Rudolf Mrázek, *Engineers of Happy Land: Technology and Nationalism in a Colony.* Princeton: Princeton University Press, 2002.

colonial and postcolonial Egypt, observes that even an entity as seemingly amorphous as the "economy" (and the structure of knowledge needed to apprehend the concept of an "economy") was itself shaped by the collapses of European empires and the rise of new nations across Africa and Asia.[44] Paul Edwards,[45] writing of infrastructural systems as the "connective tissues and circulatory systems of modernity," argues that the condition of being modern and the stability of technological systems are co-constitutive. If stability is generative of modernity, what then of the small-scale failures and workarounds[46] that shape Indian life with technology, even media technologies such as television?

In a turn away from the grandeur of large-scale technological projects and world-spanning theories of modernity, studies of infrastructure have begun to turn their eye towards the fragility and nuances of daily struggle embedded within the seemingly mundane objects and systems that constitute everyday life, across a variety of spaces and lives.[47] David Arnold and Erich DeWald, for example, contend that studying "everyday technologies" in South and Southeast Asia allows us to study devices and modes of life that

> colonial and post-colonial regimes were rarely able (or disposed) to monopolize for
>
> themselves and which passed with seeming rapidity and apparent ease into the work

[44] Timothy Mitchell, *Rule of Experts: Egypt, Techno-politics, Modernity.* Berkeley: University of California Press, 2002, p. 15-17.

[45] Paul N. Edwards, "Infrastructure and Modernity: Force, Time, and Social Organization in the History of Sociotechnical Systems." In *Modernity and Technology*, edited by Thomas J. Misa, Philip Brey and Andrew Feenberg. Cambridge: MIT Press, 2003, p.185.

[46] Sometimes popularized by the mainstream and business press as the especial Indian skill of *jugaad.* See Navi Radjou, Jaideep Prabhu, and Simone Ahuja, *Jugaad Innovation: Think Frugal, Be Flexible, Generate Breakthrough Growth.* New York: Jossey-Bass, 2012. For a more critical analysis of the practice of *jugaad* and the philosophies it entails, see Thomas Birtchnell, "*Jugaad* as systemic risk and disruptive innovation in India," *Contemporary South Asia* 19, iss. 4 (2011), p.357-72.

[47] Historian David Edgerton argues for the centrality of "obsolete" forms of technology throughout historical events popularly assumed to be shaped solely by technological innovation. See David Edgerton, *The Shock of the Old: Technology and Global History Since 1900*, London: Profile Books, 2006.

regimes, entrepreneurial enterprises, recreational activities, social lives and cultural

aspirations of a significant portion of colonial and post-colonial populations.[48]

Urban theorist AbdouMaliq Simone draws from city life in Johannesburg to theorize people's

informal and provisional activities as themselves constitutive of a location's infrastructural

character,[49] given that these activities produce the sense of temporal regularity more commonly

associated with seamlessly operating large technological systems. In their study of the Paris

metro system, sociologists Jérôme Denis and David Pontille[50] describe the "material ordering"

processes that shape the metro system's signage and wayfinding apparatus, focusing on the

simultaneous physical fragility and representational durability embedded within the metro

system's signage; qualities that are actively shaped through the labor of those who work to keep

the signs functioning and functional.

My own efforts to integrate what might be called an "infrastructural appreciation" within

my analysis of television in India draws primarily from these later studies of infrastructure, and

their critical orientation towards contingency, fragility, and human doubt and labor in structuring

a life made with and through all sorts of objects and technological systems. In some ways, media

industry studies has pried open an analytical route toward a deeper appreciation of media

infrastructures in our scholarly construction of the "media" object. John Caldwell's[51] exhortation

to consider "deep texts" and "deep industrial practices" within studies of media industries, for

example, strikes me as a fruitful means by which to consider more traditional "texts" and

[48] David Arnold and Erich DeWald, "Everyday Technology in South and Southeast Asia: An Introduction," *Modern Asian Studies* 46, iss. 1 (2012), p. 3-4.

[49] AbdouMaliq Simone, "People as Infrastructure: Intersecting Fragments in Johannesburg," *Public Culture* 16, no.3 (Fall 2004), p.408-9.

[50] Jérôme Denis and David Pontille, "Material Ordering and the Care of Things," *Science, Technology, & Human Values* 40, iss. 3 (2014), p. 341.

[51] John Thornton Caldwell, *Production Culture: Industrial Reflexivity and Critical Practice in Film and Television.* Durham: Duke University Press, 2008, p.346-49

"productions within the broader entanglement of labor and technologies that critical studies of infrastructure encourage. Caldwell's sensibility towards the research materials television and film scholars ought to consider in their analysis is a sensibility that I consider central to a serious analysis of media infrastructures and the means by which they shape industrial practices and logics.

The multitudinous life of television

In this dissertation, I examine the television both as a material object and as a broader sociotechnical entity linking together disparate actors, industries and imaginaries. I take some inspiration for this approach from studies of infrastructure and science and technology studies. In her book on prepaid water meters in South Africa, the anthropologist Antina von Schnitzler writes that thinking through the water meter is a way of exposing the "techno-politics" that shape ordinary life in South Africa:

> Focusing on a small mediating device like the prepaid meter not only opens a vista on the transformations such devices may produce in households and subjectivities, but also on a number of larger questions concerning citizenship and belonging. Embedded within technologies like the prepaid meter are ethical and political visions and expectations; they are scripted with anticipations of users' behavior (Akrich 1992; De Laet and Mol 2000; Latour 1992). And yet, such technologies are also "unstable" objects (Larkin 2008); once they leave their makers, they can be retooled for other ethical and political projects and reimagined to do work within a multiplicity of formations.[52]

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[52]Antina von Schnitzler, *Democracy's Infrastructure: Techno-Politics and Protest after Apartheid*. Princeton: Princeton University Press, 2017. p.10.

Television was a technological device, as much as it was a broader apparatus the Indian government wished to put into place in order to materially bind together the imaginative stability of the nation-state (Doordarshan's first stations outside of Delhi and Bombay, after all, were in the border cities of Srinagar and Amritsar, in an attempt to counter audiences watching Pakistan's PTV.[53]) The imaginations embedded into television—and the particularities of its physical presence in everyday South Indian life—were myriad, and not necessarily bound to the (seemingly) common-sensical understanding of television as a device meant for the domestic environment and the private audience. The instability that von Schnitzler alludes to in regard to the prepaid water meter is also on display with the television in South India—in the span of thirty-odd years, it has gone from being a technology of governmental imposition to one of illegal entrepreneurial exception to emerging as a facet of a corporate, unified media futurity. Following the discursive and material transformations television underwent can reveal larger implications about the political, economic and social networks that were necessary to inscribe ordinariness upon it.

The anthropologist Brian Larkin writes that we cannot take media for granted; that they need to be "interrogated and not presumed."[54] In particular, Larkin observes, while the material qualities of media technologies might help implement the designs and hopes embedded in their creation, they simultaneously open pathways that lie outside these presumptive designs. Television's instability has so far been under-explored in the Indian context, where the medium has usually been treated as a relatively untroubled extension of governmental imperative (via the state broadcaster Doordarshan) and/or capitalistic rapaciousness (via Rupert Murdoch's STAR

[53]Sevanti Ninan, "History of Indian Broadcasting Reform," Cardozo Journal of International and Compartive Law 5, no.2 (Fall 1997), p.345.
[54]Brian Larkin, *Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria*. Durham: Duke University Press, 2008, p.3

TV and all that followed post-1991). Instead of thinking of television as having undergone a fundamental, shattering change in the tumult of India's opening of its markets to foreign investment, I instead consider how instability has been embedded in the television (and the television set) throughout its history: in video parlours, in local cable networks struggling with the transition to digital transmission, in a set exposed upon a repairman's work-bench.

Thus, I explore how television's ordinariness within South Indian life was generated via moments and spaces of instability, rather than imposed certitude. I also consider how television was crucially bound to other media industries, such as the cinema and (more recently) the infrastructure of the "digital." These entanglements, as much as any television-specific programming or presence, were necessary for television to become embedded within the daily rhythms of mediated life in South India. In thinking about television as a medium that operated in conjugation with other media industries, I draw upon William Uricchio's observation regarding film:[55]

> Although we have historically assumed that film exists as an autonomous medium with its own technologies, institutions, and audiences, there is good reason to argue that such a view is merely an heuristic convenience and that film has from the start been conceptualised within a broader network of media technologies and media practices.

That television, like film, existed from the start within a larger space of media practices and experiences is a relatively unsurprising claim. Yet there are no serious in-depth considerations— at least in the Indian context—given to the impact of cinema-on (or through)-television, despite the number of cinema-related programs and television channels that marked even the early days of both state-broadcast and cable television in the country. The relegation of cinema by scholars

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[55]William Uricchio, "Television, film and the struggle for media identity," *Film History* v.10 (1998): p.118.

of Indian film to the domain of the public—and television, consequently, to the realm of the domestic (and thus, the private)—may have some part to play in this.

But it may also be, as Uricchio points out, a matter of heuristic convenience in the end. To talk about cinema and television (and newspapers, and nowadays, the Internet and its abundance) as distinctive, separable entities would render them easier phenomena to grasp hold of, analytically and otherwise. But it would not do justice to the ways in which—at least for my interlocutors—memories and experiences of one industry or the other bled into each other. Television made a certain kind of sense as a job to some of my interlocutors only *because* of regional-language cinema, not in spite of it. My dissertation attempts to take this intertwining seriously as a condition of ordinary media experience. It is *because* of inter-media entanglement, I argue, that television could become an unremarkable media object in South Indian life.

I open the dissertation by examining the television set within the space of the repair shop. Here, the instability of the television is obvious: television sets arrived in the shop nonfunctional and unable to function as a medium of any kind, and had to be wrestled back into their intended purpose as a pipe for bringing broadcast content to the waiting viewer. While I spent time in both authorized service centers—responsible for brand-specific repair of consumer electronics of all kinds—and in independently-operated television repair shops in the Guntur and Krishna districts, in this chapter I concentrate upon the space of the authorized repair center and the work performed therein. I do this in order to better concentrate upon the changes in sociality and labor wrought by the physical transformation of the technology of the television set.

In his book *Made to Break*, Giles Slade writes that the increasing fragility of consumer electronics "grows from a unique combination of psychological and technological

obsolescence."[56] This quality of technological fragility—and the ideological changes embedded within the maintenance and production of fragile devices—were on display in the authorized repair shop, where fragile things lived unhappily alongside rolling summer brownouts, alongside consumers who could not spare money for authorized repairs that were increasingly unaffordable, with dust that crept into crevices and in heat and damp that corroded connectors. The authorized service center was a space in which the corporate-directed fragility of consumer electronics collided with the pressures of the environment and the ordinary demands of consumers. Repairmen had to manage this ongoing tension through their work of bringing devices back to functionality, and were ambivalent about their continued ability to do so.

In the second chapter, I turn to television's history to consider how its material entanglement with the cinema industry—via the under-appreciated technologies of videotapes and VCRs—affected its uptake into everyday media life in South India. To do this, I look at coverage of video parlours and the nascent video industry in the pages of the film industry trade journal *Screen*, the enthusiast magazine *TV & Video World*, and advertisements and TV schedules in the Telugu-language newspapers *Andhra Prabha* and *Andhra Patrika*. The film industry's imaginings of video and video piracy in the 1980s—when video technologies became readily available enough for small-scale entrepreneurs to mount a challenge to the established business of film distribution via the cinema hall—ranged from moralizing condemnation to barely concealed terror.

Video, I argue, precipitated a crisis of audience recognition for both film and television in India during as it mushroomed across both urban and rural spaces. The industry and the government, respectively, professed anxiety over who watched video, where and why. It was

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[56]Giles Slade, *Made to Break: Technology and Obsolescence in America*. Cambridge: Harvard University Press, 2006. p.262.

video's ability to coalesce new sorts of audiences—audiences that couldn't be rendered visible within the logics that constituted both state-run Doordarshan and the commercial cinema industry's understandings of viewers—that generated profound anxiety and concern in both media industries. Video's recognition and service of a new sort of viewing audience, I argue, structured the form that privately-operated cable television eventually came to take, especially in terms of its focus on cinema-based offerings.

In the third chapter, I turn my attention to the effort to implement a "conditional-access system" for cable television in the early 2000s, and consider its broader impact upon the evolving work of distributing cable television. I also portray the diverse networks of cable industry workers who allied against or in support of the effort, and consider how their divergent imaginations of what cable television ought to be frustrated the government's planned rollout of the conditional-access system to the viewing public. A conditional-access system of television signal distribution required that television signals be encrypted to prevent "unauthorized" viewing. This also meant that viewers would have to possess a set-top box to decrypt the signal for viewing—a set-top box that would simultaneously render them individually legible to advertisers, broadcasters and distributors of cable television. Conditional-access was posited, by the government and some quarters of the cable television industry, as a means to counter the perceived inadequacy of available information on viewer numbers. "Transparency" was the umbrella term that encompassed this desire for increased information and surveillance in press coverage of the rollout and industry debates, and it was presented as the solution to an opaque and ill-understood conception of audiences that animated the business of cable television distribution.

Of transparency, the anthropologist Amy Levine has written that

...transparency cannot be emptied out because it is already so. It is by definition a windowpane that is easily seen through or an explanation that is easily understood. Emptiness is thus more than a trait of transparency; it is its defining mode. Other "virtual" objects and practices like the "network" (Riles 2000), auditing (Strathern 2000a, 2000b), accounting (Maurer 2002a), human rights (Riles 2002) and information and communications technology (Strathern n.d.) also share this mode of being "no-thing." (Bateson 1998:11).[57]

Far from being "no-thing," as I show, the work of television distribution was a materially fraught process, reliant on persons and technologies who could not always comply with the emerging industrial desires for individualized legibility and precise figures that could somehow generate a comprehensible notion of an audience. However, Levine's point on the nature of transparency and its emptiness remains a pertinent one. It was the desire for an empty, clear "transparency"—characteristics in such sharp contrast to the existing web of in-person negotiations, sociability, and informality that structured cable television—which drove regulatory imaginations of cable television's possible futures and technical solutions, such as the "conditional-access" system, for its improvement. Industrial, governmental, and regulatory desires for a transparency that simultaneously illustrated a system of cable television-yet-to-be would animate the nascent (and fast-growing) ideas surrounding "Digital India" that would take center stage in the late 2000s and early 2010s.

The final chapter of the dissertation considers how cable television was enrolled within state-driven discourses of the digital future and its potentiality. I examine the discursive enrollment of television within a larger rhetorics of state-led digital transformation in Andhra

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[57]Amy Levine, "The Transparent Case of Virtuality," *PoLAR: Political and Legal Anthropology Review*, v.27, no.1 (May 2004). p. 94.

Pradesh; an enrollment itself preceded by the national effort to digitalize television signals amidst the delays in implementing a conditional-access system. I do this through a close study of the AP Fiber project, a state-led initiative to deliver broadband internet, phone service and cable television to residents through an advanced optical-fiber cable network. Cable television's discursive enrollment within this project was complicated by the magnitude of material transformation cable television networks would have to successfully undergo in order to integrate with a broader "digital" infrastructure and imaginary.

Furthermore, I consider how the terrain of the "digital" was one overlaid with a future-oriented re-imagination of convergent governance, citizenship, and consumption—a re-imagination that could only be rendered viable through the wholesale implementation of the digital television signal and the plenitude that it promised. Drawing from media scholar Jung-Bong Choi's notion of "digitalization" and Henry Jenkins' foundational theories of "convergence culture," I consider how convergence—while serving as a cultural logic for media consumers and producers to animate their activities—simultaneously serves as a regulatory logic to justify governmental investment in networks of surveillance and intensified, individualized data collection.

Thinking through cable television's uneasy enrollment within the logic of convergence—a logic that increasingly enfolds within it our most mundane media experiences—allows us to consider how existing and emergent media technologies find themselves in mutable, contentious co-existence with each other. To speak of television in our contemporary moment without considering its entanglement within systems of digitally-mediated distribution and consumption makes little sense. Yet it is an entanglement with uneasy beginnings and uncertain resolutions — to subsume our contemporary media experience as one wholly constituted by "digital"

experience does little to uncover the history and contingency that has brought us to where we stand now, as producers, consumers and regulators.

In his 1974 book *Television*, cultural theorist Raymond Williams wrote of technology and human intention that

> A technology, when it has been achieved, can be seen as a general human property, an extension of general human capacity. But all technologies have been developed and improved to help with known human practices or with foreseen and desired practices. This element of intention is fundamental, but it is not exclusive...Thus an explosive may be developed at the command or by the investment of a ruling class, or by the investment or for the profit of an industrial enterprise, yet come to be used also by a revolutionary group against that ruling class, or by criminals against the industrialist's property.[58]

Williams' rejection of a strict technological determinism for a more contingent understanding of how intent manifests and is warped through the use (and abuse) of technologies is, in some ways, at the heart of my project of unpacking the inscription of ordinariness upon television in South India. It is an unremarkable claim to observe that—from the history of video parlours to the initially unsuccessful implementation of conditional-access to the changing patterns of work in television repair shops—the technology of television exceeds and reinstates the boundaries constructed by government, corporations, consumers or regulators. It is in these acts of excess and reinstatement—in the everyday, unstable being-of-television in a world (in *our* world)—that we can come to terms with the myriad ways by which technologies became unremarkable, mundane, ever-present within the mediated background of our everyday lives.

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[58] Raymond Williams, *Television: Technology and Cultural Form.* New York: Schocken Books, 1975. Routledge Classics reprint, 2002. p.132-3.

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Chapter 1:
Innovation, Obsolescence, and Repair

Introduction

"The company is afraid of India," Shekhar said, amusement coloring his voice as he sketched out, on the back of a sheet of crisp white paper, a hierarchy of who worked in his shop. Team leaders, service engineers, himself, the proprietor, and his "co-owner," Chandra. As he drew out his chart, I turned the words over in my head. Shekhar's shop was a repair shop—more precisely, an "authorized service center"—for a large corporation, well-known both in India and abroad, to Shekhar's great pride.

Shekhar—dressed neatly in pressed shirt and trousers, his forehead marked with *tilak* like a devout caste Hindu, his speech peppered with English—continued talking about other topics, as if this were a perfectly anodyne observation. He bemoaned the education and (especially) the morals of the men in his employment, but it was that singular statement which remained with me, days after our conversation.

Corporate fear was an incongruous emotion to invoke, given the space Shekhar inhabited, the space which I had come to try and puzzle out with his workers' help. Surrounding us in his "authorized service center" were the relics of a desirable, settled domesticity: washing machines were in the back, alongside air-conditioning units, refrigerators were lined up in the narrow entryway by the reception desk. Microwave ovens and old cathode-ray tube (CRT) televisions sat on the workspace floor, behind the refrigerators, so that customers had to squeeze carefully

past stacked cardboard boxes, gingerly making their way to the service engineers who worked on the televisions.

The fear that Shekhar spoke of perhaps had more to do with the state of the devices themselves: the drums of washing machines lying nakedly out on the shop floor, subject to cacophonous reshaping with nothing more than a hammer; microwaves whose control boards were studded with insect feces, CRT televisions whose "main boards" were cannibalized for transistors, capacitors and resistors for other repair jobs, for other televisions. The company, Shekhar emphasized, wanted a cleanly demarcated line of control over this process of repair, both parts and process. "India," in his reckoning, had other, contrary ideas.

Shekhar's office itself pointed to both the suspicion and the desire: it was the only enclosed and lockable space in the service center, other than the doors facing the street. Lining the walls around his desk were neatly boxed, bagged, and individually numbered parts; indeed, the sign above his office door was labeled "PARTS," in clean capital letters. If a service engineer had to make any sort of repair on an appliance, they would first have to confront him or Chandra—the "co-owners" of this entire space—in order to obtain the necessary parts for the fix. The encounter was not always pleasant.

Of "things" and "thingness," critical theorist Bill Brown writes,

Temporalized as the before and after of the object, thingness amounts to a latency (the not yet formed or the not yet formable) and to an excess (what remains physically or metaphysically irreducible to objects). But this temporality obscures the all-at-onceness, the simultaneity, of the object/thing dialectic and the fact that, all at once, *the thing seems to name the object just as it is even as it names some thing else.*[59]

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[59] Bill Brown, "Thing Theory," *Critical Inquiry* 28, no.1 (Autumn 2001), p. 5.

The work of repair is one that envelopes this sense of latency and excess—this sense of television's very materiality being *produced* and *negotiated*, culminating in the all-at-once working state of a functional television set—an operational media object capable of being embedded into networks of production and reception. Repairmen's anxieties (surrounding what televisions and television repair once had been and what they were now becoming) were also encompassed in the "thing" of the nonfunctional television set and their labor to render it into an operational object again. In this chapter, using the space of the repair shop and the work of repairmen as an analytical frame, I want to consider how the ordinariness of media objects—their steady, available presence for use as an unnoticed pipe for content and consumption—is generated through labor unrecognized as media-related labor, is laden with anxieties over present and future, and is primarily produced within non-domestic spaces such as the repair shop.

Media scholars have generally understood television as a technology bound to the strictures of the domestic space. Lynn Spigel describes discourses of television in the postwar United States as drawing upon "the more general obsession with the reconstruction of family life and domestic ideals" that animated everyday life in that period.[60] In India, I argue, discourses surrounding television were instead torn between the developmentalist imperatives of the Central government on the one hand and the populist excesses of the cinema industry on the other, a tension I more fully explore in my chapter on television's relation to video and the VCR. In this chapter, I pursue an obliquely related point: that television's ordinariness—that is to say, its condition as a reliably present media *object*—was not produced within the domestic space or solely by the television viewer, but rather within the oscillations, interactions, and tensions of commercial spaces like the repair shop. Television's unstable *thingness*, I argue, has much to tell

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[60] Spigel, *Make room for TV*, 2.

us about the processes and people that render it into an operational object, capable of integrating into the programmatic imperatives of content producers and consumers.

Making media ordinary

In the introduction to his book *The Marvelous Clouds*, media scholar John Durham Peters asks, drawing from Heidegger's notion of technology "at-hand" (though moreso from an "offshore laundering brigade made up of highly diverse spirits," including Bruno Latour and political theorist Richard Rorty): "What if we took technologies not just as tools that chip away at solid materials, but as means by which nature is expressed and altered, at least for human beings?"[61]

The repair shop was a venue in which this processual, fragmented nature of technology came to the fore. It was a site in which one could begin to understand television as a thing made and contested, its viability and possibility subject to the whims of customers and the particular skills of a repairman. In the shop, it was hard to envision the television purely as a phantasmal pipe for content, given the state of most of the sets when they came in. Here, the television was a physical device, first and foremost—hauled in by harried customers, cracked panels still impressed with ghostly afterimages from burn-in, innards home to spiderwebs and years-old tangles of dust, taking up space on the floor and needing to be carefully walked around as one made their way through a (usually quite cramped) work space.

Drawing again from an understanding (and a revision) of Heidegger, Paddy Scannell writes of everyday objects[62],

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[61] John Durham Peters, *The marvelous clouds: Toward a philosophy of elemental media*. Chicago: University of Chicago Press, 2015, p.4.

[62] Paddy Scannell, *Television and the meaning of live: An enquiry into the human situation*. Malden, MA: Polity Press, 2014, p.22.

Everyday things have a 'they' structure (they are for anyone) but upon such structures we impress our selves and in doing so transform them and make them part of our lives. As such they accompany us through life and are the placeholders of meaningful events, places, moments and relationships in the course of a life time. *This* was given me by my wife at the beginning of our relationship before we married. *That* I bought on a particular journey abroad...These are the structures of significance in which we dwell for a while in the round-about-me world of everydayness.

What makes an object an *everyday* object—what imbues it with that character of ordinariness that allows it to sit relatively ignored in the background of our daily rhythms, as television sets so often do? Scannell writes about an object's capacity to function "for anyone"—a capacity he ties quite explicitly to the availability of mass production and the accompanying abundance of objects that followed. Of a toaster, he muses: "Mass-produced goods may be anonymous, impersonal things. But why should they be anything other than this? Their standard, uniform, repeatable character is precisely the mark of their usefulness for anyone and everyone, any time any where."[63]

But are the "standard, uniform, repeatable" mass-produced objects ones that need no attention to maintain their availability to act as placeholders to our everyday lives? The repair shop, at least, provides a venue in which we might begin to think about the ordinariness of the television set—its very capacity for getting into the background of people's lives and media experiences—as a capacity that has to be produced, argued over, worked upon; in spaces distinct from the manufacturing facility or the home. The mundane, unremarkable availability of consumer electronics is an availability that is actively shaped and fashioned; and repairmen were

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[63] Scannell, *Television and the meaning of live*, p.30.

one party to help make it so. The space of the repair shop—and the work of technological,

financial and social negotiation embedded within the work of repair—were necessary conditions

(though obviously not the *only* conditions needed) for the television to attain a character of ready

normalcy in Andhra Pradesh.

Scannell writes that "the ownership of TV sets presupposed a world oriented toward

domesticity; a way of life centered on households, the sphere of privacy, home-and-family,

whose members are free from such time-consuming chores as daily fire-lighting, shopping for

food, cooking, sweeping, scrubbing and so forth." [64]None of this characterization necessarily

holds true for Andhra Pradesh, even in the wealthy rural regions where I worked. Given the

inadequacy of these presuppositions and the world which they inhabit, how are we to understand

the processes by which televisions become objects imbued with ordinariness in *particular* places,

at *particular* moments? Part of the answer lies in discourses surrounding what could be (or ought

to be) *shown* on television—discourses which I will examine in another chapter. But part of the

answer, surely, is to examine more closely the processes that make television a readily available

device to begin with, processes such as repair.

Producing the Indian television

As Anna McCarthy has observed in the context of television in the United States, the

"quotidian geography" of the television stretches far beyond the home and the domestic

audience. McCarthy notes that television "shapes the way we experience a place as public or

private, but not always in identical ways, producing identical meanings."[65] Furthermore, as

McCarthy observes, "there is as much rich material for analysis in the technological and

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[64] Scannell, *Television and the meaning of live,* p. 82.
[65] Anna McCarthy, *Ambient Television: Visual Culture and Public Space*, Durham: Duke University Press, 2001, p.4.

positional forms TV assumes in a space as there is in the images in displays." [66]There is much to learn from looking at the television outside its potential as a platform for content.

What televisual politics can we expose by decentering the television's place within the home, and focusing instead upon the commercial confines of the repair shop? The television, after all was not only an object watched for its programming—it was also an object broken, an object repaired; an object played with, admired, and cursed out. Television repairmen, Lisa Parks observes, were also key to the "social circulation of technical knowledge about television" [67]—they demystified the device and "had the power to make TV become a 'window on the world.'" Their expertise remains especially crucial in India, where infrastructural systems were not imbued with an inherent guarantee of functionality or disturbance-free operation. As Brian Larkin writes in the context of contemporary Nigeria[68], while the promises of "technologies of speed" have greatly impacted expectations, hopes, and desires in postcolonial and developing societies, "it is painfully obvious to people who live there that they often do not work as they are supposed to."

The television set's propensity to mechanical failure—and concomitant discontent with the infrastructural inadequacy it was embedded in—colored early accounts of the television's reception amongst audiences. A 1971 report from a rural SITE (Satellite Instructional Television Experiment) installation in the northern state of Haryana shows that the primary complaint received from the community was about the upkeep of the set—its "maintenance and repairing arrangements were not satisfactory." "Timely repair and proper maintenance" ranked higher than a "regular supply of electricity" as an audience suggestion to improve the installation's

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[66] McCarthy, *Ambient Television*, p.9.
[67] Parks, "Cracking Open the Set: Television Repair and Tinkering with Gender," *Television & New Media* 1, no.3 (August 2000): 259.
[68] Larkin, *Signal and Noise,* p.220.

efficiency. The television's tenuous functionality—and the anxieties that its functioning or breakdown could generate in both viewers and operators—was thus not peripheral to the experience of television in India.

A 1986 report on SITE—prepared in anticipation of the beginnings of nationwide satellite television broadcast—also emphasized the need for ensuring the physical reliability of television sets, recommending that "top priority should be given in central and state government budgets to ensure the installation and maintenance of community TV sets."[69] Breakdown—and the consequent need for repairmen and their knowledge and labor—was viscerally central to the experience of television in India.

However, accounts of television in India have analyzed its politics and its presence in everyday life through a primarily representational register, focusing heavily on the production and reception of various television programs and genres. Early studies of television in India, for example, analyzed television primarily as an educational tool bolted on to existing social development programs and outreach.[70] A focus on television programming and its representational stakes also animates Rajagopal's[71] and Mankekar's[72] foundational accounts of television in the 1980s and early 1990s. Their studies analyze the politics of *Doordarshan*, the state broadcaster, through detailed accounts of its programming choices and its reception by emergent audiences, an approach mirrored by other studies focused on that particular period of

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[69] Eapen, K.E. "SITE Experience: Some Suggestions," in *SITE to INSAT: Challenges of Production and Research for Women and Children,* edited by Binod C. Agrawal and Arbind K. Sinha. New Delhi: Concept Publishing Company, 1986, p.49..

[70] Arvind Singhal and Everett M. Rogers, "Television soap operas for development in India." *Gazette* 41 (1989): 109-126.

[71] Arvind Rajagopal, *Politics after Television: Hindu Nationalism and the Reshaping of the Public in India.* New York: Cambridge University Press, 2001. .

[72] Mankekar, *Screening Culture, Viewing Politics.*

time. Studies of Indian television have also focused heavily on the post-liberalization era of the mid-to-late 1990s [73] and the arrival of Rupert Murdoch's STAR TV in India.[74]

Y.V Lakshmana Rao's early study of mass communication forms such as newspapers and radio in India[75]—a study itself conducted in Andhra Pradesh—observed that mass communication had impacts on everyday life outside of its representational and ideological work. Rao noted that a *dispositional* change was at work as well amongst the elite, a change eerily reflective of the contemporary dreams embedded within the promise of digital infrastructure:

> While the mass, generally, seek the security of the past, the elite seek the promise of the future and are prepared for a policy of change even if they are not agreed among themselves about what shape such change ought to take...Change is initiated by the few, understood by the few, and even used by the few—until the natural processes of communication takes these ideas of the few to the many and whatever benefits may accrue slowly begin to be shared.[76]

Punathambekar and Sundar[77], calling the 1980s a "time of television," have adroitly noted that Doordarshan shaped the quotidian routines of everyday life through its program schedule, priming audiences for the continued presence of television in their lives, echoing the notion of dispositional change that Rao observes. Doordarshan's programming choices—and the broadcaster's reshaping of the imaginative stakes of everyday life—was also accompanied by a

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[73] Shanti Kumar, *Gandhi Meets Primetime: Globalization and Nationalism in Indian Television.* Urbana: University of Illinois Press, 2006, p. 7-14.
[74] Melissa Butcher, *Transnational Television, Cultural Identity and Change: When STAR Came to India..* Thousand Oaks: Sage Publications, 2003, p.14-18.
[75] Y.V. Lakshmana Rao, *Communication and Development: A Study of Two Indian Villages.* Minneapolis: University of Minnesota Press, 1966, p.58-60.
[76] Rao, *Communication and Development*, p. 57.
[77] Aswin Punathambekar and Pavitra Sundar, "The Time of Television: Broadcasting, Daily Life, and the New Indian Middle Class," *Communication, Culture & Critique* 10 (2017): 401."

significant *material* transformation as well, one that shaped the technological contours of the 1980s in India.

As Pendakur,[78] Chakravartty,[79] and Guhathakurta[80] have pointed out, the 1980s were marked by significant policy changes regarding television and video media's material availability: restrictions on electronics imports were lifted or lightened, joint partnerships between domestic firms and international partners increased, and governmental investment in expanding television's infrastructural footprint increased significantly. The lifting of these material restrictions was also accompanied by a shift in rhetoric about the possibilities of pro-business and technology-oriented development and trade policies. Atul Kohli pointedly observes in a review of post-Independence Indian economic policies that Rajiv Gandhi (the prime minister who led most of these consequential changes in television policy) ``dropped the pretense of socialism altogether and openly committed his government to a new "liberal beginning."[81] This new beginning was linked—implicitly and explicitly—to the promises of technology and the new economic structures assumed necessary to foster its development.

Coming to terms with how the ordinary domestic presence of television was produced as a matter of material fact allows us to expose the myriad networks of people, locations, and technologies that were responsible for upholding the regular routine of a life with television. Drawing from a yearlong ethnographic study of television repair shops and cable television operators in small-town and rural parts of the south Indian state of Andhra Pradesh, I use what

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[78] Pendakur, "A Political Economy of Television: State, Class, and Corporate Confluence in India," p. 234-5.
[79] Paula Chakravartty, "Telecom, National Development and the Indian State: a postcolonial critique," *Media, Culture and Society* 26, iss.2 (2004): 229.
[80] Subhrajit Guhathakurta, "Electronics Policy and the Television Manufacturing Industry: Lessons from India's Liberalization Efforts," *Economic Development and Cultural Change* 42, no.4 (July 1994): 849-50.
[81] Kohli, "Politics of Economic Growth in India, 1980-2005: Part I: The 1980s," *Economic and Political Weekly* 41, no.13 (April 1-7, 2006): 1257.

Lisa Parks[82] terms an "infrastructural disposition" to consider what kinds of politics the material presence of the television generated in spaces outside of the home. The chaotic process of technological normalization that shaped the television's presence in people's everyday life—a process embedded within the workings of the repair shop—came to be superseded by the state government's dreams for technologically-enabled, "innovative" futures. These futures were embedded within the terrain of "special economic zones" and within large-scale projects such as AP FiberNet, a statewide municipal broadband network, which I will discuss in more detail at the conclusion of this chapter.

The repair shop was a site where the normalized stability of the television set—its ability to function as a "for-anyone-as-someone" structure, as Scannell terms it[83]—was thrown into question. But it was also in the repair shop that the television set's stability could be renewed and released back into the viewer's world. As such, the repair shop—inhabiting the unacknowledged, messy space of the present moment—presented a challenge to the promises of futuristic, technological seamlessness and integration plastered on billboards and promised in shops, showrooms and by the state.

Futuristic dreams and technological hopes

Historians of technology[84] have observed that technology was deployed by European colonial authorities as a means to materially and symbolically enact their rule over—and their distinction from—their colonized subjects. David Arnold[85] writes that the British in India ``were far from

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[82] Lisa Parks, "'Stuff You Can Kick': Toward a Theory of Media Infrastructures," p.357.
[83] Paddy Scannell, "For-Anyone-as-Someone Structures," *Media, Culture and Society* 22, iss.1 (2000): 9.
[84] Michael Adas, *Machines as the Measure of Man.* Ithaca: Cornell University Press, 1989: p.6-7.
[85] David Arnold, *Everyday Technology: Machines and the Making of India's Modernity.* Chicago: University of Chicago Press, 2013, p.24

neutral in their attitudes to India's existing technology, nor were they diffident about equating

technological progress, as they perceived it, with their own superior civilization."

Brian Larkin, writing of the symbolic and representational power of technological

infrastructure in the postcolony, notes that technology's symbolic import only intensified after

independence, as "infrastructure came to represent the promise of independent rule rather than

colonial supremacy."[86] Jonathan Parry, studying long-distance labor migration to the Bhilai Steel

Plant in central India, makes a similar point, observing that the steel plant was "as much about

forging a new kind of society as about forging steel"—a Nehruvian-era ethos which was then

internalized by the Bhilai workforce, as they cast their own rural roots aside. Workers at Bhilai,

Parry observed, thought the village was "an area of darkness," standing in for the "abstract

moralised qualities of 'backwardness,' 'bigotry,' 'illiteracy' and lack of 'civilisation.'"[87]

The nationalist dream embedded in Bhilai—and exemplified in the architecture of the

then-new capital city of Chandigarh and Prime Minister Jawaharlal Nehru's description of

India's dams as "the temples of modern India"—would be challenged by the actuality of the

technological environments that came to structure everyday postcolonial experience.

Technological life in the postcolony, Brian Larkin notes, is characterized as much by delay,

boredom and failure as it is colored by excitement and potential. "In Nigeria," he writes,

> all technologies are variously subject to the constant cycle of breakdown and repair; the
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> promise of technological prosthesis is thwarted by the common experience of
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> technological collapse. Each repair enforces another waiting period...The experience of

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[86] Larkin, *Signal and Noise*, p.8.
[87] Jonathan P. Parry, "Nehru's Dream and the Village 'Waiting Room': Long-distance labour migrants to a central Indian steel town," *Contributions to Indian Sociology (n.s.)* 37, iss. 1&2 (2003): 221.

slowness comes as a consequence of speed-producing technologies, so that speed and

acceleration, deceleration and stasis are relative, continually shifting states.[88]

The Verghese Group, one of the many commissions called into being by the Central government

to ruminate over what was to become of India's broadcast services, imagined both *Doordarshan*

(television) and *Akashvani* (radio) to possess a transformative potential on par with Nehruvian

dams and factories, noting in its 1978 report on the broadcasters' autonomy that the objective of

a national communications policy would be "to awaken the people, inform, mobilize and educate

them to be democratic citizens...and promote development and accepted national goals." Yet

even these abstracted ideals ran headlong into the concrete realities of what *Doordarshan* and

Akashvani were in the texture of everyday experience.

Both television and radio uptake were hampered by breakdown—physical breakdown of

the community sets meant to promote collective listening, weak tower signals that competed with

videotapes, and programming that did not necessarily reflect the linguistic sensibilities of its

audiences, particularly in South India. By the 1950s, Robin Jeffrey pointedly observed, "Indian

radio...was more likely to be seen as part of the dreariness of daily life from which people were

trying to escape."[89] The experience of these technological systems and their associated media

products was thus riven with contradictions: between their potential and their reality, between the

futuristic temporality that was always out of reach, and the stasis that one was forever trying to

resolve.

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[88] Larkin, *Signal and Noise,* p.236.
[89] Robin Jeffrey, "The Mahatma didn't like the movies and why it matters: Indian broadcasting policy, 1920s-1990s," *Global Media and Communication*, 2, iss. 2 (2006): 207.

Unstable situations: the world of the repair shop

The repair shops I studied fit into a larger ecology of technology-enthusiast magazines, scrap dealers, and corporate and independent service centers, all of which constituted an effort to respond, imaginatively and practically, to the conditions of delay, breakdown and lack that characterized an ordinary life with media technology in India. As several repairmen told me, with a knowing air, children and wives would always *want* to watch their serials and cartoons, and so for the sake of domestic peace it helped to get a television fixed as quickly as possible.

In this chapter, I focus primarily on the repair work carried out at an authorized corporate service center, with additional vignettes from independently-operating television repairmen. In their study of mobile phones in India, *The Great Indian Phone Book*, the anthropologists Assa Doron and Robin Jeffrey illustrated the extensive networks of "gray-market" mobile phone repairmen, whom they termed *mistriis*—emphasizing the artisanal, piecemeal acquisition of their technical skills—and their small electronics shops in the Indian consumer ecosystem; an ecosystem which was also reflected in the world of television repair.[90] Authorized "care centres," Assa and Doron observed, brought a certain diversity to the repair workforce by hiring women to work in "meet-and-greet" roles such as reception and handling forms—something which I also noticed in the authorized service centers and showrooms that I visited. There were no women working in the independent repair shops I visited—they were oftentimes small outfits staffed by just a single repairman.

The authorized service center I worked at was located on the lower level of a large house in a mostly-residential neighborhood in Guntur's "Two Town" area. The landlord's Ford EcoSport was often parked in the driveway behind the gate when I arrived in the mornings,

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[90] Assa Doron and Robin Jeffrey, *The Great Indian Phone Book: How the Cheap Cell Phone Changes Business, Politics, and Daily Life*. Cambridge: Harvard University Press, p.98-102, 104-105.

polished to a bright shine. One morning a 55-inch flat-screen "smart" television set was abruptly sent down to the service center, with explicit instructions from Shekhar and Chandra to examine it as soon as possible. It was, I was later told, the landlord's own television set.

One side of the service center opened up opposite to a small hospital. A yellow banner advertising the state government's healthcare program—and carrying former chief minister N.T. Rama Rao's benevolent visage—was strung across the hospital's front, visible from the center's gate. Patients and visitors from the hospital rested and waited on the service center's sharply-angled driveway, under the bare branches of summer-shriveled trees. The other side of the service center opened onto an extremely narrow lane, where motorcyclists were regularly shouted at by *auto-rickshaw* drivers for blocking deliveries and customers from the center.

The front desk—and the female team leaders working the desk—was separated from the workshop by tinted dark glass, set high in a blue-painted frame behind and to the right of the reception desk. A light blue sofa sat opposite the reception desk, and narrow doorways cut into the blue-painted frame allowed access to the two sections of the service center from the front door: A/V equipment, off to the left, and H/A (home appliance) equipment, straight on. Labeled refrigerators waiting for their owners to return crowded one side of the A/V section, and cardboard boxes were stacked high to the ceiling.

The bosses' office sat in a glass enclosed space, recessed within the workshop space. Their office was also where spare parts were kept and distributed to the service technicians. It was a prioritized space—only its fans and fluorescent lights were allowed to operate on the battery backup when there was a power outage—and it was the only door in the workshop area that had a lock which was used regularly. Most of the technicians worked either right out on the workshop floor (especially with large items such as washing machines), or at long and flat

wooden tables, with rickety drawers set into their undersides. Narendra, my guide to the service center, had two chipped work tables set up right by the partition, so that we looked right at the back of the team leaders' heads and at the customers, silhouetted through the dark-tinted glass. A State Bank of India calendar—already two years out of date—hung on a nail in the partition.

Narendra, the repairman I spent the most time with at the authorized service center in Guntur, was a soft-spoken older man with graying hair, who often wore *tilak* [red powder] and *vibhuti* [ash] on his forehead, caste signs of Hindu devotion. The service center's bosses also adorned their foreheads and held morning prayers in the service center before the morning calls started rolling in, Chandra walking barefoot with the incense sticks to the pictures of the gods by the entrance of the service center to begin his day. Shekhar had also told me once, rather proudly, that he was now something of a temple-going addict these days.

Narendra carried two mobile phones—a large-screened Android device that worked well for taking photographs of device labels and playing YouTube clips, with a ringtone set to a catchy devotional song, and a smaller "dumb" phone. His wife stayed at home looking after his two sons, who were both in primary school (and whose school fees caused him no end of grief). Narendra commuted in to Guntur by passenger train from his village across the Krishna river; a commute that was inevitably turned upside down by delays and breakdowns in service, including an hour and 45 minute odyssey the day the Railway Minister presented his annual budget to Parliament.

He also worked, he told me, as a repairman back in his village, earning income on the side in addition to his salary from the service center. The center, Narendra scoffed, didn't pay him enough considering his experience. The boss, Narendra later told me, was also a cheapskate, sometimes trying to take a cut of the money he and his colleagues earned working on informal

jobs for neighbors and friends. Narendra wondered why the boss had to stoop to this level, given

that the service center already engaged in the usual business of inflated markups on parts and

prices. He shrugged. *Andaru ilage vuntaru, kada?* he asked, expecting no answer. *Everyone's

just like this, aren't they?* It was hard not to agree.

Narendra's main work-tables, which he covered with a faded set of blankets whenever he

had to lay a fragile flat-screen television down on them, were generally littered with the tools of

his trade: orange-and-white analog multimeter, noxious-smelling nitrocellulose thinner and a

toothbrush to scrub it into circuit boards, solder, flux and soldering iron, a black magnifying

lamp that shone bright fluorescent white and wobbled on its cracked base, a cable set-top box

with a coaxial cable that Narendra spliced with a knife and twisted into three connections for

testing different sets simultaneously, and the televisions themselves (accompanied by the

occasional microwave) in various states of disassembly. The soldering iron and magnifying lamp

were mostly reserved for work on CRT (cathode-ray tube) televisions that customers still

brought in, despite a lack of official warranty or guarantee on these devices.

Narendra also set up a mirror on one of the work-tables—leaning it against the

partition—so that he could see what was happening on the television's screen as he worked on

the device. The mirror, again, was more useful for the CRT televisions, which we both thought

were too heavy to move about much after Narendra had hauled them on to the work-table. Flat-

screen televisions were easier to maneuver and prop against surfaces, and generally required less

dedicated hands-on attention, given the limited set of fixes one was allowed to make on them.

That they required less hands-on attention did not impact the price of the repair itself; CRTs were

still generally cheaper to get fixed than flat-screen televisions, even if they did require more raw

labor-power. This disjuncture—between the sheer *effort* required to fix a CRT television and the

potential profit that could be made from it—would define the contours of repair work that I studied throughout the region. Repairmen worked with the televisions customers brought them, and the gap between what was fixable—given the increasing exclusivity, surveillance, and control corporations exerted over their spare parts—and what was profitable was only increasing.

Sailaja, one of the two female "team leaders" who ran the front desk, was the only team leader who regularly came back to the workshops to speak to the repairmen, as she was the one responsible for preparing the final delivery and payment paperwork for the customer, as well as wrangling repairmen's handwritten job sheets into compliance with the online corporate database that the team leaders were in charge of updating. We laughed and nodded awkwardly at each other most days I was there, but she was genuinely curious about my presence, and one morning recruited me to "demo" the working state of a television set to a customer who had come to pick up his television before Narendra had made it into work. Between the two of us, we successfully managed to demo the set, to the customer's mild amusement.

There were few women who worked in repair, either in the independent repair shops or in the authorized service centers. Authorized service centers tended to hire women to perform customer-facing labor such as reception and managing paperwork, rather than in roles that required hands-on work with devices that were brought in for repair. Industrial training institutes, the lower-rung educational institutes where many of my interlocutors trained, were also targeted towards men. Some institutes were exclusively male institutions, while others admitted women, but not necessarily to the electronics courses. One director told me that he admitted women to his industrial training institute, but primarily for training in textiles work. This reflects Judy Wacjman's early assertion[91] that "the securing of technical skills has also been a powerful

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[91] Judy Wajcman, "Patriarchy, Technology, and Conceptions of Skill," *Work and Occupations* 18, no.1 (February 1991): 43-44.

weapon in patriarchal struggles at work, excluding women from those technical skills."

However, it is worth remembering that the gender disparity was (and is) not nearly as severe in

the information technology industries, which dominate the public imagination of what constitutes

a "job in technology". Information technology jobs, as sociologist Smitha Radhakrishnan points

out, are a space for the "enactment of respectable femininity," associated with middle-class

morés and aspirations.[92]

  Repair work, on the other hand, was not necessarily portrayed as desirable or aspirational

labor, even by the repairmen. While they were proud of their individual skills and successes, they

did not necessarily see the job itself as worthy of their children or their children's futures. When

repairmen talked about their education to me—an "NRI," a woman, someone seemingly more

aligned with the new technological economy than the old—it was often in self-deprecating tones.

During my stint at the authorized service center, Narendra was initially suspicious of me, and we

often spent the time in silence, as I watched and took notes while he worked (usually) on a CRT

circuit board. Shekhar was more clearly impressed by my formal credentials, and invited me to

talk to area managers in his office when they came to visit the shop, emphasizing that I was an

American university researcher when he introduced me to the managers.

  Television, oddly enough, broke the silence: Narendra's choice of dramatic relationship-

repairing daytime talk shows as his choice of background entertainment was deeply amusing to

the both of us, and after we both laughed over them he began explaining what he was doing as he

worked, increasingly entertained by my interest and the indecipherable English scrawl on my

notepad. One time we both pored over an introductory electronics book I'd brought to the shop,

in an attempt to begin deciphering what the circuit boards meant. Narendra mentioned he kept a

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[92] Smitha Radhakrishnan, *Appropriately Indian: Gender and Culture in a New Transnational Class.* Durham: Duke University Press, 2011, p. 10-11.

collection of such books at home, as he liked learning from them. While I was not ever a truly *familiar* face to Narendra, given who I was, at some point he decided I was not someone likely to complain to management either, and after this he began sharing his complaints about working in Shekhar's service center as well.

In his classic account of Xerox service technicians, sociologist Julian Orr writes that technicians

> find control to be difficult and ephemeral in this domain, something for them to re-establish in the specific situation, knowing it will only be lost in the use of the machine, and it is their understanding of the machines that is fragile and contingent, known to be true in specific circumstances but uncertain in further application.[93]

This contingency of service technicians' control—structured in the service center by customers' uncertain questions and more abstract corporate demands for reproducible accountability— colored the everyday rhythms of work at the authorized service center. Sometimes Narendra could give a clear, technical explanation to his customers as to why a set had failed and whether it would again; sometimes he simplified technical problems into a story; sometimes, the set was simply what it was, and it was up to the customer to continue trying to live with it. Many of these conversations revolved around cost and parts—it was not always clear to the customers why particular problems demanded particular solutions, and it was Narendra's task to cajole or explain, as the situation demanded.

In contrast to Shekhar and Chandra's authorized service center—located in a fairly central part of Guntur city—Prakash, an independent repairman I met through a cable operator, worked in a village about 45 minutes' drive from Guntur. His shop was a single room, opening

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[93] Julian E. Orr, *Talking about Machines: An Ethnography of a Modern Job.* Ithaca: ILR Press, 1996, 66.

right out on to the main road that cut through the village, and his work-table served as a good perch to observe the goings-on down the road, everything from cars to coming-of-age processions. The road itself was in good condition, asphalt-paved and unbroken for most of its length—testimony to the financial and political clout of the Coastal Andhra region in regional politics—and was generally a quiet stretch, with brightly-painted residences on the side of the road across from the shop. Prakash also worked on a wooden table, one that nearly spanned the width of his entire shop, with a small CRT television tuned to Doordarshan's Telugu-language channel for Andhra Pradesh, *Saptagiri*. The picture was fuzzy, and the sound tinny and shrill, competing with the rumble of traffic from the road. There was no fan in the shop, just a fluorescent ceiling light and an outlet for the extension cord that powered the soldering iron and television on Prakash's work-table.

Prakash's customers were all locals from the village, and he worked exclusively on CRT televisions, cannibalizing parts from old television sets or buying them in the grey market electronics shops in Jinnah Towers, in Guntur—a place that Narendra went to as well to find replacement boards for the CRT televisions that passed through the service center. Other independent repairmen I met didn't have shops of their own, working on an ad-hoc basis in a small area they traveled around in. Some worked out of their family homes, and one—Shankar— set up shop in a local Telugu Desam Party office. The infrastructural requirements for setting up shop as an independent repairmen were fairly minimal—one repairman I met in Guntur worked out of a converted carpark beneath an office block. In lieu of a front door there was a metal gate, and a steeply sloping concrete driveway leading down into his workshop.

Independent repairmen also worked on their own schedules much as they worked in their own spaces, customers' arrivals governed by the weather or the recurrence of power cuts. The

temporal pressure of corporate service guarantees that shaped workers' schedules in the authorized service centers had no place in these independent shops. But alongside this relatively informal schedule was a lack of printed guarantees or certifications—things that were on prominent display throughout the space of the authorized service center, and qualities that shaped co-owner Shekhar's assessment of the work that was to be performed under his wary eye.

Obsolescence and the anxiety of repairmen

When Narendra brought customers behind the front desk into the workshop space, there was usually a moment where they would silently take in their surroundings—the floor crammed with televisions and refrigerators labeled with handwritten white-and-blue bits of paper, the marriage-counseling reality television show Narendra watched regularly (to Shekhar's dismay) blaring cheerfully on a CRT television being tested, the rusted rings of the soldering iron's holder—while Narendra made last adjustments to their sets or readied his diagnosis and cost estimate.

This pair of customers, a man and a woman, looked uncertainly at each other instead before looking back at us when Narendra brought them behind the front desk to the A/V section where we worked on the television sets. Their television—an older flat-screen LCD television—lay face-down on Narendra's chipped blue workbench, on top of a faded set of blankets. Narendra began to explain what happened to the set: the television's "main board" would have to be replaced. The man joked about the 3-month warranty on the replacement part, wondering if he would have to bring it in again in a few months' time. It was not a bad question—Narendra himself told me he thought that the flat-screen televisions had an overall lifespan of only 5 years, total.

Narendra then showed the customers the television's "main board", off-handedly mentioning that the CRTs—the bulky, boxy televisions with cathode-ray tube picture technology—were much easier to fix, unlike these newer sets. Narendra gestured at the green-and-silver board in his hand while he spoke. These newer parts, he told them, these are harder to fix. The man and woman nodded deferentially—in seeming agreement with his assessment—and the trio headed back out to the front desk, where the customers signed some paperwork and deposited their advance payment for the repair.

Obsolescence, Evan Watkins writes in *Throwaways*,[94] is not a natural phenomenon. Rather, it is a concept that must be actively produced, both ideologically and materially. The ideology of obsolescence—the determination that a given technology (or a given job, a given person) is no longer relevant to the relentless progression of society—is always, Watkins writes, dialectically bound up with (re)imaginings of the relations of progress, the relations of "innovation." Where a determination of obsolescence is made and materially enforced, there too lies a certain vision of what the future ought to be. The process, Watkins notes, is constantly shifting, temporally limited in its reach: "innovation can only be innovation for the time being." In the creation and enforcement of obsolescence lies the imagination of innovation, of futurity and movement away from the imagined ills of the present moment.

Drawing from Ernst Bloch, who noted famously that "not all people exist in the same Now,"[95] Watkins observes that to recognize obsolescence as produced in the present is to break the links between obsolescence and a fading, irrelevant past. Temporal concerns, perhaps not unsurprisingly, animated several of my conversations with television repairmen. Most of the

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[94] Evan Watkins, *Throwaways: Work Culture and Consumer Education*. Stanford: Stanford University Press, 1993, p.27-28.
[95] Ernst Bloch, trans. Mark Ritter. "Nonsynchronism and the Obligation to Its Dialectics," *New German Critique* 11 (Spring 1977): 22.

time, an abiding concern with the future—or more specifically, with the lack of a viable future in their line of work—colored our discussions.

The majority of the repairmen I talked to and worked with were from the *Kamma* landowning caste, and thus culturally bound a group[96] that had historically tied itself quite explicitly to narratives of technologically-aided progress.[97] They spoke of children in the major metropolises of Bangalore, Hyderabad, or even further abroad, studying at universities or working in other, more "respectable fields." None of the repairmen I had spoken to anticipated that their businesses or shops would continue after them. Linked to this absence of prospects was an ongoing uncertainty about the present moment, wherein the shifting material natures of the television sets was changing the very nature of the work that was possible for them to do.

These conversations, and the latent anxieties that surfaced within them, forced me to consider—as Watkins does—how obsolescence takes shape in the world. If the production of obsolescence lies entwined with a vision of the future, then it falls to us to ask what kind of future is at work in the procedures that govern an arena such as the company-authorized service center—with its spare parts locked behind the boss' doors, with its printed-up guarantees—and what ways of knowing, learning, and life were being rendered out-of-the-ordinary (or at least, out-of-warranty). The question the anxiety of the repairman poses to us is simply this: what vision of the future undergirds those mundane media technologies that shape or lives, and how is this vision of the future lived with and encountered in the space of the present moment?

The power of repair, Watkins notes, lies precisely in its ability to join up, patch, reshape and redeploy disparate and discarded entities into new and unexpected possibilities. Of repair,

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[96] Xiang, *Global "Body Shopping"*, p.44-5.
[97] Damodaran, *India's New Capitalists*, .p.92-4.

Steve Jackson[98] also writes that it might be considered a "subtle act of care," a means by which the disorder of the world may be contained, and human order precariously knit together. Jackson also writes that repair may be a means by which to counter commodity fetishism, the problem "by which the meaning and politics of technology are obscured, stripped, and neutered."[99] But as Shekhar's office—and Shekhar and his employees themselves—illuminated, this work of care was shot through with ambiguity and colored by competing desires: desires for control, for affordability, for efficiency, for flexibility, profit, or a desire to be of assistance.

Whatever vision of the future lay embedded within the carefully-surveilled spare parts and the service guarantees of the "authorized service center," it was a vision that collided with the chaotic mix of objects that customers brought in for repair: devices such as DVD players whose parts the company no longer supplied, CRT televisions that the company no longer actually sold or serviced (but whose repair still ate up a considerable chunk of technicians' working hours), and microwaves driven to breakdown; innards covered in dust.

Technological time in the repair shop was marked by oscillation, rather than progression: sometimes a recently-released television set with all of the latest features would come in for repair, and the repair would be a simple replacement of a board or the panel. But the repairmen would keep these newer televisions for a day or two longer than was necessary, enjoying the experience of their loud speakers and playing YouTube videos on the large screens. In contrast to the repairmen's attempts to experience the newness of the latest televisions for themselves, customers sometimes abandoned their older CRT televisions at repair shops, filling up backrooms and boxes until the repairmen cannibalized them for parts or called the scrap dealers.

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[98] Steven J. Jackson, "Rethinking Repair." In *Media Technologies: Essays on Communication, Materiality and Society.* Edited by Tarleton Gillespie, Kirsten A. Foot and Pablo Boczkowski. Cambridge: MIT Press, 2014, p.222.
[99] Jackson, "Rethinking Repair," p.230.

The temporal terrain of the conflict voiced by repairmen speaking about their own

work—a conflict between a future already foreclosed and a present marked by definitional

uncertainty—was somewhat alleviated by the very nature of their work. Repair served as a

means by which obsolescence (and the implications of innovation it was necessarily bound to)

could be contested, pushed aside, or ignored, for just that much longer. Outside of these

temporally-oriented questions, the other issue that repairmen's anxieties illuminated was a more

materially-bound one: what did it mean to live and labor with and amongst broken and

obsolescent things, as a condition of everyday life rather than as a rarely-encountered state of

exception?

That the world of everyday objects—electric outlets, televisions, phones, toilets, pipes—

was something to be actively wrestled into functionality was an unremarkable observation, both

to myself and to the repairmen whom I talked to. This is a reality in sharp contrast to prevailing

understandings of technological infrastructure that take its smooth functioning as its

unexceptional state,[100] rather than the fact of a device's normal functioning being embedded in

an ongoing struggling for functionality. How did the reality of the moment — the reality of

breakage and failure — color the ideology of innovation embedded within authorized chains of

service and emerging attitudes of consumption and disposability?

Consumption, as a moral signifier, has marked the post-liberalization middle classes[101] of

India both in public discourse[102] and in private moments.[103] Accompanying this notion of

"moral" consumption was a concomitant notion of consumer goods as disposable and

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[100] Susan Leigh Star, "The Ethnography of Infrastructure," *American Behavioral Scientist* 43, no.3 (1999): 381.

[101] Christiane Brosius, *India's Middle Class: New Forms of Urban Leisure, Consumption and Prosperity*. London: Routledge, 2012, p.4-5.

[102] Leela Fernandes, "Nationalizing 'the global:' media images, cultural politics and the middle class in India," *Media, Culture and Society* 22 (2000): 621-2.

[103] Margit van Wessel, "Talking about Consumption: How an Indian Middle Class Dissociates from Middle-Class Life," *Cultural Dynamics* 16, iss.1 (2004): 98-100.

replaceable. As Giles Slade notes, the "disposability ethic"—along with branding—is intrinsically tied to manufacturers' efforts to market and encourage repetitive consumption.[104]

Repairmen were particularly attuned to this change in consumer behavior, and it was this dispositional change—alongside the specter of the "China item"—which they pointed out as illustrative of a broader material and ideological shift. This material and ideological shift, I argue, was strongly connected to emergent, intertwined notions of quality and control: notions whose instability was embodied in the very work of the repair shop.

Innovation and control in the breaking world

Dead, Narendra said to me one day as he was working on a flat-screen television, was a fixable problem.

He clarified his point later that week, telling me that dead was a category you had to narrow, before he asked me to figure out what kind of dead television set he was working with — all as he unscrewed the backplate to the flat-screen LED television set that lay face-down on the work-bench. I thought about his question — dead (as in entirely nonfunctional) *looked* identical across the many sets that we were working with today. Blank screens did not give up their secrets easily.

But sets were not dead in the same ways, and Narendra was pushing to me to think about the fix, first and foremost. Dead, it seemed, was something to be untangled in the solution.

"Dead" was written on the service center job sheets, which asked for a summation of the problem with the set at the top of the sheet, just below the section for customer information. (It did not seem to be an official category propagated by the company, and neither did "intermediate dead", another state in which television sets commonly found themselves, according to

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[104] Slade, *Made to Break*, p.4.

Narendra's carefully handwritten and carbon-copied job sheets). Dead was also—strangely, but not unsurprisingly—a temporary condition (except when parts were unavailable, or the repair simply too expensive for the customer to bear). While I puzzled out what the problem might be, the power went off in the service center, and the technicians scrambled to switch power over to the battery backup.

Narendra plugged in the LED television to test it, and the service center's battery backup system promptly overloaded, shutting off the lights and fan in the boss' office—something that needed to be quickly rectified, judging by the speed by which Narendra leapt to his feet. Chuckles and curses followed Narendra as he unplugged the set and went to the back of the service center to reset the battery system. He would have to wait for municipal power to be restored before he could figure out the type of dead under which this particular television set fell.

This scenario—a not-uncommon occurrence in the repair shop—exemplified the tension between the potential embedded in technology and the struggle to embed it within the uncertainties of everyday life. Steve Jackson and Ishtiaque Ahmed,[105] in a study of mobile phone repairmen in Dhaka, note that the repairmen thought the environment they lived in—the very heat and humidity of the Bangladeshi capital—caused devices to fail. The television repairmen I encountered in south India also characterized televisions through their environmental tolerances: the older CRT television was "rough and tough", suited for the village and for the laborer and never a real problem to fix up and send back out. The newer LCD/LED flat-screen televisions were "metro," unsuited for rural environments (or rural inhabitants, despite their growing presence in wealthier locals' homes), and subject to expensive and debilitating failures.

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[105] Steven J. Jackson, Syed Ishtiaque Ahmed and Md. Rashidujjaman Rifat, "Learning, Innovation and Sustainability among Mobile Phone Repairers in Dhaka, Bangladesh," *Proceedings of the 2014 Conference on Designing Interactive Systems (DIS '14)*, p.908.

Even the perceived quality of repair work was not immune from the taint which "India" could inflict. Shekhar noted wryly to me that he no longer engaged in the "Videocon" model of repair in his shop, despite having worked at Videocon for several years. At this point, I had only known of Videocon as an Indian brand of consumer electronics. The company made everything from televisions to washing machines, much like the multinational company Shekhar now worked for, and I wondered why he emphasized his distance from the name and all it stood for.

Curious, I pressed him to explain what he meant by "Videocon model." It was, Shekhar said, the "old way" of doing things in India, a way not suitable for the company he presently worked for. Another shop owner, upon hearing that I had spent time in Shekhar's service center, would later tell me that the Videocon model of service involved delaying the repair, interminably, until a customer took matters into their own hands and delivered the necessary beating. Common to both these descriptions was the notion that the Videocon model of repair was peculiarly Indian, specifically regional and thus, consequently, corruptible and damaging in its very essence. India's presence, like Dhaka's, seemed to inhibit both the proper functioning of devices and the approved methods by which their damage might be rectified.

The historian Rudolf Mrázek wrote,[106] musing on Jakarta's new highways:

I recall Jakarta most as it was at the time of the riots in 1997 and 1998. The wide and smooth throughways of the city, then, at last begin to function as designed. Models came alive. Highways, to use Heidegger's term, came forth into becoming. They became arteries...A trip to an interview on the other side of the sprawling city—usually one to three hours of speeding and braking—could now be made in twenty minutes. Horizons opened up or, rather, there were no horizons anymore; only the open road.

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[106] Rudolf Mrázek, "Bypasses and flyovers: approaching the metropolitan history of Indonesia," *Social History* 29, no.4 (2004): 432-3.

The shift Mrázek makes here—from the physicality of Jakarta's newly-built, wide and smooth roads to the deeply affecting exhilaration of "no horizons"—reflects Shekhar's attachment of affective and moral qualities to functioning technological objects and their associated brand names. Videocon televisions were not only technologically deficient in his estimation—suspect to breakdown, suspect to delayed repairs with no real recourse—but were also indicative of an insurmountable affective and moral compromise, a compromise physically embodied in these technological deficiencies.

Part of Shekhar's admiration for his current employer was based, in part, on how he assessed the company's quality. Quality, in Shekhar's estimation, was driven by a fine-grained control. It was control—over the availability of parts, over the moral rectitude and work habits of employees—that Videocon lacked, a lack that Shekhar thought was reflected in their products. Badly-repaired televisions and delayed parts were only the physical instantiations of what Shekhar deemed to be Videocon's corrupt internal nature. In Shekhar's shop, this desirable, fine-grained control was most materially evident in the service center's repair process for new models of flat-screen televisions.

The parts for a flat-screen television were quite carefully tracked: Narendra, the senior repairman, had to request the parts for flat-screen televisions directly from Shekhar, who kept them in his office, the one room in the repair shop with a lock on the door. The needed part was usually one of three things: a "power" board, an "input/output" board, or a "TCON" board. Narendra would bag and label the defective part he had removed from the customer's set, and hand the defective part over to Shekhar, after noting its serial number down in a long notebook he kept on his work-table. All of this was done before Narendra received the actual spare part he

needed to perform the repair. It was Shekhar's responsibility, Narendra later told me, to send all the defective parts back to regional headquarters.

Parts — their (un)availability, their price, the control exerted over them — shaped many of the discussions I had with repairmen, especially independent repairmen. Before I arrived at Shekhar and Chandra's service center, I spoke to two itinerant and independent repairmen— Karan and John— whose routes took them through the villages by Vijayawada, across the river from where I lived in Guntur.

Over cups of milky coffee, Karan told me that repairs "back then" (in response to a question about televisions and tape recorders; he'd only stopped fixing black-and-white televisions in 2008) were markedly different from trying to repair contemporary electronics, because "if parts went (bad), we could put in anything. Now, even if the parts go (bad), we can't do that." It was, he said, just a question of taking out and changing the entire PCB board, rather than fixing the smaller, more specific cause of the problem. Most broken things these days—the "maximum"— went to the scrap heap. It was the difference between USB sticks and cassettes — the USBs were "all motherboard," and thus could not be repaired, just replaced wholesale.

With the increasing scarcity and cost of parts, Karan said — the rupee had changed, the repairs themselves had changed—the repair business itself became more expensive work to live by. Repairmen at the authorized service centers, Karan said, had the luxury of ordering and obtaining the parts they needed, whereas unaffiliated repairmen like himself had to be a bit more creative in their sourcing, buying from scrap dealers and using the still-working parts of other defective television sets.

The service center's tight control over parts was necessary, I was told later by Shekhar, to maintain the company's "name," and its association with "quality." If the parts leaked out on to

the open market, and botched repairs were then made with them, the company's good name

would be compromised. The company's view, according to Shekhar, was that their standing in

the market (and their customers' estimation) came about because they provided "maximum"

service to the customer. In Shekhar's telling, the company's "service" extended to the provision

of guarantees, "genuine" parts and timely repairs.

Key to this whole endeavor was a careful and formalized system of surveilling both parts

and the time spent on repairs, with punitive consequences if target times were not met. The

baseline for responding to a customer issue was 48 hours, and Shekhar showed me on a piece of

paper how he tracked his engineers and intervened as the clock ticked upward. He noted proudly

that over 80 percent of the calls answered by his shop were dealt with within 48 hours. (This, of

course, did not include delays waiting on parts to be delivered, delays which Shekhar termed a

"company mistake," if the 48-hour deadline was exceeded).

In contrast to this tightly time-constrained environment, the repair of CRT televisions

was much less tracked, despite their repair being a far more labor-intensive task. Unlike the

LED/LCD television boards, which Narendra never needed to look at closely enough to justify

using his magnifying lamp, working on a CRT television's main circuit board was a slower,

drawn-out process, as Narendra had to test and check each section of the circuit board to find the

"short" — a process he likened once to looking at train tracks, as he checked current and

resistance on the board with his multimeter.

Unlike the LED/LCD flat-screen televisions, which regularly came in with defective

panels, CRT screens — made out of thick, heavy glass — were rarely broken or cracked, even

after rough rides on the backs of motorcycles or in auto-rickshaws to get to the shop. Most of the

problems, such as they were, were in the main board, the and in the "picture tube," which could

not be repaired, but easily replaced with the picture tube from another CRT television. While Narendra worked to find *specific* problems with the CRT boards—often replacing single resistors, capacitors, or transistors— he didn't engage in with this mode of analysis with the LED/LCD flat-screens, saying that Shekhar and Chandra wanted him to maintain a quicker pace by fixing those televisions as quickly as possible, a pressure most likely mandated by the overarching corporate policy of a 48-hour window for repairs or customer callback.

Narendra was considerably (and somewhat hilariously, in the face of Shekhar's earnest exposition of the company's values to me) less invested in Shekhar's particular idea of quality, and mourned that repairs were priced as high as they were. In his estimation, the company's (and the service center's) foremost motivation was making a profit, even if it wasn't always beneficial to the customer. Repair, in Narendra's view, should primarily have been about figuring out what they could do to help the customer—but these good intentions could (and often were) thwarted by the kinds of authorized parts that were made available to him by the shop.

For example, the cost of a complete panel replacement hardly seemed like a justifiable expense when the problem was a single defective strip of light bulbs in the backlight assembly. But the company only provided complete panels to the service center, not smaller components like strips of light bulbs. Though Narendra tried, he couldn't perform these smaller fixes on flat-screen television panels. He noted disdainfully that fixing flat-screen televisions was dreadfully boring work: swap in a new board for a defective board, charge the customer the appropriate markup, and one's job was done.

Narendra told me that almost all the fixes one could make on newer flat-screen televisions were disproportionately expensive in comparison to the price of a new set. Broken panels, a common issue, required that the entire panel be replaced, instead of the damaged layer,

both because of the way the flat-screen televisions were constructed and the tightly controlled availability of their parts. Quality—and Shekhar's maintenance of the company's "name" and its affective potential to draw in customers—demanded this control. It was this control, indirectly, that made repair an increasingly unviable proposition.

Karan, the independent repairman, also observed that the new LED/LCD televisions—insofar as they were repairable devices *at all*—were much more limited in their fixable problems. There were (flat-screen) TVs these days, he said, whose panels "went" (i.e. stopped working) within a year, year and a half of purchase. Repairing an LED/LCD panel was an economically senseless proposition: putting a new panel into an LED/LCD television could cost up to 22,000 rupees, nearly 80 percent of a repair job's cost. 22,000 for repairing a panel, when new finance and pay-in-installment schemes had made it so one could walk away from the showroom with a brand new flatscreen television, having put up only 1000 rupees for a first installment (or even just 1 rupee, if Sonavision's massive holiday billboards in the Guntur city center were to be believed). Repairing a flat-screen television made less and less sense in this emerging economy of disposability and consumption.

Shekhar's company-driven implementation of surveillance and processes of small-scale control in the authorized repair shop—and the slippery way in which an obsolescent technology like the CRT television was exempted from these processes of surveillance and formal oversight, living alongside its futuristic counterpart in a strange conjoining—mirrors Dipesh Chakrabarty's claim in *Provincializing Europe* that "the task of conceptualizing practices of social and political modernity in South Asia requires use [to assume] that historical time is not integral, that it is out of joint with itself."[107] Though Chakrabarty invokes the coeval nature of gods and spirits with

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[107] Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference.* Princeton: Princeton University Press, 2000, p.16.

man in his explication of disjointed time, it is worth considering how the technologies and tools that undergird the experience of everyday routine—such as televisions, motorcycles, or lightbulbs—are also entangled within these disjointed flows.

This disjointed temporality—this strange mash between the innovative future and the already-obsolescent present—was made obvious to me comparing Narendra's efforts on newer flatscreen television versus the more common CRT television. Narendra's work on the CRT television was individualized and attuned to specific problems, rather than to following a fixed and time-limited procedure. He kept a collapsed cardboard box under his work-bench containing the "main boards" from other CRT televisions, from which he could pull individual parts and modules. These parts, not being model- or brand-specific, could easily be swapped into other sets, or purchased from the electronics market in Guntur.

Narendra never turned away customers who brought in a CRT television when they came in for a consultation, despite Shekhar's grumbling and occasional scolding. One customer brought a bare CRT television's "main board" in a cardboard box, sans plastic housing, screen, or anything else that indicated its brand or point of origin. Narendra wryly noted that he was only supposed to work on one brand of television, and then told the customer to come back the next day, promising him he would take a look at it.

Replacement and the fading attraction of repair

In 2013, three years before I went to study Shekhar's service center, I had met Adi, a television repairman in a village two hours' drive away from Guntur city, heading east towards the Andhra coast. Adi worked from his house, with no assistants, at a large wooden work-table that blocked access to the front door from his sandy courtyard.

When I arrived to speak with him in the early summer evening, he was dressed casually, in a white singlet and a dust colored *lungi*, sitting under a slowly turning fan. He was working on a Sansui CRT television, popping the back of the set with a long-handled screwdriver, poking and prodding as he asked his customer when the picture on the television set had gone out. He talked with the customers—all men—who waited on him as he worked, sitting or standing in his courtyard. The language was informal: there were few niceties, linguistic or otherwise, here.

His wife was at the other end of the house, and a boy played in the middle room, away from the customers milling about in the courtyard. The television set he was working on was covered in layers of dust, inside and out. After 12 years doing this work, he knew exactly what to ask his customer. He had only started his work for the day; the hours of his job, he noted wryly, depended on the timing of that day's power outage. When power returned to the village, then only he began to work. If the ability to repair within the authorized service center was constrained and mutated through increasingly fine-grained surveillance and regulation, other forces were at work outside of its walls. Few independent television repairmen worked on flat-screen televisions.

Kumar, a repairman whom I met in the city of Vijayawada working in a shop in a narrow lane dedicated almost entirely to television and electronics repair shops, told me with a not inconsiderable pride that he could repair *anything*. He had been in the trade for over 13 years, and unlike most of the independent repairmen I had met, also ran a secondhand electronics shop. His shop was crammed with all sorts of domestic appliances: televisions, air-conditioning units, refrigerators pushing out in front of his small desk.

He noted that he had a good working relationship with the authorized electronics sellers in the area: he picked up the abandoned television sets that customers left behind in the

authorized shops after they'd bought a new replacement. He then repaired and resold these televisions in his own shop. Unlike many of the independent repairmen I'd spoken to, Kumar fixed flat-screen televisions, though even he claimed that there really wasn't much one could do on them.

Kumar had learned how to switch and swap broken panels out, unlike most of the other independent repairmen I encountered. But Kumar also had some access to flat-screen television parts from the abandoned sets he received through his showroom contacts. He noted, with considerable amusement, that the repairmen at authorized centers sometimes came to him for parts, especially for older sets they no longer had parts for.

Shankar, the independent repairman working out of the local Telugu Desam Party offices in a small village an hour's drive southeast of Vijayawada, had a rather grim outlook on the future of his career, entirely in contrast to Kumar's confident cheer. Working in a room with yellow-and-red Telugu Desam Party banners and cutouts of party head Chandrababu Naidu strewn in the corner, a black and white portable television glowing at the edge of his desk, Shankar was certain that the television repair trade's days were numbered, even in his small town.

It was a decline he directly linked to the changing technological nature of television sets themselves: within five years, Shankar thought that the growing availability of cheap "China items" would drive repairmen out of business. He had enjoyed working on older analog electronics like tape recorders, and told me he felt as if he was learning something new while repairing them. Newer devices, he felt, were both harder to repair and to learn from.

The "China item" was a recurring specter in the conversations that I had with repairmen, and something that they often pointed to as a herald of their trade's decline. Insofar as repair

could be constituted as a response to the everyday frustrations of broken televisions and power outages, it was only viable if customers imagined it to be the *best* way to maintain the continuity of their lives. Why repair a television, if new televisions (buoyed by pay-by-installment schemes and cheap Chinese brands) were there to be had?

This growing shift towards replacement was easiest to witness in the independent repair shops. Many shops I visited had a corner or a backroom with a steadily growing pile of CRT televisions that had been abandoned, and not all the repairmen I met were as entrepreneurial or as willing as Kumar to turn them into another facet of their business. Given that most customers who still came to the independent shops owned CRT televisions, they were useful sources of small parts like single capacitors or transistors.

The authorized service center was a completely different story. Shekhar would harangue the service engineers at semi-regular intervals to throw away the accumulated CRT televisions and boxes of abandoned CRT main boards, in order to maintain a professional appearance befitting of their authorized, multinational status. His desperation to maintain this "professional" appearance spiked when visits from corporate auditors and regional-level supervisors came due. Narendra, as was his wont, would do his best to calmly ignore him.

Tension and temporality: the tug of war between innovation, obsolescence and repair

If we think about obsolescence and innovation functioning in an intertwined relationship—profoundly opposed in their existence and ideal but nevertheless bound to each other—then the repair shop becomes the site in which these definitional contradictions are materially enacted. The dreams displayed in newspaper advertisements and on showroom walls collided with the messy reality of workers' schedules and unavailable parts; the sleekness of flat-screen televisions lined up in gleaming malls crashed up against the abandoned skeletons of

outdated CRT televisions in repair shops. In the authorized service center, the corporate desire to maintain the ideal of an abstracted, brand-specific quality stood against the technicians' competing wish to help their customers, and try and fix whatever kind of set they brought in for examination.

In Vijayawada, the electronics showrooms were bustling when I went to visit them, accompanying a colleague who was shopping for televisions to place in a building he was renovating into a hotel. There were no CRT televisions in any of the showrooms we went to; instead, the walls of the showroom were covered, with few inches to spare, with flat-screen televisions of varying sizes, blasting cheerful Tollywood music or cricket matches, depending on the salesman's preference. The showroom employees led me to a stand of brochures when I asked for more information about the sets that they sold—it was hard to distinguish differences between the sets from sight alone. The glossy books, mostly from multinational brands, shared a singular theme: flat-screen televisions set in perfectly minimalistic environments of large glass windows, blonde wood furniture, light-skinned viewers.

Set against this imagination was the very present reality of the repair shop, with work-tables covered in scattered parts, spliced cables, and damaged televisions in various states of breakdown and functionality. Most of the parts—most of the cables and power transformers, stowaway insects and the piles of circuit boards—belonged to CRT televisions, as most of the televisions that repairmen saw in their shops were CRT televisions, despite having been banished from the showroom and the future it had on offer.

Herbert Marcuse writes that capitalism "accumulates an increasing quantity of general ability, skills, knowledge...[which is] channeled into unnecessary work, unnecessary in that it is not required for the construction and preservation of a better society but is necessitated only by

the requirements of capitalist production."[108] Marcuse does not go into the specific form that these skills take, but the contrast between the kind of "practical" knowledge that the television repairmen I talked to possessed—knowledge that was pieced together through hands-on work with devices, through laboring in gurus' shops, and the occasional certification course—and the knowledge that the miniaturized components and sealed-together panels of "smart" flat-screen televisions demanded, illuminates his point better than most.

The American journalist Vance Packard[109] noted that manufacturers of consumer goods—alongside building their products with an eye on complexity, instead of durability—began to engage in creating an "obsolescence of desirability," directly working to temporally influence consumers' perceptions of the goods they were buying in an effort to systematize their buying habits on a predictable temporal scale, one not necessarily linked to major technological improvements. The flat-screen LED television, however, represents a more complex commingling of the obsolescence of function—the picture was indeed sharper and clearer, when paired up with the right set-top box, the sound less distorted, the set itself lighter and easier to transport—with this obsolescence of desirability. CRT televisions, though they were common in secondhand electronics shops and independent repairmen's backrooms, had been banished from the showroom floor and salespeople's minds.

And yet the tenuous, continued existence of repairmen and repair shops proves that the work of living with the commodities that capitalism so incessantly produces does not always result in an unsated desire for the innovative. The televisions that customers brought bore marks of being lived with in ways that stretched beyond mere utility or admiration for technical

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[108] Herbert Marcuse, "The Reification of the Proletariat," *Canadian Journal of Political and Social Theory* 3, no.1 (Winter 1979): 21.
[109] Vance Packard, *The Waste Makers.* New York: David McKay and Company, 1960, p.55.

capacity: fading stickers of gods and children's cartoons pasted on the black casing of CRT televisions, or marks of vermilion and turmeric, a Hindu sign of blessing. Customers expressed disappointment when fixes weren't available—and while this may have been due to the expense they would now incur buying newer, pricier consumer goods, part of it also appeared to be genuine disappointment at having to let go of objects that had, by then, spent several years in their homes and lives.

The repair shops—insofar as they were enmeshed in the web of relation that connected corporate innovation and the continuously obsolete television sets and DVD players filling up their backrooms—illuminate the uncertain material enactment of the relation between innovation and obsolescence. The determination of an object's value was a dialogue rather than a determination, subject as much to a customer's frustration and wheedling as it was to the repairman's ability to secure parts. Affective value did not often come up in these conversations—which mostly tended to focus on price and the quickness of repair—but repairmen could be cajoled to take on jobs, to render value into objects that had limited use at the time they entered the shop.

Repairmen's gloomy outlook on their own futures were tied to a closing of this conversation. Assigning value to the flat-screen television was a less flexible task, given the fact that spare parts were now so tightly tied to companies' notions of temporally-enforced obsolescence, and repair work to the maintenance of reputation alongside physical product. CRT televisions were more amenable to cheaper fixes, but even their viability was being abrogated by upstream changes, particularly the shift to digital signals and high-definition broadcasting by the cable television providers.

Bill Brown writes of children playing with things,

One must imagine that within the child's "tactile tryst" the substantiality of things emerges for the first time, and that this is the condition for reshaping the material world we inhabit. One must imagine that this *experience* in the everyday foretells a different human *existence*. If the use value of an object amounts to its preconceived utility, then its misuse value should be understood as the unforeseeable potential within the object, part of an uncompleted dream.[110]

The work of repair, of course, does not involve *misuse* per se, but it does require a closer engagement with what Brown calls the "substantiality of things"—an acknowledgement of the nature of the television set outside of its role as an everyday media *object*.

The piles of unlabeled CRT television circuit "boards" that graced both authorized and unauthorized television repair shops speaks best to this notion of repair work as a close engagement with the substantiality of things, beyond their delimited object-values and uses. Outside of the protective housing of the television set, disconnected from power source and screen, the CRT boards made little sense on their own—and were very often considered trash that needed to be hidden from sight, when Shekhar needed to clean up the authorized repair center for visiting higher-ups.

But the CRT boards could be enrolled within the work of transformation, the work of rendering objecthood and sense into the "thing" of the broken CRT television set, and their presence within the repair shops I studied seemed to mark the space as one where the reality of television-as-thing would have to be confronted (whether through confused conversations between customers and repairmen or through the work of repairmen with the parts at hand). With the decline of CRT televisions—and the tighter corporate control over newer flat-screen

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[110]Bill Brown, "How to Do Things with Things (A Toy Story)," *Critical Inquiry* 24, no.4 (Summer 1998): 955-56.

television parts—it was an engagement with the "thingness" of television whose days were numbered. Newer technologies did not demand as stark an engagement with the unforeseeable reality of devices-as-things. They were, after all, "use-and-throw." The possible existences their inscrutable thingness foretold had already been foreclosed within the cycle of disposability and upgrades.

Earlier, I argued that the repair shop—and the work of repair itself—was a space marked by oscillation between futurity (embedded within new television sets) and obsolescence (embedded within the knowledges of the repairmen). Outlining the political theory of philosopher Ernst Bloch, Douglas Kellner and Harry O' Hara write that

> The present, for Bloch, is characterized by *latency* and *tendency*: the unrealized
> potentialities that are latent in the present, and the signs and foreshadowings that indicate
> the tendency of the direction and movement of the present into the future. This three-
> dimensional temporality must be grasped and activated by an *anticipatory consciousness*
> that at once perceives the unrealized emancipatory potential in the past, the latencies and
> tendencies of the present, and the realizable hopes of the future.[111]

The space of the repair shop, where the "thingness" of the television interrupted its ability to act as a media object, was also a space in which the uncanny temporal qualities of everyday life— the latency of the present, the failings of the past and the anxiety of the future—were thrown into sharp relief. In the repair shop, the television inhabited a present moment that was colored by the failings of the past (the blown circuits, the power cuts, the television-now-not-capable-of-*being* television) and a closure of future possibilities, as marked by the decreasing number of possible fixes on newer television sets that could avoid a full-blown replacement.

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[111] Douglas Kellner and Harry O'Hara, "Utopia and Marxism in Ernst Bloch," *New German Critique* 9 (Autumn 1976): 16.

If repairmen were openly anxious about their possible relevance to the future of television—or at least, their relevance in the corporate future coming to be embedded within the television—they did not see themselves as inevitably trapped in the past. Repair work might not have a perceptible future within their children's future professions, but the potential of repair was realized in the *present* moment—repair lived within repairmen's own labor and efforts to imbue functionality within the broken devices that were sent to them, and their success in once again (re)creating meaningful objects from things.

It was this messy *present*, with its still-latent possibilities, its immediately-consequential labor, that sat uncomfortably alongside the Andhra Pradesh government's very public proclamations of an explicitly digital futurity. If oscillation—a movement *between* an imposed closed-off future, the memories of past knowledge and relevance, and the labor of the present—marked work and conversation in the repair shop, it was a stern insistence of moving *away* from the vacillations and oscillations of the present and *forward* into a new, decidedly *digital* moment that marked the government's imagination of a future for Andhra Pradesh, and eventually, television itself.

Conclusions: AP Fiber and the Digital Future of Andhra Pradesh

Andhra Pradesh has a particularly distinctive history in relation to public declamations of technology's productive powers. The current chief minister of Andhra Pradesh, Nara Chandrababu Naidu, drew inspiration from Malaysian and Singaporean urban planning[112] in his public reshaping of the capital city of Hyderabad in the late 1990s to accommodate the growth and development of information-technology based service industries. In 1999, with the help of

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[112] Tim Bunnell and Diganta Das, "Urban Pulse—A Geography of Serial Seduction: Urban Policy Transfer from Kuala Lumpur to Hyderabad,." *Urban Geography* 31, no.3 (2010): 279-80.

the consulting firm McKinsey, Naidu's government produced an *Andhra Pradesh Vision 2020*
plan that projected its leapfrogging from an agricultural past right into the technology-based
service sector economy.

Naidu himself would be feted as a particularly globally-minded leader by neoliberal
institutions like the World Bank, and figures like Bill Clinton and Bill Gates. Naidu and his party
were voted out of office in 2004, only returning to relevance a decade later with the breakup of
Andhra Pradesh and the creation of the new state of Telangana, which lay claim to the city of
Hyderabad as its capital city. Naidu was then elected chief minister of the "residuary" state of
Andhra Pradesh in 2014, and his Telugu Desam Party governed the region until May 2019.
Naidu embarked upon several new projects that emphasized the technologically-driven future of
the state and the creation of its new capital city, Amaravati.

Writing about the explosion of special economic zones (SEZs) in Andhra Pradesh in the
2000s (a state that had by 2013 seen more approvals, planning, or construction of SEZs than any
other Indian state), the anthropologist Jamie Cross has observed that the SEZs are "active
investments and commitments to other kinds of futures, built on the debris of the past, and
shaped by personal histories of migration, labour and occupancy."[113]

Cross[114] also notes describes the vision document is a "techno-fiction," an affectively-
charged phenomenon that renders technical expertise and forms of knowledge into a future—a
future laden with imagined possibility or (alternatively and simultaneously) subject to derision
and contempt. Economic zones were central to these vision documents, and were envisioned to
be "spaces in which capital could flow without brakes, impediments or limitations,
unencumbered by history, politics or culture." These dreams—inevitably linked to technological

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[113] Jamie Cross, *Dream Zones: Anticipating Capitalism and Development in India.* London: Pluto Press, 2014, p.11
[114] Cross, *Dream Zones*, p. 47.

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proficiency and futurity—were challenged by the very realities to which they were tethered. These were realities colored by the conditions of obsolescence that constituted everyday technological life, even in dream-laden Andhra Pradesh.

Silvia Lindtner and Seyram Avle have also argued the vision of technological work that saturates the dreams of governmental entities—a vision of technological work that is"innovative" and "self-entrepreneurial," capable of remaking the stakes of citizenship—constitute a form of "tinkering with governance."[115] Tinkering with governance, they contend, marks a fundamental reimagining of the state-citizen relationship, one in which the ability of citizens to fashion themselves into independent economic actors was regarded as paramount (a point echoed in Das and Lam's study of Chinese and Indian 'science parks'[116]). How does the repair shop challenge the linkages made between technological proficiency and unencumbered economic promise dreamed up by figures like Chandrababu Naidu and governments like India's?

In light of Naidu's history of public proclamations confirming technology's inherently progressive and futuristic potential—as well as his wholehearted embrace of ideas such as the *Vision 2020* document and the economic policies embedded within—the space of the television repair shop poses some important questions for us to consider. How have the labor and the spaces that have produced television changed in the light of a digital future perceived as inevitable in its arrival? Studying the repair shop allows us to unpack the labor that lies latent within television's everyday presence. Alongside a stronger understanding of the presence of the television set within our lives and work, this also allows us to construct a more nuanced view of the present—a moment deemed obsolete in the face of the SEZ-and-digital driven future. These

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[115] Silvia Lindtner and Seyram Avle, "Tinkering with Governance: Technopolitics and the Economization of Citizenship," *Proceedings of the ACM in Human-Computer Interaction* 1, iss. CSCW (November 2017): 70:2-3.
[116] Diganta Das and Tong Lam, "High-Tech Utopianism: Chinese and Indian science parks in the neo-liberal turn," *BJHS Themes* 1 (2016): 228-9.

questions are thus not readily answered by analyses of television that treat it solely as a platform for discursive content.

In addition to allowing for a more complex understanding of how the television exists within people's present lives, the repair shop also exposes the tensions that lie within the declamations and promises surrounding television's future and, more broadly, the techno-centric futurism embodied in economic projects such as the SEZs. In 2016, the Telugu Desam government launched AP Fiber, a municipal broadband Internet project that promised citizen-consumers a "triple-play package" of television, telephone, and Internet services. In the government's mediation of AP Fiber, television was yoked to the futuristic potential which it had previously attributed only to digital media and services.

Chief Minister Naidu—alongside Cisco Executive Chairman John Chambers—formally launched the project in the coastal city of Visakhapatnam, with a declaration that AP Fiber would lead to the "digital empowerment of [the] common man." The core component of AP Fiber's consumer offerings was a "triple-play package" of 15 Mbps broadband internet service, IPTV-based cable television service with 250 high-definition channels, and VoIP-based telephone service starting at Rs. 149 a month for households.

The service required installation of a new combination cable set-top box that cost Rs. 4000—an unusually high sum in comparison to cable television-only set-top boxes that cost the consumer between Rs. 1000-1500, or were even given away for free (as was the case with neighboring Tamil Nadu's state-run Arasu Cable corporation, a move that sparked protests both from private cable television operators in the area and from customers who felt they had been cheated by their providers).

Television was only one component of the services the Andhra Pradesh government promised to deliver through AP Fiber. "Value-added services" that linked consumers directly with the government—services as mundane as checking state school exam results or paying utility bills—were heavily promoted alongside television in the materials advertising AP Fiber. It was no longer sufficient for television to remain a distinctly entertainment-oriented technology linked to the propagation of cinema as it had been in its early days; informally-run, maintained, and financed by a host of small-scale, fiercely local entrepreneurs.

Instead, television was enrolled within a larger discursive project surrounding "digital" services and industries within Andhra Pradesh — a discursive project that was tied to a future of progress aided by "high" technology and a thorough integration within global circuits of capital. The future represented in and by these evocations of the "digital" made no linkage to the choppy, strung-together mesh of obsolescent and advanced technologies that marked the present moment of the repair shop. The technological work of the repair shop—one which functioned within a state of infrastructural uncertainty (fuses blown by summer brownouts, parts cannibalized from abandoned televisions for obsolete models) stood in sharp contrast to the free movement of services and always-available functionality promised by these digital projects and the Special Economic Zones they were housed in.

But the ready attribution of innovation and seamlessness that the government was willing to present as the inevitable future of the state, television, and the state's consumer-citizens was belied, questioned, and challenged by the technological instability of the immediate moments of the present, an instability that the repair shop embodied quite starkly. Thinking through the space of the repair shop and the labor of repairmen gives us the analytic room through which to contend with the public imaginings of technology that undergird projects such as AP Fiber.

AP Fiber was only one part of the state government's much larger nexus of digitally-

oriented dreams for the region, a nexus which included the instantiation of paperless state

Cabinet meetings, the launch of an "APCM Connect" smartphone application based on

Microsoft's Kaizala service, and the development of a "Sunrise Startup Village" in the

Visakhapatnam area, based on a private-public partnership "startup village" in the Keralan city

of Kochi. To return to Lindtner and Avle's assertion that "economic desires and stories of the

market are enacted through technological production," it is clear that whatever television had

once been—tightly associated with informality, flexibility and locality—it could new longer be,

within these new desires and stories of the market.

As Carol Upadhya[117] has noted in her study of Andhra Pradesh's new capital city,

Amaravati, these explicitly high-tech, globally-oriented government projects function as a ``re-

combination of pre-existing elements of Andhra's regional identity—territory, caste, and

provincial capital—with 'global' aspirations and trans-regional circulations of capital and

people. Insofar as AP Fiber, Amaravati, and the nexus of high-tech projects dotting the

Visakhapatnam landscape (including a "Fintech Valley" and a proposed blockchain hub),

represented a desire for global pre-eminence and neoliberal conformity, it was a desire

modulated through a very particular regional history and identity.

This desire—for globality, for regional distinction, for a *future* distinct from the

disjointed present—undergirded the ugly public break in 2018 between Naidu's Telugu Desam

Party and the Central government led by Prime Minister Narendra Modi. The break hinged upon

the Modi government's denial of "Special Category Status" to the newly-formed state of Andhra

Pradesh. This status would have entitled Andhra Pradesh to increased economic assistance and

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[117] Carol Upadhya, "Amaravati and the New Andhra: Reterritorialization of a Region," *Journal of South Asian Development* 12, no.2 (2017): 178-9.

various tax breaks—all of which, undoubtedly, would have facilitated the creation of the digital,

globally-aspiring spaces that the regional government wished to engender. Television, despite its

resolutely piecemeal beginnings, had become swept up in a broader vision of a technological

futurity that had no place for informality, uncredentialed and unmeasured skills, or locally-

oriented flexibility. The next chapter explores this history of informality from another angle: the

centrality of video and VCR to the development of cable television.

Chapter 2:
Video, Cinema, Cable Television

Introduction

"I started business in 1994," Ramu said. "We didn't even have CD players back then, so we used VCPs, you know, cassettes. Big cassettes. We used the cassettes and showed two cinemas a day, one in the afternoon, one in the evening. Sometimes in our free time they would watch whatever English shows were on, even when they didn't understand it. Fridays, on Doordarshan," he continued, "they would show 5-6 songs, and they would watch that like it was a festival. They'd show 5-6 old songs, 1 new one. The people would just come together and watch that."

The years leading up to and away from the 1982 Asiad were crucial years for the transformation of television, in material ways small-scale and large. As Nikhil Sinha notes, Doordarshan started out 1983 reaching only 28% of the population; by 1985, it would be double that, and by 1990, Doordarshan could be beamed into (if not necessarily *received by*) nearly 90% of Indian homes.[118] Even as Doordarshan was accelerating build-out and presence in such large ways, the "video menace" and the beginnings of small-scale cable television networks in Bombay apartment blocks were starting to lay the groundwork for what would become the privately-operated television networks that would shape the media landscape of post-liberalization India.

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[118]Nikhil Sinha, "Doordarshan, Public Service Broadcasting, and the Impact of Globalization: A Short History." *Cardozo Journal of International and Comparative Law* v.5, no.365 (1997), p.373

Consternation and contestation thoroughly marked television's emergence in the 1980s, and colored the possibilities in its becoming an ordinary object that dwelt within the rhythms of people's daily routines. To take one example, in the enthusiast magazine *TV & Video World*, an English-language magazine published in Bombay that hosted discussions of Doordarshan's latest serials, detailed the scandals and travails of the bureaucrats in charge of production and profiled the actors and actresses choosing to star in the broadcaster's new stable of "sponsored" programs (instead of head to the film industry), there were intense debates in the viewer-written letters over the viability of Doordarshan's National Programme, and its overt, unifying aspirations. Viewers—usually from South India (especially Tamil Nadu), and sometimes from Calcutta— sharply challenged the notion of a national imaginary mediated through the Hindi language, and were often met with equally sharp blowback from North Indian and Bombay-based viewers. The daily schedule of Doordarshan—the same schedule that Punathambekar and Sundar highlight as crucial for generating television's ordinariness in urban India—became a subject of sharp mockery in an August 1985 letter from Dr. N. Sankaran in the industrial city of Coimbatore, in Tamil Nadu:

> Mondays: *Navjothi/Barrister Vinod*; Tuesdays: *Hum Log*; Wednesdays: *Khandaan*; Thursdays: Hindi Movie/*Ados Pados*; Fridays: *Yeh Jo Hai Zindagi*; Saturdays: *Hum Log*; Sundays: *Safarnama*/*Rajani*/Paying Guest/Another Hindi Movie. I do not understand what Doordarshan thinks of us South Indians. One wonders whether they are catering for India or *Hindia*.

Viewer K.S. Sivasenapathy from Madras—also in Tamil Nadu— whose letter was published alongside Sankaran's, offered a more succinct explanation for South Indian viewers' relative disinterest in the broadcaster or its offerings: "Doordarshan's programmes are mostly in Hindi

which makes it difficult for us South Indians to understand."[119] Viewer V. Sagar, from the

country's capital of Delhi, responded furiously in the following month's issue:

> There are no such words as 'Hindi culture' or 'Hindi Raj.' Nor do they exist anywhere in
>
> India or elsewhere. To call Hindi a "regional language" is again a travesty of truth. Hindi
>
> is the national language of India according to the Constitution of India, which was
>
> prepared by representatives from all over the country, including from those areas, which
>
> now talk of 'thrusting Hindi.'

TV & Video World billed itself as "India's First Home Entertainment Magazine" on its cover,

and claimed to reach an audience of "8,80,000 TV and video owners who every month buy or

borrow a copy." Owned by Bombay-based Sterling Newspapers Pvt. Ltd, who also published the

Gentleman, *Technocrat* and *GFQ* magazines, *TV & Video World* published a broad range of

television and video-related content, combining interviews with Doordarshan officials, updates

on the National Network expansion and lists of the best English and Hindi language films

available on videocassette. The magazine published cover stories on the arrival of video in 1984

and the spread of cable television in 1988—the period roughly congruent with the timeframe of

interest in this chapter. Alongside its reviews and reporting on television content, the magazine

also published extensive technical reviews of the latest television, video and sound equipment

and included interviews with manufacturers and in one case, an authorized repair center. In its

pages were advertisements for television sets (both state and privately manufactured), video

libraries, projection screens, video-only films and distributors, and classifieds.

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[119]The Doordarshan *kendra* in Madras, ironically, was the only major *kendra* to actively insist on making Tamil-subtitled or dubbed versions of *all* of Doordarshan's major programming, as a note from the September 1985 issue of *TV and Video World*'s regular *TV People* column, sardonically titled *Southern Comfort*, illustrates: "Doordarshan seems to have taken the Madras viewers' hatred for Hindi quite seriously. First, they dubbed the episodes of *Hum Log* in Tamil. Now, under the new network rules, all serials will be dubbed in Tamil in advance."

The viewers who were writing in to *TV & Video World*, then, should be seen as individuals who had already deeply invested in the possibility of enfolding the television within their daily lives. Letters praising *TV & Video World*'s film reviews and more anodyne commentary on Doordarshan's serialized programming flanked the intense reader debate on the viability of Doordarshan's national(ist) aspirations. And yet, Doordarshan's bracketing of television's possibilities was deeply unsatisfying, especially to those consumers who had the resources to invest in the early possibility of regular television in their lives.

Doordarshan's programming—as tightly bound to the production of a national, Hindi-mediated unity as it was—was thus a heavily contentious and contested project among the most enthused of television consumers, even if this contention was not at all reflected in the broadcaster's choice of language or national programmatic offerings. How then are we to understand the growing ordinariness and popularity of the television, both as material object and programmatic entity, in a region (and amongst viewers) who had little investment in the unifying ethos that the national broadcaster offered up to the country's citizens, and even actively railed against it? Punathambekar and Sundar assert that television's becoming an ordinary object was linked to Doordarshan's *production* of a certain sort of ordinariness—the "mundane routines and concerns of the urban middle class" in Hindi-language sitcoms such as *Yeh Jo Hai Zindagi*.[120]

Yet, in South India, the possibility of a Hindi-language show like *Yeh Jo Hai Zindagi* developing any sense of ordinariness or unexceptionality was rendered seemingly impossible by its very linguistic nature, and the underlying assumption that an ordinary urban life was *necessarily* a Hindi-mediated one. To return to Dr. Sankaran's letter, one could hardly understand "what Doordarshan thinks of us South Indians." Another tidbit in *TV & Video World*,

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[120]Punathambekar and Sundar, "The Time of Television," p.411.

from the June 1985 *Video Spectrum* column, noted that the pioneering Doordarshan serial *Hum Log*—a serial often used by scholars of Indian television to demonstrate the reach and power of Doordarshan's national ambitions—sparked protests in Kerala due to a throwaway comment by a villainous character. *TV & Video World* translated the comment thus: "A girl has come from Kerala looking for a job; if she can be employed somewhere; it will help us secure favors from higher circles." Malayali women, the article noted, worked in large numbers outside of Kerala, which rendered the comment all the more offensive.

Given the linguistic strangeness and cultural missteps that marked Doordarshan's production of a national ordinariness in its hit shows, the question remains—what allowed television to develop its mundane character and ordinary possibility in South India? To return to the cable operator Ramu, and his remembrances of early television—why is it that video cassette players (VCPs) and cassette tapes jump to the mind more easily than the names of any of Doordarshan's major productions?[121]

In this chapter, I argue that video technologies materially linked together the media experiences of cinema and television. The material entanglement of video technologies prompted a discursive crisis in Indian state television and popular cinema industries over how to imagine, delimit and draw together the audience, as their longstanding models of "citizen-viewers" (in the case of *Doordarshan* and television) or "distribution territories" (in the case of cinema) could not adequately capture what or how people were watching and interacting with video technologies. To trace out how this sense of crisis and inadequacy emerged, I examine how the film industry

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[121]One might argue for the relevance and centrality here of the mythological serials produced by Doordarshan in the 1980s, particularly the *Ramayan*, which is central to media scholar Arvind Rajagopal's linking of the broadcaster to the birth of a new, affectively potent and state-supported Hindu nationalism. Yet even here, a certain murkiness exists in regard to South India, where Doordarshan's productions existed within a much more robust and affectively saturated world of Telugu- and Tamil-language popular films *also* heavily based on Hindu mythological stories. It is unclear whether Doordarshan's *Ramayan* bore any more political potency in South India than, say, N.T Rama Rao's portrayals of Rama, Krishna, *and* Karna on the silver screen.

imagined video exhibition and viewing practices in trade journals like *Screen*. I then contrast

portrayals of Doordarshan and television in Telugu-language newspapers and the enthusiast

magazine *TV & Video World* to illustrate how viewers' imagination of Doordarshan contrasted

sharply with the government's own imagination. Lastly, I briefly outline the emergence of the

Telugu-language cable television channel *Eenadu Television*, and how its emergence marked a

new envisioning of the constitution of an audience, and the audience's relation to television,

consumption and regional-language cinema.

Following media scholars like John Hartley, I imagine the "audience" here as a useful

industrial construction, as "invisible fictions that are produced institutionally in order for various

institutions to take charge of the mechanisms of their own survival."[122]. While there are some

indications—such as the reader letters to *TV & Video World* and the (very select) description of

video parlours in *Screen*—as to what the actuality of viewers and their experiences were like,

Doordarshan's imagination of an audience congruent with the citizenry of India, and the cinema

industry's division of viewers into "urban" or "interior," into various distribution "territories"

with their own proclivities, were unstable creations that video technologies visibly and

consistently disrupted with their presence.

Unstable audiences

Accounts of video in the film trade journal *Screen* reveal the industry's prolonged sense

of alarm with the emergence of video and the concomitant revelation that the film industry's

speculative imaginations of its audiences were far less cogent than they had once seemed.

Doordarshan—and consequently, its vision of who a television viewer *ought* to be—was also

challenged by the popularity and sheer pervasiveness of video technology. *Screen* consistently

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[122]John Hartley, "Invisible fictions: audiences, paedocracy, pleasure," *Textual Practice* 1, no.2 (1987), p. 125

referred to the video industry as a "growing menace," (October 23 and 30, 1981), an "invasion" (April 22, 1983), termed it piracy (throughout the 1980s) and saw within it a "boom" (May 13, 1983), an "epidemic" (Sept. 30, 1983), a "wave" (July 1, 1983), and a "threat" (May 6, 1983). Central to the woes that *Screen* portrayed were the plight of film exhibitors; the Andhra Pradesh film exhibitors trade association released a statement in an August 1983 issue of *Screen* that claimed exhibitors in India "have been consistently deprived of any say in their trade, which, coupled with the meagre returns on the huge investments made in the business, have added to the disincentive of being an exhibitor."[123]

Exhibitors pleaded with state governments to "regularise" video shows, as V. Verma reported in a November 1983 *Screen* article.[124] Noting that small town cinema hall owners were the most affected by the "video menace," Verma observed that a loss of cinema halls would induce a loss of entertainment taxes to the states. What stands out is the relative simplicity of the video parlour's technological needs—"a colour TV and a VCR can be installed at a cost of Rs. 30,000 and the video cassette can be hired for Rs. 10 or Rs. 20 per day, or even purchased for about Rs. 500"—and the upfront expenses borne by the (presumably completely law-abiding) cinema hall owner, "from Rs. 10 lakhs to Rs. 20 lakhs...after which he is strictly bound by the Cinematograph Act, the Entertainment Duty Act and other laws."

As Tejaswini Ganti keenly observed in her book *Producing Bollywood*, prediction and anticipation are discursive strategies that media industry workers use to justify and reify the processes through which their films get made. These "production fictions," as she terms them, "are fluid and flexible discourses that can be consistently modified to account for new

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[123]"AP exhibitors' struggle for survival," *Screen*, August 19, 1983.
[124]V. Verma, "Regularise video shows: Exhibitors' plea," *Screen*, November 11, 1983.

circumstances."[125]. In *Screen*, the industry discourse surrounding video was one of illegality and omnipresent threat, primarily towards exhibitors and distributors—though producers weighed in as well. Video was nearly always associated with illegal or unsuitable viewing in the pages of *Screen*—the few positive assessments of video's impact on viewers usually came in reader letters rather than the paper's writers.

What purpose did this particular discursive construction of video—a construction of video as looming, existential threat—serve? The notion of video as threat brackets *Screen*'s coverage of the 1984 Copyright Act amendment, which rendered unauthorized video-viewing illegal and exposed viewers to criminal prosecution and police raids. Yet by May 1986 *Screen* judged that the "industry's anti-piracy drive has fizzled out," unironically noting that "it was not serious, in any case."[126] The same issue of *Screen* also reported that veteran film industrialists were in the process of setting up video companies.[127] The prevalent notion of "video-as-threat" in the film industry press, I argue, served as a convenient mask for the failure of industrial categories like distribution territories or "city"/"interior" dichotomies to render video's spread predictable and containable. Video traversed Indian cinema's traditional distribution territories and circuits, forcing the industry to contend with the inadequacy of these locational-cultural constructs to fully capture their viewers.

Unlike Doordarshan, delimited by its metropolitan *kendras* and the unified National Programme, video drew on the regional specificity of cinema to draw in its audiences. The usability of the television was no longer strictly bound to the broadcast schedule, and the television set itself was no longer tied to the closure of the domestic sphere. It was this

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[125]Tejaswini Ganti, *Producing Bollywood*, Durham: Duke University Press, 2012, p. 246
[126]M.S.M., "Industry in the doldrums," *Screen*, May 9, 1986.
[127]"Barjatya's new company," *Screen*, May 9, 1986.

mutability—this possibility that the television broadcaster and the cinema hall could not contain the potentials of the technologies themselves—that was crucial to television's emergence into ordinariness in South India. The video shop, much like the repair shop, was a zone of contention that was crucial to the television gaining the sheen of ordinariness and acceptance in South India.

Instead of television-first programming—which the national broadcaster had a lock on until the 1990s—the small-town cable operators I talked to remembered cinema as the primary motivator behind their decision to get into the cable television business. In this chapter, I articulate a sense of the media environment in the 1980s and early 1990s that could generate these memories and make cinema relevant to the story of television. That is to say, while I cannot precisely answer *why* cable operators tended to focus upon cinema and video as the originary point of their interest in and entry into the cable television industry, I can illustrate how video produced a commingling of television and cinema's possibilities—a commingling that cable television would later draw upon to generate its own imaginings of who would watch and how.

Doordarshan and the struggle for daily relevance

The weekly film on Doordarshan was the most emphasized part of the published television schedule in Telugu-language newspaper *Andhra Patrika*, again highlighting the importance of cinema to people's experience of television. Writing about the 1990s television landscape, Chadha and Kavoori write that "the present televisual landscape of India cannot be defined in terms of a singular, unified narrative of the type that characterized it during the time when it was dominated by the overarching, hegemonic presence of the state-sponsored

broadcaster Doordarshan. Instead, it seems to represent a more fragmented and hybrid form."[128]

It is clear from the accounts in *Screen* that even in a Doordarshan-dominated televisual landscape, the actual uses televisions were being put to were far less unified: Doordarshan, in its heyday, operated within a broader mesh of telvision-and-video operations that were as far-flung as the national network itself. The "rhizomatic" nature that Chadha and Kavoori attribute to the 1990s, post STAR and Zee TV, was already a characteristic of the media landscape within which televisions were embedded. Videos were as much a part of television's coming-into-ordinariness as much as the broadening range of television-specific programming that marked the 1990s.

The Government, for all it had invested in the expansion of Doordarshan's infrastructural footprint for the Asiad, remained "unaware of the number of videos in villages" throughout the 1980s, to the increasing consternation of the film industry. Given this lack of consistent state interest in cracking down on the video industry and its film-oriented pirating and profiteering, it's instructive to think about the moral and discursive potentials that the state embedded within its broadcaster. Abhijit Roy, in thinking about the contentious world of mediating publics in 1980s India, writes that

> One can in fact go to the extent of suggesting that the kind of 'public' the State-controlled Media tried to create till the 1980s, though largely in vain, was in many ways opposite to the 'public' of popular cinema in India. While the popular cinematic public was conceived as one belonging primarily to streets and lumpen public spaces, the territory of the broadcast public was essentially the home and the family...*[129]*

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[128] Kalyani Chadha and Anandam Kavoori, "Mapping India's television landscape: constitutive dimensions and emerging issues," *South Asian History and Culture* 3, iss. 4 (2012): 593.
*[129]*Abhijit Roy, "Bringing up TV: Popular culture and the developmental modern in India," *South Asian Popular Culture*, vol.6, no.1 (April 2008): 32.

The centrality of home and family to statist imaginations of television—and early television's assumption of moral righteousness against the perceived commercial crassness of popular cinema—is not in doubt. What should be questioned is whether the domestic space—with its customs and restrictions and thwarted desires—was necessarily the space in which the television's ordinary possibility was generated, particularly outside the major metropolises and within linguistically-differentiated regions like South India, in which regional-language cinema possessed the linguistic mundanity that Doordarshan's nationally-oriented productions could only half-heartedly emulate.

Consider the presence of the daily television schedule within the newspaper— information necessary to generate a sense of television's continuing relevance and presence within people's lives. In *Andhra Patrika*, "the grand old newspaper of the nationalist movement in the Telugu region,"[130] (and a paper which would close down in 1991, just as cable television was taking off), the Doordarshan schedule was irregularly published and lumped alongside the government tenders, separated from the multi-page spreads of photos and gossip that characterized the paper's coverage of cinema news and releases. *Andhra Patrika* was a newspaper with a pedigreed history: started in Bombay as a weekly paper in 1908 by K. Nageswara Rao—the manufacturer of the popular 'Amrutanjan' balm—publication later moved to Madras. The paper backed the Gandhian nationalist movement from the 1920s, becoming— according to a British official—"the most evil influence in the Telugu country." By 1947 and independence, it was "the largest, best-known Telugu daily."

Andhra Patrika's fortunes would shift after indepedence. Robin Jeffrey argues that this shift was a result of the newspaper losing its traditional enemy: "During the national movement,

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[130]Robin Jeffrey, "Telugu: Ingredients of Growth and Failure," *Economic and Political Weekly*, v.32, no.5 (Feb. 1-7, 1997), p.192-195.

the rationale for running a newspaper, and its attractiveness to readers, were often the same: to oppose the British boldly...After 1947, however, all governments were Indian governments, and a newspaper's foes, as well as its friends, were Indians, not foreigners." By the 1980s, when the National Network was implemented and regular television broadcasts initiated, *Andhra Patrika* had been in steady decline. It kept publishing from Madras until the 1960s, when it started an edition from Vijayawada in the wealthy coastal region of Andhra Pradesh. But it had already been passed over in circulation by *Andhra Prabha*, started by Ram Nath Goenka's *Indian Express* group, and later, by Ramoji Rao's *Eenadu*, a paper that Jeffrey argues fully represented the antithesis of what *Andhra Patrika* had been.

 Andhra Patrika's coverage of the Doordarshan television schedule was somewhat scant, especially when compared to its coverage of popular Telugu cinema. To take one example, January 1987 issues—printed a few years before the paper itself would close, and two years after Doordarshan had built out its extensive National Network of low-power transmitters to service small-town and rural regions around the country, including Coastal Andhra Pradesh—primarily placed the television schedule amongst the government tenders and circulars, rather than alongside the more extensive coverage of cinema. The January 2, 1987 issue placed the television schedule (under the title "Today on TV" on the screen of a illustration of a television set) amongst calls for tenders from South Central Railways and the Andhra Pradesh State Road Transport Corporation. The lead story on the page with the television schedule detailed corruption by the Indian Red Cross, while the schedule itself was surrounded by short stories on local conferences and road accidents—stories which were usually altogether removed from light-hearted entertainment.

The same issue devoted its last page to ads announcing movie showtimes and release anniversaries. These ads—unlike the Doordarshan television schedule—were fully ensconced within a commercial ethos: the cinema ads exhorted the reader to *nede chudandi* (see it today)! above listings of showtimes, and any spare space on the page was filled up with ads for other services or products, such as the monthly literary magazine *Bharati* or medicines for "gas trouble." The only tender on the page of cinema ads was for the construction of the "Agricultural Market Committee Building," an entity unaffiliated with the government. *Andhra Patrika*'s coverage of cinema wasn't limited to paid advertisements—the paper also carried film reviews, ads for film magazines, and stories about film stars and films under production in its Sunday supplement, *Aadhivaram Anubandham*.

Andhra Patrika did run more detailed descriptions of Doordarshan's programming in a weekly column called *Doordarsanam*, written by Lata. The column for the week of January 18, 1987, for example, contained short descriptions of the shows *Kabhi Door...Kabhi Pas*, *Naqaab*, *Malgudi Days*, an interview with author Günter Grass, and a Telugu-language play, *Bucchi babu*. The column was separated from the actual schedule in the newspaper, often appearing earlier in the newspaper, next to weekly serials and regularly appearing columns. *Andhra Patrika*'s inclusion of content descriptions was in contrast to its more commercially successful competitor, *Andhra Prabha*—which published no additional Doordarshan-related content outside of the television schedule.

Publishing from Vijayawada and Chittoor (and later from Bangalore), *Andhra Prabha* had overtaken *Andhra Patrika* in circulation numbers by 1960: 53,000 for its two Andhra-located editions, compared to 48,000 for *Andhra Patrika* publishing from Madras. By 1970, *Andhra Prabha*'s circulation had reached 116,000. Both of these newspapers would later be overtaken by

Ramoji Rao's *Eenadu*, started in 1974 from the city of Visakhapatnam. For the purposes of this chapter, I focus on the presentation of Doordarshan within the pages of *Andhra Prabha* and *Andhra Patrika*. *Eenadu*, and its owner Ramoji Rao, would have a critical role to play in the later emergence of regional-language cable and satellite television in South India, and I will return to them in due time.

　　Andhra Prabha published Doordarshan's schedule more regularly than *Andhra Patrika*—slotting it alongside the daily horoscope and *Akashvani* radio broadcast schedule on its pages and creating a sense of its temporal reoccurence and ordinariness. However, unlike *Andhra Patrika*, it did not publish additional information or columns on Doordarshan's regular programming, despite its temporal regularity. In considering where and how *Andhra Patrika* and *Andhra Prabha* placed the television schedule within its pages, my goal is to provide a sense of where viewers might have encountered Doordarshan and television within other forms of media that formed their everyday routines. For Doordarshan—and the television set in which it resided—to become ordinary was a matter of becoming materially and programmatically consistent *and* relevant.

　　If *Andhra Prabha* granted Doordarshan a sense of temporal regularity by including it alongside radio and the daily horoscope, it did not necessarily mark off Doordarshan's programming as worthy of deeper engagement, as *Andhra Patrika* tried to do with its programming summaries. Whereas the published radio schedules in *Andhra Prabha* indicated broadcast from the regional towns of Vijayawada, Visakhapatnam, and the state capital Hyderabad, Doordarshan's schedule was marked as emerging from New Delhi alone. Even if Doordarshan was becoming temporally regularized and rendered daily, its presentation in the

newspapers continued to bear marks of a distinct association with a distant Central government, rather than being fully embedded within local cultural life, as Telugu-language cinema was.

Figure 1: *Andhra Prabha* TV schedule, January 3, 1987
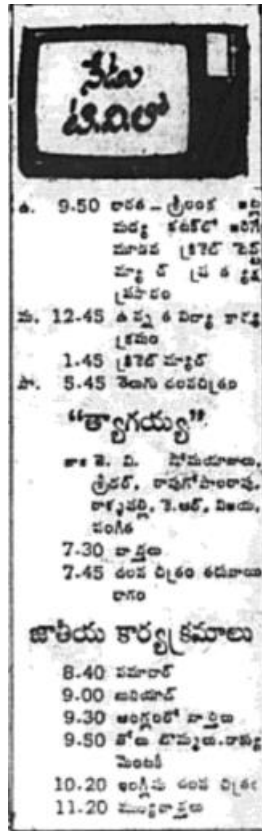
Figure 2: *Andhra Patrika* TV schedule, January 1, 1985

Coastal Andhra Pradesh—where *Andhra Prabha* and *Andhra Patrika* were both distributed and published—did not receive Doordarshan broadcasts from the *kendra* in Hyderabad. Instead, Hindi- and English-language National Network programming was beamed to the region's low-power transmitters directly from New Delhi, as *Andhra Prabha*'s television schedule indicated. This was the *only* formal television programming the heavily Telugu-speaking area received until private cable television channels began broadcast in the 1990s. Given the lack of a major regional *kendra* transmitting in the area, there was no possibility for extensive regional linguistic adaptation or alteration, as was the case with Madras Doordarshan

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and Tamil-language shows like *Oliyum Oliyum* and *Thirai Malar*, which topped the first major

Doordarshan viewer survey in Madras[131].

This disjuncture between the strictures and goals of broadcast content and what viewers

tended to watch on television sets colors accounts of earlier television experiments by the Central

government. Researchers for the SITE (Satellite Instructional Television Experiment) project

observed that nearly half of the programmes telecast from the Hyderabad Doordarshan *kendra*

were either sports (24 percent) or feature-film related (23 percent). [132] The researchers also

observed that within the coverage area of the Low Power Transmitters (the transmitters

responsible for providing coverage to coastal Andhra Pradesh), programming was transmitted in

directly from Delhi, creating a frustrating experience for the majority of viewers. "The Hindi

scare compels many TV owners to keep their sets closed, *save for the film-based entertainment*

items" (emphasis mine). Their field reports in the Hyderabad *kendra*'s coverage area also

highlight how crowds were drawn to the film-based programming. From Jeedimetla, now part of

the contemporary urban conglomeration of Hyderabad:

> As a general rule, when the set is in working condition, the watchman switches it on for
>
> the weekly Telugu and Hindi feature films. Thus, on Saturdays and Sundays, a large
>
> crowd of 250-300 gathers at the high school. Frequently, youngsters bring pressure on the
>
> watchman for other film-based items like Chitrahaar and Chitramala. He allows them to
>
> operate the set. Otherwise, it remains closed.[133]

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[131]*TV and Video World*, January 1986.
[132]B.S.S. Rao and B.V. Sharma, "INSAT Experiences: Candid Scenes from Andhra Pradesh," in *SITE to INSAT: Challenges of Production and Research for Women and Children*, eds. Binod C. Agrawal and Arbind K. Sinha, New Delhi: Concept Publishing Company, p. 144.
[133]Rao and Sharma., p.148.

Jeffrey—in documenting the rise of *Eenadu* and the fall of *Andhra Patrika*—notes towards the end of his piece that *another* Telugu daily newspaper, *Andhra Jyothi*, bought the rights to translate the script of Doordarshan's national telecast of the *Mahabharata* in 1989-1990. *Andhra Jyothi* would increase its circulation that year by 50,000—still not enough to overtake *Eenadu*, which achieved a circulation of 1,00,000 by 1978[134] and would continue to lead Telugu daily newspapers in circulation throughout the 1980s and 1990s. If Doordarshan's programming was indeed popular within the non-Hindi speaking regions of South India—and there is no reason to doubt that the *Mahabharata* was popular, if not politically potent in the same registers across the country—it is far less clear that the phenomenon of popular television programming was experienced in viewers (or readers, in this instance) in the same way, affectively or materially.

It is also worth pointing out here that Doordarshan's *material* availability was far less consistent in towns and villages than in the major metropolises, particularly outside the two cities large enough to possess a 2nd channel in the 1980s: Delhi and Bombay. A.W. Baxy, a viewer from Nagpur—a not-insignificant industrial town in Maharashtra—observed in the December 1984 *TV & Video World's* "Doordarshan Forum" column that the Nagpur *kendra* had received directions that *all* low-power transmitters, including the one serving Nagpur, be delinked at 11:30pm. This led to programmes being cut off abruptly, much to viewers' dismay. Another viewer, P.B. Ghosh from Calcutta, observed in the May 1985 "Doordarshan Forum" column that it was hard to tell—given how weak the colors on programmes broadcast from Delhi and Bombay were—whether or not there was a problem with their television set. Doordarshan's response was that "the micro-wave link could be bad at times," adding that if the viewer could

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[134]*Eenadu paathikela aksharayatra*, p. 132

watch his *local* programs satisfactorily and only had problems with the National Hookup, there was nothing wrong with their set.

Materially, then, Doordarshan's ready availability—an availability so necessary to the television acquiring its ordinary presence within the rhythms of people's daily lives, if we are to follow Scannell's ideas of everydayness—was subject to disruption, not unlike the physical sets themselves. The question remains, then: if not Doordarshan, what allowed the television to become a readily available presence within people's daily routines? If, as Roy points out, the public of commercial cinema was the imagined antithesis to the public of Doordarshan and state television, what can we say about the public of the video parlour and videocassette—the public that would come to feed into early cable television in the 1990s?

Newspaper advertisements announcing the arrival of television (or advertising consumer electronics more generally) were suffused with the presence of video. Advertisements for ECTV—the domestically-produced television set developed by the Electronics Corporation of India in Hyderabad—were run by local electronics and repair shops in *Andhra Patrika*. Regionally-specific advertisements, such as one celebrating *Makar Sankranti* in January, appeared alongside more regular announcements of the arrival of ECTV at local independent electronics shops. Many of these local establishments had names invoking a relationship to video or other consumer electronics, such as "Televideo Enterprises" and "Doordarshan Electronics" in Nizamabad and "Rayalaseema Refrigeration and Air Conditioning Company" in Ananthapur. Unlike ads for privately-manufactured televisions, which were usually in English and included local or regional dealer information at the bottom of the advertisement in very small type, Telugu-language advertisements for ECTV television sets proclaimed "We proudly announce," followed by the name of the dealer in large bold type, centered prominently within the

advertisement, and ending with a reminder that "We are the authorized dealer for our ECTV,"

(*Maa ECTV adhikrutha dealerni*) ending with the logo for ECTV and the address of ECIL in

Hyderabad.
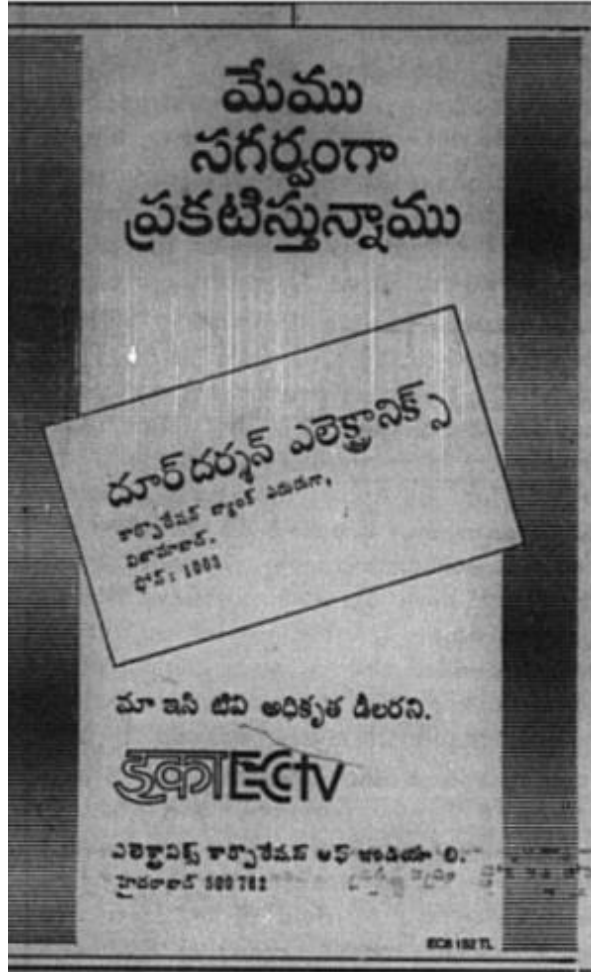
Figure 3: ECTV announcement for Doordarshan Electronics, Nizamabad. *Andhra Patrika*, January 16, 1987.

Figure 4: ECTV Sankranti advertisement, *Andhra Patrika*, January 14, 1987

The *Andhra Patrika* ECTV advertisement hails the reader with a grammatically exclusive 'we' (*memu*, emphasizing a collective that does not include the listener, as opposed to *manamu* which is listener-inclusive). The advertisement's tone implies that the local dealer and their staff are personally inviting the reader to experience *our* ECTV (*maa ECTV...*) in an extending of shared collectivity. This emphasis on locality and the possibility of personal closeness stands in sharp contrast to Doordarshan's absence from most of *Andhra Patrika*'s pages, or the television schedule's locational association with New Delhi in the television schedule printed in *Andhra Prabha*.

The ECTV *Sankranti* advertisement in the January 14, 1987 issue of *Andhra Patrika* is also worth examining a bit more carefully alongside these local dealer announcements, because it

explicitly implied that television could be enfolded within a localized cultural event. ECIL was a state-owned corporation based in Hyderabad charged with the task of producing affordable color and black-and-white television sets for the Indian people. The ECTV Sankranti advertisement in the January 1987 issue was a large, quarter-page ad, accompanying a half-page advertisement with Sankranti greetings from a local savings association and a regular news story.

Under an illustration of rice plants and a sunny sky, the ECTV advertisement proclaims, "For a colorful Sankranti," (*rangula Sankrantiki*) "a joyful goddess of plentitude in the house — ECTV!" (*intilo saradaala panta Lakshmi — ECTV!'*) Adjoining a picture of the different television sets in ECTV's lineup, the advertisement proclaims that a viewer could celebrate Sankranti while enjoying Telugu programs on ECTV. The emphasis on ECTV's ability to integrate into profoundly local customs, an ability which drives the advertisement's claims, seems to be the exception to how television sets were generally advertised in the newspapers. Smaller advertisements for privately-manufactured television sets in *Andhra Patrika* and *Andhra Prabha* emphasized their foreign (usually Japanese-manufactured) internal components instead of their ability to fit within a localized context.

ECTV's Sankranti advertisement is also notable for its depiction of the television set as an object that could fit within an imagined rural environment. *Lakshmi*, the "goddess of plenitude" in the leading line of the advertisement, is here specifically referred to as *panta Lakshmi*, emphasizing her connection to the crops (*pantalu*) whose harvest the festival of Sankranti celebrates. That the television set could be envisioned as contributing to the enjoyment of Sankranti is notable. Even an enthusiast magazine like *TV & Video World* still imagined television as a primarily metropolitan form of entertainment, only printing the Doordarshan

schedules for the four major cities—Delhi, Bombay, Calcutta and Madras—until the 1990s, when the National Network schedule began to appear in its pages.

Doordarshan, unlike ECIL with its television set, did not advertise its broadcast programming—Hindi, English or Telugu—in either *Andhra Prabha* or *Andhra Patrika*. Even though ECTV promoted the possibility of integrating the act of watching Telugu programming into holiday celebrations in its Sankranti advertisement, there was no similar effort by Doordarshan, the other (seemingly) necessary half of the televisual experience in India. If the predominant state manufacturer of television could envision audiences and dealers proudly enfolding the television set within their particular cultural practices and localities, the state broadcaster saw no great necessity to imagine its audiences as distinctively local. Doordarshan produced programming for all Indians; emphasizing Telugu or Tamil or Bengali programming or audiences was not, therefore, within its remit. This presumed universality, as the viewer letters in *TV & Video World* illustrate, was not always appreciated, given the perceived Hindi-centric nature of Doordarshan's programming.

In contrast to the ECTV advertisements in *Andhra Patrika*, advertisements for television sets in *TV & Video World*, a magazine targeted towards home entertainment enthusiasts—presumably mostly male, given the advertising within the magazine and the publisher's other offerings, such as *Technocrat* and *Gentleman*—emphasized the foreign technologies found within the set, rather than any local suitability. ECTV's advertisement invited the reader to enfold television within their Sankranti celebration or visit a dealer welcoming them with warm platitudes. Onida—a private Indian electronics manufacturer paired with Japan's JVC—ran full page ads in *TV & Video World* that emphasized just how jealous an Onida owner's neighbors could become upon seeing the Onida set. With the tagline "Neighbours' envy. Owners' pride,"

above pictures of cracked TV sets (broken by stones hurled in rage), or pages mocked up to appear that they had been torn (by jealous neighbors, again in rage), Onida emphasized a uniqueness that was rooted in singular experience, private space, and closed-off ownership— after all, the advertisement's explicit claim that neighbors would be jealous of Onida owners seemed to quietly imply that said neighbors could not enjoy watching a television set that they did not themselves own and keep close. (Interestingly, the advertisement's copy implies that the neighbors are television owners as well: "And [they] have been deeply regretting the fact that they're stuck with colour TVs that are obviously a generation behind!") Yet this closed-off, exclusive idea of ownership did not necessarily mirror the environments in which television was routinely encountered—in semi-public spaces such as the video parlour or the front rooms of homes.

ECTV did not advertise in *TV & Video World*, though other state television manufacturers such as Kerala's Keltron, Orissa's Konark TV, and Karnataka's Keonics did advertise in the magazine's pages. In a November 1985 advertisement in the magazine, Konark TV emphasized that its sets were built "with high technology from Grundig, West Germany." Konark also invoked the *Mahabharata*, a Hindu epic, in another advertisement, claiming that Konark TV were the "eyes and ears in which you can have blind faith," much like blind king Dhritarashtra relied upon Sanjay to convey the events of the Kurukshetra battle to him. Konark's English-language advertisement, while reliant upon a particular mythology to emphasize its technological prowess, did not invoke as strong a local sensibility as ECTV's Sankranti advertisement in *Andhra Patrika*. Konark TV's advertisement was about the self-contained set and the quality of its technologies, rather than the possible rhythms of daily life into which the set might be integrated.

Keltron, in an April 1985 *TV & Video World* advertisement, took a similar tack, emphasizing its "tropicalised" suitability for India's environment with a large photo of various transistors, capacitors, and resistors labeled "Electronic components by Keltron: It's what others use to make their Colour TVs good." Keltron boasted their televisions performed so well in tropicalised conditions that "2000 persons in the Gulf have preferred Keltron Colour TV over foreign brands," with nary a hint as to the particular diasporic connection or rhythms of life the Kerala-based manufacturer was invoking. If Keltron imagined itself to be a particularly *Keralan* brand, it did not explicitly advertise as such in *TV & Video World*, which envisioned itself as a magazine with national reach and prominence.

The television set was advertised and encountered in a broader nexus of newly-available consumer electronic goods, including video equipment. It was thus not necessarily or always bound up to the imaginations of television the state had in mind. The television was also easily enrolled within the alternative visions of mediation and the audience embodied in the videocassette and in cinema. The difference between ECIL's imagination of the consumers who would buy an ECTV set for Sankranti celebrations in Andhra Pradesh, and Doordarshan's imagination of citizens who uniformly consumed content from the National Network—this was the gap that had been filled by video technologies and video parlour entrepreneurs by the time the advertisement was published in 1987. Stephen McDowell has observed that while the *number* of televisions rapidly expanded in the mid-1980s, the programming offered by *Doordarshan*, the state broadcaster, remained limited in its offerings, even as film production was thriving.[135] McDowell notes that it was the distribution system set up around VCRs and video cassettes—

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[135]Stephen D. McDowell, "Globalization and policy choice: television and audiovisual services policies in India," *Media, Culture and Society* 19 (1997): 151-172.

and not exclusively television-oriented programing—that proved to be the bedrock for the distribution of diverse audiovisual program offerings in India.

The spread of video

In 1983, *Screen*, an important Indian film industry trade journal, described video parlours in Andhra Pradesh thusly: "small, dingy, and improperly ventilated rooms with avid patrons sweating it out for two hours to watch a clumsily pirated version of a Hindi or English blue film.[136]" Photos of signs from the "Raunak Cool Drinks" video parlour accompanying the article showed that a television set, flanked with the text "Enjoy Free Video Films" was used as the central illustration in the video parlour's signage, rather than a VCR or videotapes. *Screen*'s caption accompanying the photo of Raunak Cool Drinks's advertising warned: "A show like any other show. Cool drinks and video films. The craze for video films is growing rapidly. The best films available, even the latest." *Screen*'s insistence that video-on-TV shows were "like any other show"—and therefore ought to be bound to the regulatory and copyright strictures of commercial cinema—illustrates that the television set was becoming a troublesome media object to contend with. Broadcasting may have been the exclusive domain of the government, but the television set was not bound to broadcast content anymore. Its material portability and linkage to VCR and video was carving out new arenas and formations within which audiences could begin to draw together, to the alarm of both Doordarshan and the commercial film industry.

Between 1980 and 1987, the number of television sets in India increased 10-fold.[137] Accompanying this increase was the rapid spread of videotapes and video parlours outside of the metropolis. In a material sense, then, the linkage of cinema and television sets began a bit earlier

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[136]M.R. Sameeran, "Video parlours rampant in AP, TN," *Screen*, November 11, 1983.
[137]Singhal et al, "The Diffusion of Television in India," *Media Asia* 15(4):222-229.

than the start of Ramu's village-level cable networks, with their cassettes and two films a day. Wanting to promote the 1982 Asian Games in New Delhi amongst the people, the Rajiv Gandhi government lifted import restrictions on video cassette players and televisions. This decision that would prove consequential for the material spread of television into smaller towns and localities outside the metropolises of Bombay (now Mumbai) and New Delhi. *Screen* loudly declaimed the arrival of the "growing menace" of video in 1981. Ads in *Screen* announcing that ``THE VIDEO AGE HAS ARRIVED'' appeared in 1980. By 1984, the cost of video-recording equipment had fallen from Rs. 1,000,000 to Rs. 250,000; the cost of blank cassettes had dropped from Rs. 300 to Rs. 100 per cassette. Lending charges for cassettes dropped from Rs. 150 a day to Rs. 8.

Studies of VCR and video based in the U.S.—in particular, Joshua Greenberg's *From Betamax to Blockbuster*—posit that one of the major transformations that shaped video's uptake was a shift from "a machine that records television to a machine that plays prerecorded cassettes, generally movies."[138] In India, however, the distinction between early encounters with the television, cinema, and video/VCR was far less pronounced—oftentimes television sets and videocassette equipment were encountered in tandem through the space of the video parlour, set up for the express purpose of watching popular cinematic productions. The video/VCR had primarily been a means to liberate cinema from the confines of the cinema hall, as cable operators and the trade journal *Screen* both noted in their own explanations for, and understandings of, the "video phenomenon."

Greenberg writes that early video in the United States was shaped by hobbyists' individual and collective efforts to record programs from their television sets, given that there were no pre-recorded cassettes available for videocassette recorders as the major studios "were

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[138]Joshua Greenberg, *From Betamax to Blockbuster: Video Stores and the Invention of Movies on Video* MIT Press, 2010.

caught flat-footed by the introduction of this new machine, not having even figured out whether

they wanted to release their movies and television programs on tape, much less how to do so[139]."

In India, however, both video piracy (of cinema, not of Doordarshan's programs) and the

sustained development of video-recording and playing technologies were intertwined from the

start: the Santacruz Electronics Export Processing Zone (SEEPZ) in Bombay[140], was

simultaneously a futuristic special economic zone intended for electronics production and

foreign export as well as a suspected hotbed of domestically-oriented video piracy.[141].

     Binod Agrawal, one of the primary researchers who had worked on the government's

earlier SITE television experiment, also somewhat acidly noted in a 1986 article that "many

more applications of video are being 'invented' in India that are far from its original uses for

'time shifting' and viewing special television programs," observing that "many in India and

elsewhere have thought of it as 'even better' than television," and that "the single most important

use of the VCR is for viewing commercial films." Early cable television, Agrawal pointedly

remarked, was "nothing more than video distribution systems from a single VCR." This

observation—that the VCR's potential to freely link viewers to commercial film, rather than

Doordarshan-produced television, drove its subsequent adoption by viewers and entrepreneurs—

also haunted the pages of *Screen*.

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[139]Greenberg, *From Betamax to Blockbuster*, 21.
[140]SEEPZ was established in 1975, alongside the Electronics Corporation of India, Ltd. (ECIL) as part of a new push into information technology production by the Government's Department of Electronics. See Tariq Ashraf (2004), "Information technology and public policy: a socio-human profile of Indian digital revolution." 91 percent of the total "unskilled" and "semi-skilled" assembly operators in the SEEPZ were women, paid around Rs. 450 a month, in comparison to (mostly male) workers at local factories, who were paid around Rs. 1000-2000 a month. See Sujata Gothosakar, "Free Trade Zones: Pitting Women against Women", *Economic and Political Weekly*, Aug. 23, 1986.
[141]An article from the August 3, 1984 issue of *Screen* noted that previews of pictures within the SEEPZ were being halted "with immediate effect in an effort to curb video piracy" after claims that an insider was handing off camera prints to video pirates. The article also observed that pornography was smuggled through the SEEPZ to "private places" in Bandra, Malabar Hill, Crawford Market and far-off Bombay suburbs.

Tapes with titles like "Yoga For Better Sex" were erased right on SEEPZ premises after being discovered by the censors (*Screen*, July 11, 1980). One of the more prominent video companies mentioned in *Screen*'s pages, Esquire Video, got its start in 1979 in the SEEPZ. A loophole in the 1952 Customs Act allowed video cassettes produced for export to be legally imported back into the country; Esquire promptly leapt upon this loophole to become one of the largest video distributors in India. In some sense, then, the spread of videotapes and consumer electronics—a spread that was painted by *Screen* as a dubiously legal, morally threatening one—was intimately bound to the projects of neoliberal production and reinvention that an area like the SEEPZ embodied. This relation, of course, would only become more sharply pronounced with the onset of cable and satellite television in the 1990s—but it is worth holding on to the somewhat schizophrenic sense of the 1980s SEEPZ (a grand government project simultaneously subverted by illegally industrious capitalistic incursion) as fundamental to television's particular evolution in South India.

In his work on the transformation of video into a mass medium, *Veni, Vidi, Video*, film scholar Frederick Wasser writes that viewers initially bought VCRs to watch television programs "when they wanted to," and it was only *after* a critical mass of VCR-owners had been reached that the infrastructure for renting and watching pre-recorded videos mushroomed in their neighborhoods[142]—not quite reflecting the compressed and simultaneous expansion of the television network and video establishments in 1980s India.

Writing about the "consumption junction"—an idea Greenberg takes as central to understanding the VCR and its imagined potential—Ruth Schwartz Cowen describes a network relation that focuses on "the actual or potential consumer of an artifact and imagining that

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[142]Frederick Wasser, *Veni, Vidi, Video: The Hollywood Empire and the VCR*, Austen: University of Texas Press, 2001, p.8.

consumer as a person embedded in a network of social relations that limits and controls the technological choices that she or he is capable of making."[143] What relations did the video/VCR/television nexus allow for, and how does this alter our understandings of cinema, television, and their relations to each other? How did these new media forms and audience spaces interact with the imaginations that governed both state-run broadcast television operations and the privately-run space of the cinema and film exhibition? As Abhijit Roy insists:

> Cinema, in fact, is crucial to television not only because the former is equally capable of creating strong constituencies of mass appeal but also because it is the only parallel site containing streams of recorded sounds and images involving concurrent of form. Along with the radio broadcast form, film has given television a significant context. Since reception of a representational site is inalienably attached to the formal legacies of the apparatus concerned, one can't afford to undermine the formal histories of a 'national' cinema in shaping the viewership of television in a particular cultural context.[144]

Roy's emphasis on cinema's influence and intertwining effect on Indian television and its possibilities is worth considering in light of how the audience of television has primarily been imagined to be a *domestic* one, removed from the seemingly chaotic publics and possibilities embedded within cinematic exhibition and practice. In *Family Television*, media scholar David Morley writes that

> Too often, the fact that television is predominantly a *domestic medium* and that viewing is largely done "in" the family is either ignored, or is "registered" only to be assumed

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[143]Ruth Schwartz Cowan, "The Consumption Junction: A Proposal for Research Strategies in the Sociology of Technology," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, eds. Wiebe E. Bijker and Trevor Pinch. MIT Press, p.254
[144]Abhijit Roy, "The Apparatus and its Constituencies: On India's Encounters with Television," *Journal of the Moving Image* vol.4 (2005)

away as a pre-given "backdrop" to the activity, rather than being directly investigated. Television viewing may be a "privatised" form of activity, by comparison with cinemagoing for example, but it is still largely conducted within, rather than outside of, social relations—in this case the social relations of the family or household.[145]

This understanding of television—one that posited it *primarily* as a domestically-oriented activity governing family members' interactions with each other (but not necessarily their interactions with a broader, separable "public" outside the home)—is perhaps too isolated an imagination of television's presence in everyday life to easily apply to Indian viewers and their experiences of television, which were permeated by visitors and neighbors and shaped by interactions with the wider ecology of video libraries and parlours.

A digression may be in order here. One of the things I would do with the television repairmen I worked with at an authorized service center would be to watch television—usually the news, sometimes relationship-fixing talk shows headed by former film actresses, sometimes movies—while we waited for the next customer. During one of these breaks, a Telugu film called *Police Bharya* (*Police Wife*), from 1990[146], caught my attention.

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[145]David Morley, *Family Television*, London: Comedia, 1986.
[146] *Police Bharya*, directed by Relangi Narasimha Rao (1990; Hyderabad, India: Sri Anupama Productions), online at https://youtu.be/4nQr5AKKNow.

A romantic comedy about a hapless police constable who falls in love with a Doordarshan newsreader, it was the constable's initial encounter with the newsreader on television that intrigued me. After run-ins with the amorous neighbor whom he desperately tries to avoid and the boss' wife who terrifies him, the constable goes to the barber for a hair oil massage. The barber drums his customer's skull to the rhythm of the *mridangam* player on the television in a corner of his shop. The constable asks, "There used to be newspapers and transistors in this shop, have you put in television recently?" He continues, musing idly: "It'll probably be good for leisure (*kaalakshepam*), but are you gonna stick us for those charges too?" The barber thumps his head hard, and he squirms, asking why he was hit if he didn't say anything wrong this time. The barber sardonically notes he doesn't want him to say *anything*, as it's time for the news. The newsreader—a young woman—begins speaking, and the constable is instantly captivated, wondering aloud what magic is this (*emi vintha*) that there's a divine creature in "our" TV (*mana TV lo ilanti apsarasa*). The barber looks entirely underwhelmed at his customer's increasing excitement. It eventually turns out the newsreader is his sister.

The scene is compelling primarily because of the space in which the television is initially encountered—not alone in a domestic space (or even a neighbor's house), but within a commercial establishment. While there are painfully few customers in the barbershop—only the constable, another man, and the barber himself—the space is still distinctly non-domestic. The constable links the television in with a continuum of other publicly available distractions at the barbershop—the newspaper, the transistor radio—rather than being surprised at its presence within a public establishment. The television is not necessarily an "ambient" presence in this location. It soon becomes the focus of everyone's attention in the room, what with the barber's desire to listen to the news and the constable's attraction to the newsreader. Even so, what the television decidedly *isn't*, in this case, is a private or domestic device. To construct television's audiences as uniquely or solely domestic and bound to the space of the home, then, seems particularly limiting when it comes to India's encounter with the media form.

The lead article in the issue of *TV & Video World* from November 1984 was entitled "How Video Has Changed Our Lives," with reporting from multiple Indian metropolises[147]. The article was published shortly after changes to the Indian Copyright Act introduced criminal penalties for the viewing of pirated films, privately or publicly. The reporters noted that "Video owners are apparently oft-visited people, with the machine certainly adding to their status in society. Most owners said they would not feel frustrated if they were watching a film and some people dropped in on a social visit." This blend of public-private experience wasn't restricted to those people who could individually afford a TV/video setup—it also distinctly marked middle and working-class people's encounters with video, as the *TV & Video World* reporters somewhat patronizingly point out:

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[147]Saumya Balsari, R.K.K. Menon, Ranjana Kacker and Nilofer Ahmed, "How Video Has Changed Our Lives," *TV & Video World*, v.1, no.12 (November 1984), p.14-17.

And what about the lower strata of society? Video shall, perhaps, no longer be out of their reach. Enterprising domestics and slumdwellers pool in their resources to hire sets, the expenses being shared by at least 50 people. Video parlours have made their appearance in slums, and hutments and garages of posh buildings often act as mini-auditoriums. An interesting thought—maybe both employers and employees are watching the same films. Video can, maybe, become the great leveller."

An assumption worth noting in the reporters' observations on video usage is their idea that video allows for the possibility of "employers and employees are watching the same films," and that video carried within it an equalizing potential not embedded within cinematic exhibition or film-watching practices that were grounded within the cinema hall. Neither is there a solid association of the television/video setup with the confines of the domestic space—an assumption that would become routinized in later studies of television viewing practices and audiences. Instead, "hutments," "video parlours" and "garages of posh buildings" all figure as possible spaces in which the potential of the television might be encountered by first-time viewers. Importantly, these spaces were ones which were *not* necessarily associated with domestic practice and private life, but instead blended aspects of commercial exhibition and the locality of neighborhood venues.

In thinking about the publics formed by early cinema and the space of the cinema hall in South India, media scholar S.V. Srinivas writes that the social mixing that the cinema hall made possible "raised considerable disquiet among certain quarters but it also opened up the possibility of thinking about the cinematic audience as a microcosm of the nation itself."[148] Srinivas argues that the "public" imagined for and through the early Telugu-language cinema was not

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[148]S.V. Srinivas, "Gandhian Nationalism and Melodrama in the 30's Telugu Cinema,"*Journal of the Moving Image* 1, iss.1 (1999):19-20.

exterior to the community but an extension of and synonymous with it. The public was not always seen as the other of the community. In fact Telugu newspapers of the twenties frequently reported the activities of caste associations and these associations in turn presented an audit of their accounts and activities to the press. The public was thus not something that existed 'out there' in some unproblematic manner but an agency that was conceived and mobilised differently from that in other media.

This idea of the public—as something that was an *extension* of the community, rather than an oppositional entity—is worth contrasting with Morley's vision of the act of television viewing as a fundamentally *domestic* and somewhat separable and contained activity from other "public" spaces and media forms (particularly cinema). A public that was simultaneously an extension of the community and a distinctive space of proto-democratic possibility could not be shaped by media forms that were inherently or exclusively limited to the space of the "private" or the "public." Cinema, as Srinivas illustrates, inhabited and produced a space that congealed the private and the public into an altogether more amorphous entity. Given cinema's great influence on the spread of the television set and its integration into small-town media life, it is not implausible to imagine that the publics formed by the television—in spaces like the video parlour or the communal television-viewing space—were also complex intertwinings of public and private sentiment, neither entirely limited to domestic/"communal" concerns nor entirely abstracted to a national public, as Doordarshan's creators and maintainers envisioned.

In contrast to Srinivas' observations about historical cinema viewing practices and possibility, the sociologist Lakshmi Srinivas—writing about contemporary cinema halls and viewing practices in the South Indian city of Bangalore—observes that

Moviegoers' decisions about which films to see then involve decisions about how to navigate and experience the city. People are reluctant to move out of their comfort zone and prefer to frequent theaters they are accustomed to. They manage the risks and inconveniences of navigating the city by choosing films screened in theaters close to where they live.[149]"

While both the areas and the period in which this chapter is based differ significantly from Srinivas' account of contemporary Bangalore, her observation that cinema-going was *already* (and perhaps had always been) an activity that was structured not around a possible equality to be found within the darkness of the movie theater, but by a hyper-awareness of the social and physical risks involved in the act of movie-going itself, and a focus on local differentiation and material particularity, has relevance for trying to understand the perceived egalitarian potential of the video parlour or the act of communal video watching in the *Screen* report: "Audiences at Bangalore's cinema halls and tent theaters are constantly reminded of the materiality of the theater setting and the sensualities of these spaces.[150]" Video, judging by the *Screen* reporters' accounting, produced a kind of liberatory potential through the promise of simultaneity. No longer would small-town cinema watchers (or the urban poor) have to wait for the film to (eventually, possibly) make its way to their particular neighborhood theater; rather, they could experience the possibility and pleasure of watching a movie *alongside* their supposed betters, at the same time, in their carparks, villages and tenements that shadowed their bosses' and employers' legalized city.

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[149]Lakshmi Srinivas, *House Full: Indian Cinema and the Active Audience*, Chicago: University of Chicago Press, 2016, p.74
[150]Srinivas, *House Full.*, p.92.

The insistence upon television's linkages to the private, domestic sphere—and its especial, unique work in connecting the national politic with the private concern—color the two major scholarly accounts of early Indian television: Purnima Mankekar's *Screening Culture, Viewing Politics* (1999) and Arvind Rajagopal's *Politics after Television* (2001). Both these scholarly accounts share some thematic overlaps: an abiding concern with theorizing the rise of a Hindi-and-Hindu centered national imaginary (embodied most profoundly in the political fortunes of the right-wing *Bharatiya Janata Party*), an interest in thinking carefully about television's role in linking political and seemingly personal concerns, and a fixing of television to the space of the home and the productions of Doordarshan and its National Programme— particularly its later sponsored programs and televised Hindu epics. Rajagopal writes in the introduction to *Politics after Television*:

> Television stitches together a plurality of fields through a currency of images, instituting a system of representation that cuts across society. Within it, the distinct symbols of each social field can be 'realistically' portrayed in all their uniqueness, while ignoring their constitution within a newly homogenized system of representation. It thus permits the unobtrusive accumulation of economic as well as symbolic capital on an unprecedented scale.[151]

But this particular theorization of television's encompassing capabilities does not fully capture the dissonance embodied in reactions such as the Malayali protest to *Hum Log*'s stereotyping, the ongoing scorn and dismissal towards Doordarshan meted out by viewers from all over South India across both trade and enthusiast publications, the recurring preference of viewers for Dacca, Lahore, and Sri Lankan television where it could be captured, and the Madras *kendra*'s

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[151] Rajagopal, . *Politics after Television*, p.11.

own extensive efforts to dub and produce Tamil-language content exclusively. These localized, regional assertions—if not of autonomy, then at least of disapproval and awareness of a deep distinction from Doordarshan proper—disrupt the ability of television to "homogenize a system of representation" and provide space for unobtrusive accumulation of symbolic capital. Given the violence that undergirded movements for linguistic autonomy in both the Tamil- and Telugu-speaking regions of India, the ability of television—insofar as we imagine television as only linked to Doordarshan and its Hindi-mediated national project—to produce a unobtrusively homogenous space of (nationalist) communication would be severely compromised by virtue of its linguistic choices.

In his essay "The 'Worlds' of the Region," media scholar Ratheesh Radhakrishnan theorizes a "nonintegrated subject" whose performance of subjectivity is shaped not by the national or the global, but by the multifaceted construction that is the region. The region, Radhakrishnan writes, ``hitherto understood as a particular affiliation that will be superseded by the nation in time, provides for newer horizons of universality. The region...allows for multiple horizons of the universal, not necessarily in conflict with each other.[152] The congealed chaos embedded within everyday encounters with television in South India—the television was not necessarily a conduit straightforwardly linking the domestic and national spheres, the television *was* regularly and physically encountered within spaces such as the video parlour that broke down any inherent connection to a removed domestic "privacy," and the possibility of the television's becoming unobtrusive and unexceptional was linked to its perceived and actualized ability to provide content distinct from that offered by the National Network and its Hindi-mediated ordinariness and unity—materialized a set conditions under which the "nonintegrated"

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[152] Ratheesh Radhakrishnan, "The 'Worlds' of the Region," *positions: east asia cultures critique* v.24, no.3 (August 2016), p. 709.

subject, simultaneously in tune with and out of step with the project of the nation, could reproduce themselves.

Srinivas, a cable operator I spoke to from a village in the Guntur district, told me when he started his local cable network in 1995, there were "no dish satellites or anything like that back then. We only had video recorders, VCRs. We played VCR cassettes, for the VHS system, the big cassettes. We played those cassettes, and then we used coaxial cables and amplifiers, and connected to the houses from the amplifiers." When I asked him if he used the video cassettes to play movies, he responded affirmatively. Doordarshan was hardly mentioned in the conversation—Srinivas' memory of television leapt between Gemini (whose signal he only received for two hours a day in the beginning), and Ramoji Rao's *Eenadu* TV, which he said began regular transmission with a 24-hour song shows titled *Eenadu saraagaalu* (roughly translated, "Today's songs").

How do we theorize this moment—the emergent media system of cable television drawing out of the intersecting shadows and possibilities offered by the national broadcaster *Doordarshan* and by the deep histories of cinema and cinematic exhibition in South India? Cable television—in its 1980s and transformative 1990s incarnations—and to a lesser extent, Doordarshan, depended upon the cinema for relevance, more so in areas of India within reach of other nations' broadcast imaginaries, programs and schedules. Viewers in these areas—all outside Doordarshan's Hindi-mediated national imaginary—wondered about (or actively sought out) broadcast transmissions from other countries, as evinced by a letter in[153] *TV and Video World*, written by viewer K. Balagopal from the southern state of Kerala: "How can the authorities expect to integrate a nation of different cultures and life-styles by imposing mediocre

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[153]"Feedback," *TV & Video World*, vol.2, no.1, December 1984

programmes in Hindi through the National Network?...People will still yearn to watch Lahore or Dacca TV." (Sri Lanka's *Rupavahini* also figured into this desire in South India.)

The first large-scale deployment of television in rural areas of India—the 1972 Satellite Instructional Television Experiment (SITE)—presumed a model of communal viewing that the Doordarshan of the 1980s seemingly abandoned. As Aswin Punathambekar and Pavitra Sundar observe—thinking through Doordarshan's new character after the introduction of commercially-sponsored programs in the 1980s—the broadcaster mediated a profound temporal shift, "the delinking of the time of everyday life from statist notions of Development and aligning it with emergent, yet powerful affective regimes of advertising and consumption that were transforming daily life."[154] Yet these affective shifts lived in a landscape of other changes to media shape and form, particularly with regard to cinema. It would be within the space of these shifts—both in the broadcaster Doordarshan and the cinema industry's struggle with the "video menace"—that cable television would emerge on to the Indian media landscape.

Video terrors and the incommensurable audience

In a 1984 article on "Video in Jawahar," *Screen* columnist Ali wrote, with a heady mixture of disdain and surprise at the rural region and its mostly-indigenous inhabitants, that "video is still the best pastime in the city": "There are two video theatres which are running like any other theatre anywhere. Regular shows are rare. Fifteen to twenty people see a film a time. There are all kinds of films shown, old and new...The people who are running the show and the people who are seeing them are blissfully unaware of the new law against video. They are happy with their new 'cinema machine.' "[155] In a similar vein, a "video fever" struck the North Indian

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[154]Aswin Punathambekar and Pavitra Sundar, "The Time of Television," p.403
[155]Ali, "Video in Jawahar," *Screen* (Friday, December 14, 1984)

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state of Madhya Pradesh in an April 1983 issue of *Screen*, with the reporter emphasizing the informal nature of the network and its establishments, which were mostly video "restaurants": "By and large, publicity is spread by word of mouth but some of the bolder owners of such restaurants have even begun to advertise in the newspapers."[156]

Televisions, then, were not strictly bound to the programming that was intended for them—programming that, from the outset, had been laden with an expectation of moral and developmental probity. As the 1985 Report of the Working Group on Software for Doordarshan, "An Indian Personality for Television," acidly observed:

> The similarity between the programme content of Vividh Bharati [All India Radio's program of film songs[157]] and of the Delhi Doordarshan Kendra is too striking to be missed. Both rely heavily on film-based entertainment, commercials and news. Both are directed to the urban minority of India's population. The contribution of either of them to education or to socio-economic development is minimal.[158]

While the Working Group's aspirations reflected an imagination of television that was unbound to cinema's popular trappings and commercial impulses, the start of sponsored programming in the mid-1980s—something that the Working Group was specifically appalled by in its report—rendered the actuality of Doordarshan into something far more ambivalent. In 1986, *Screen*'s editor B.K. Karanjia acerbically observed that "for all the smoke and fire breathed by several filmmakers, they meekly accepted the rates originally and unilaterally fixed by the Doordarshan authorities."[159] Karanjia's implication here—that cinema-related content was worth far more than

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[156]M.P Garg, "Video fever grips MP," *Screen* (Friday, April 29, 1983).

[157]See Aswin Punathambekar, "Ameen Sayani and Radio Ceylon: Notes towards a History of Broadcasting and Bombay Cinema," *BioScope: South Asian Screen Studies* 1, iss. 2 (2010): 189-197.

[158]*An Indian Personality for Television, Volume I, Report of the Working Group on Software for Doordarshan*, p.41. New Delhi: Publications Division, Ministry of Information and Broadcasting.

[159]B.K. Karanjia, editor's column, *Screen*, January 24, 1986.

Doordarshan was paying or the filmmakers fighting for—speaks volumes about the popularity of film-on-Doordarshan, rather than the broadcaster's original content. *Chitrahaar*, a Doordarshan program that played a collection of film songs on a weekly basis, had long been one of Doordarshan's more popular offerings—and was often the only Doordarshan program the cable operators I spoke to remembered as something that people were willing to watch. What the government hoped that television would be to its viewers—and what viewers chose the television to be for themselves—was a contested and conflicting zone of pushback, refusal, and imposition.

Viewers' stated affinity for programming (especially cinema) that varied from Doordarshan's explicit televisual aspirations (if not its experienced actuality) was consistently reflected in the stories cable operators told me about how they came to be in their line of work. Cinema also colored early transnational experiences of cable telvision in the trade press: a *Screen* correspondent in Karachi reported that Indian films (whose videotapes were banned under Martial Law provisions) aired twice a week on Oman TV, and could be seen with a booster dish that cost Rs. 660. Dissatisfaction with domestic television programming was also rectified through occasional access to international channels. In 1984, *Screen* reported, the Sri Lankan national television station Rupavahini weakened the strength of its transmission by Government order, noting that while the channel was immensely popular in South India, it did not receive any Indian advertising to compensate. *Screen* also noted that even after the introduction of colour to *Doordarshan*, South Indian viewers preferred Rupavahini "due to the imported canned programmes."

In *Screen's* estimation, the *primary* function of video—and the television sets associated with them—was to exhibit films, and compete with cinema halls, rather than Doordarshan and its

productions. In an article from December 1982 about state governments' efforts to tax video cassettes, correspondent V. Verma noted pointedly that "in our country, a person who has a TV or video, or who can see films on TV or video in the houses of friends or relatives, has no incentive to go to a cinema theatre." The southern state of Andhra Pradesh, in passing its first regulations on video at the end of 1983, assumed the primary function of video cassettes was to watch films. The state passed a licensing scheme for video establishments based on existing regulations for commercial cinema halls—an effort a *Screen* reporter derided as the state having "just gone ahead and miniaturised the Cinematograph Rules."[160] At least, the reporter added with more than a hint of mockery, Andhra Pradesh had not been quite so insistent in copying over cinema regulations to video parlours as Tamil Nadu, which insisted that "video shows are under compulsion to show Government slides." How this would be done, the reporter concluded, they had no idea.

Despite the film industry's abiding concern over video, their predictions of utter disruption were unfounded—at least in the case of India in 1984. *Screen* reported in November that theatrical earnings across the country had increased in spite of the video boom[161] Viewers, it seemed, were handily escaping the imaginative and predicative powers of the industry—and disrupting their projected notions of what audiences would or should watch in the process. *Screen* also noted that at the time regulations were passed, an estimated 10,000 video parlours were operating in the towns, villages, and cities of Andhra Pradesh. In Tamil Nadu, petitioners challenging an ordinance on video argued for the "fundamental right to practice a trade," noting that they served about 100,000 customers. The Karnataka High Court had ruled, a few months

[160]M. Bhaktavatsala, "Video: The wind of change," *Screen*, April 27, 1984.
[161]V. Verma, "Theatrical earnings up in spite of video boom; industry's fears belied." *Screen*, November 23, 1984.

earlier, that "films shown by means of video cassette recorders at hotels, clubs and coffee houses was nothing but cinema."

Screen's stories of videos outside of the metropole—whether in Madhya Pradesh or Rajasthan, Andhra Pradesh or Karnataka—were usually couched in terms of surprise and disbelief. Surprise that video had even reached remote or rural regions, and disbelief at the sorts of films viewers were crowding into small, inadequate video parlours to watch. *Screen*'s outrage was reflective of the dominant understanding of cinema audiences, revenue potential and distribution patterns of the time. As Tejaswini Ganti writes

> In my conversations with distributors and trade journalists, entire territories were assigned a character based on the commercial performance of films...In addition to producing ethno-linguistic audience categories, the distribution network generates the scalar residential binary of "city" and "interior" audiences, which corresponds to the division of distribution territories into A, B and C-class centers.[162]

S.V. Srinivas, in an article about Hong Kong action films on the Telugu "B-circuit" (which reflects but does not quite mirror the Hindi film industry's A, B and C-class centers), further elucidates that the "B-circuit" is one "characterized by low level of investment...de-standardization of the film's status as an industrial product" and "confined to territories consisting primarily of non-metropolitan centres.[163]" Video, by successfully catering to these audiences, revealed the uncertain foundations upon which dominant film industries—particularly the Hindi film industry that *Screen* served—constructed their notion of audience.

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[162]Tejaswini Ganti, *Producing Bollywood*, p.291
[163]S.V. Srinivas, "Hong Kong action film in the Indian B circuit", p.49

The reporter M.S.M Desai, writing for *Screen* in August 1984[164] about a "porn wave" that

had turned the city of Bombay into an "erotic wonderland," emphasized the "extent of video

evil" the newly-convenient availability of pornography had revealed. "Not content with pirating

legitimate Indian and foreign films," he thundered, "video pirates have now taken to purveying

sex and perversion through smuggled pornographic films which are then distributed all over the

country through an ingeniously-devised infrastructure of video libraries and parlours, thus

endangering the moral fibre of the society." Alongside the moralistic outrage at the seemingly

unstoppable presence of pornography in the city is a more mundane observation about video

itself. Desai acknowledges here that it is *video* infrastructure: the libraries, the multiple daily

shows at video parlours ("unmindful of police, who get regular 'haftas'"), that has thoroughly

permeated the fabric of Bombay and its suburbs, far more than *Doordarshan*, even with its

second channel and fairly extensive Hindi-language content.

Throughout the early 1980s, *Screen* reported on the decline in U.K. theatres specializing

in Indian films after the emergence of a video market, with film prints being stolen from

cinemas, distributors' offices and even airports (March 7, 1980), and the film industry's

subsequent delight with the government's decision to allow producers and exporters to sell the

video rights of their films to the highest bidder. Far from a worry that *television*-specific

programming would be pirated or time-altered, the concerns over video cassettes and video-

recording equipment in India were almost entirely driven by the anxieties of the film industry.

Amarjeet Ranu's front page article from a October 1981 issue of *Screen* observed that South

Indian film producers in particular were caught out by the sheer popularity of video: "They

themselves wonder," Ranu writes, "how so many Hindi, Tamil, Telugu, Malayalam and Kannada

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[164]M.S.M Desai, "Porn wave turns city into erotic wonderland; Startling disclosures about extent of video evil," *Screen*, August 3, 1984.

films on video cassettes are in circulation when nobody has given the rights for their video-taping in the generally accepted sense of the term."

The editor of *Screen*, B.K. Karanjia, characterized video piracy in terms of moral depravity and stringency—a not dissimilar exercise to the moral aspersions cast onto commercial cinema by the state. Karanjia, defending *Screen*'s reporting on a video parlour owners' association strike in New Delhi in the October 4 issue of *Screen*, had this to say about the magazine's take on the whole situation:

>...If pirates can claim protection to sell piracy across the counter, smugglers can as well demand safeguards and thieves talk of the right to other men's property, and then surely, deplorably, the national conscience would lose its prick."

Despite the moralistic outbursts—typical of *Screen*'s coverage of video piracy's impact on the film industry—the spread of the video industry continued relatively unhindered.

Film scholar Lucas Hilderbrand, musing on the nature of cinephilia[165] after the advent of home video, writes that video made "movie love even more diffused" and that "the politics of video have, from the beginning, been a politics of access." Like Greenberg, Hilderbrand attributes the success of video's uptake in the United States to amateur efforts, to "movie lovers" and buffs and small business owners, working against the machinations of the large studios. In India, however, the perceived nature of cinema itself—a commercial, crass, financially suspect affair removed from the aspirations of Nehruvian governance—was deeply intertwined with perceptions of video. Broadcast television's project of explicit, citizen-oriented improvement was nowhere to be found here. Rather, an undecided attitude—vacillating between the imposition of authorized violence through police raids, and lax enforcement of copyright

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[165]Lucas Hilderbrand, "Cinematic Promiscuity: Cinephilia after Videophilia," *Framework: Journal of Cinema and Media*, vol.50, no.1-2 (Spring/Fall 2009): p.215

standards (no doubt helped by the 'haftas' the film industry accused video parlour owners of paying)—prevailed, one that would come to color India's enmeshment within the project of neoliberalism and late capitalism.

Two weeks later, in the October 26, 1984 issue, *Screen* reported that the Film Federation of India—which had long attempted to characterize video piracy as exceptionally deviant and criminal activity, and had forbidden any of its members from selling the domestic video rights to their own films—decided to permit the sale of domestic videos for films released and censored before October 10, 1982. As for the significance of that particular date, *Screen* reporter V. Verma observed, "the import of VCRs and VCPs was liberalised around this time when also the piracy started." This move was angrily opposed by the All India Film Distributors' Council, who noted that the move "by some of the producers to unilaterally dispose of their films is highly objectionable and illegal." Distributors also objected to the telecasting of films and film songs on the national television network by Doordarshan throughout 1983 and 1984, though this neither prevented nor halted Doordarshan from doing so.

In the U.K., *Screen* observed, video cassettes were sold in vegetable and fruit shops, motor repair garages and butcher shops. This increasingly mundane availability— of video cassettes, players, and the necessary television equipment to enjoy them with—was also reflected in observations surrounding the growing "video menace" in India. By 1981, *Screen* noted that "the VCR was no longer a novelty" in neighboring Pakistan. A 1983 report on video from the English-language newsmagazine *India Today* observed that "in the smaller towns, video operators rent out a VCR and colour TV with a couple of films at rates ranging from Rs. 150 to Rs.250 a day to people who want to impress their guests, or screen a film at a family get-together."

More mundane than video rentals for family gatherings was the popularity of videos in long-distance buses across South India: Ranu's 1981 *Screen* article notes that Thiruvalluvar Transport Corporation in Tamil Nadu planned to install video decks on its air-conditioned coaches running on the Madras–Trivandrum and Madras–Bangalore routes. The 1983 *India Today* article also points to buses with video facilities as a particularly potent sign of the "video boom" and its emergence into a sort of material banality: the reporters noted that public sector transport corporations were beginning to offer video films alongside their private competitors in Punjab and Haryana, states which border the capital city of New Delhi. M. Bhaktavasala asserted in an April 1984 essay in *Screen* that in video-equipped coaches, at least, "there are more persons today asking for the noisy video show to be stopped than those wanting," pointing to the feature's increasing banality within everyday experience, for a certain class of people.

Pirate film screenings in small towns were the primary conduit through which television sets and their supporting equipment—videotapes, VCRs and cables to connect them all together—made their way into people's everyday lives. Calling 1983 the "year of the video," a 1984 article in *Screen* noted that it was the possibility of experiencing the release of a film at roughly the same time as its release in the metropolis that made video parlours and theatres so popular across small-town and rural India: "Video cassettes of the latest film reached out to all parts of the country within a week of the metropolitan release of the film whereas it took from six months to a year for a film to reach the theatrical circuits of small towns...The distributors send prints to small town cinemas only after they are worn out by runs in the major cities, after which they are happy to get whatever income they can. No wonder that in small towns the video is more attractive than the cinema show."

Accounts of video parlour and library raids from *Screen* give us some sense of what the technological setup in these establishments was like. A series of raids in Bombay city and suburbs published in the December 7, 1984 issue included a list of equipment seized by police: "brand new video cassettes," both blank and recorded, "Texella Colour TV and National VCR," "Phillips Colour TV set, Blaupunkt VCR, Trend Voltage Stabilizer," Through venues like the video library and parlour, television was beginning to creep into the background of people's lives, and not necessarily in the domestic venue of the family living room or individual home. A column from April 1983, "Mixed Musings," speculated on how the middle-class dream had evolved from owning a television set to "possessing a video set." In Dadar (a Bombay neighborhood), the columnist wrote, "video companies" did roaring business shooting "weddings, naming ceremonies, holy communions, birthday parties, etc., besides office conferences and send-off parties for clients who don't possess video cassette recorders at present but hope to possess them in the near future." The interplay between video cassette equipment and televisions defined how these devices were experienced as a matter of course.

In *Ambient Television*, Anna McCarthy writes, "The quotidian geography of TV in public is composed of sites where commerce and bureaucracy, purpose and drift, routine and event interweave, places in which television's presence remains largely unexamined by scholars and critics."[166] Arguably, it was in *public* venues such as video theaters and community viewing centers (like those utilized by the 1970s SITE project) rather than the closed-off domestic environment of the living room and the home through which television crept into daily life and routine in south India.

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[166] McCarthy, *Ambient Television*, p. 1-2.

This possibility of simultaneously experiencing a film, regardless of distance from the metropole, had a consequential effect on Indian film distributors' bottom lines: a June 1984 report in *Screen* grimly predicted the collapse of the trade by the end of the year, as "with the advent of video piracy, whether the film is a hit or a flop, its chances in the territories are jeopardised the moment it is released in one territory since the pirated video cassettes reach all over India almost immediately." Piracy also jeopardized the steady revenue stream that second-run and older films ensured for a distributor, and rendered exhibitors—cinema hall owners—unable to keep up with the fixed rental fees they paid distributors for films, given declines in cinema hall attendance.

A May 1984 column by Karanjia directly blamed the government's relaxed import policies on VCRs, videotapes, and television equipment for the rise of film piracy: without a thought, Karanjia claimed, the Government had created "a ready and ripe market for the pirates" by allowing the import of more than five lakh VCRs into the country, without a ready supply of cassettes or programming to engage those VCRs. Karanjia noted darkly, "we cannot think of much money accruing from the State-owned TV, nor from video, unless the piracy is checked." Ironically, the very same issue of *Screen* carried a story about India's largest television manufacturer—Weston Electroniks, Ltd.—entering the videotape manufacturing business.

These threads of connection between cinema, video, and the growing presence of the television set within viewers' media lives was thus more than incidental. A June 1984 reader letter in *Screen* from R. Akilesh in Andhra Pradesh attested to the importance of video to television set owners, more than Doordarshan or the television network. "People argue over imported sponsored programmes versus the locally made ones. But does anyone think about thousands of persons who do not have access to TV programmes even if they can afford to buy a

TV set? Video boom and video piracy have, ironically, been a boon to people owning VCRs in such places. Even the Asiad did not bring the Doordarshan close to people in such towns."

In sharp contrast to the development of broadcasting in India, McDowell notes, "the construction and provision of cable television networks in India was initially a small-business, private-sector and unregulated activity." In this, it was similar to the video parlours and video exhibition industry that caused such consternation on the pages of *Screen*. A 1983 article in *Screen* on the possible extinction of the exhibition trade in the state of Uttar Pradesh noted that video clubs formed between family and friends had evolved into multi-storied apartment buildings installing multi-channel systems that played centrally-located video cassettes. This linkage—between the early multichannel systems that would become private cable television and the desire to play videocassettes of films—is yet another indication that cinema was the primary motivator for the build-out and acquisition of the cables, television sets and audiovisual equipment that undergirded early cable television outside the metropole.

Cassettes continued to creep into other facets of everyday life—1983 marked the first year that a party other than the Indian National Congress came to power in Andhra Pradesh. The Telugu Desam Party rode a wave of populist support that was, to some extent, premised on the popularity of its leader N.T. Rama Rao as a Telugu film star. Less than a year later, an anonymously-produced video cassette attacking the policies and administrative decisions of the Andhra Pradesh Chief Minister N.T. Rama Rao "with catchy tunes and humour-coated political jibes" was released during a state-level legislative election. *Screen* reporter N. Muralidhar observed that it offered "a very eloquent commentary on the Telugu Desam Party rule."

Writing about the "penumbral" nature of the global as illuminated through contemporary Asian video culture, Joshua Neves and Bhaskar Sarkar observe that "the varied registers of video

practice produce unstable and overlapping media ontologies: confounding preset expectations, they glide between—and enfold—industrial and amateur, legal and illegal, ratified and renegade, giving rise to multiple mediated globalities...One might even argue that some of the most exhilarating instances of creativity appear when the fetish of creativity is abandoned in the throes of quotidian life."

In another essay, Sarkar elucidates further on the "plastic" nature of the global. The global, Sarkar writes, "effectively materializes from the mobile encounters between mutating nodes—as networks of shifting relations between entities that are themselves in the process of becoming. A constellation of relations in conditions of chronic *mutability*, the global is best thought of as a fluid emergence rather than a stable totality...the global-as-emergence results from the transitory and contingent connections between singular local nodes."[167]

One sees this mutability—between acceptable and abhorrent, between mundane and magical—in the interplay between videotapes, cinema, and the state-operated broadcaster Doordarshan that led to the emergence of private cable networks. Within the *process* of becoming an everyday media form, the television set and cable television were intertwined in a mesh of relation between the cinema hall, the national aspirations of the state broadcaster, and audiences that desired content which was both familiar (regional-language films and productions) and distant (uncensored films and foreign content). The question then becomes: how do we understand this constant mutability as a historical process—as one that *has* happened and is continuing? The world of videocassettes, VCRs and CRT televisions still dwells, ghostlike, in locked-away storerooms and the floors and spare spaces of many a repair shop across the Andhra delta. This plasticity, and the "throes of quotidian life" within which it was

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[167]Sarkar, Bhaskar. "Plasticity and the Global." *Framework: The Journal of Cinema and Media*, v.56, no.2 (Fall 2015): 451-471.

contained both shaped the means by which television sets became a part of the fabric of everyday life, and the particular ways in which they were changing in the present moment. The story of television—here in Andhra Pradesh and elsewhere—was thus a story of enmeshment and mutability, one that led to the emergence of a new media environment in the small-scale cable television and video distribution networks that mushroomed throughout urban and rural areas alike.

Writing about the rise of the Nigerian video film industry, the anthropologist Brian Larkin argues that:

> Nigerian films represent the waning of state-based visual media (from mobile film units to television dramas) and their ideologies of progress and uplift and represent the shift to privatized media forms, mimicking the larger transformation of Nigerian society. Both form and industrial organization represent a radical reworking of the basis of African cinema and visual culture.[168]

The emergence of early video-based cable networks in India at a moment where the threat of economic liberalization loomed alongside Rajiv Gandhi's increasingly market-oriented governance indicates a similar mimicry was at work, infrastructurally and aesthetically. I have already discussed how the SEEPZ figured both as a project of neoliberal restructuring as well as an originary point for the video-based piracy that shaped ordinary experiences of television in the 1980s. How can we read this history as a "plastic" mode of enmeshment with the global? The "nonintegrative" consumer-subject of regional video parlours and hyperlocal cable television networks came to be enmeshed within the larger possibilities embodied within the satellite television channels of the 1990s—television channels that would be taken up as the ultimate

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[168] Larkin, *Signal and Noise*, p.173.

symbol of India's opening up to "the world" (insofar as the world is represented by the possibilities embedded within foreign direct investment).

Bhargavi Narayanan[169] argues that the piratical imaginary within the diegetic world of Tamil popular films is "the hyphen holding the subaltern-popular together," with the pirate working as a "plastic, malleable force who can engage reading publics and fans alike to convey particular political concerns." One might think of early cable operators as a similar sort of linchpin, opening up new venues of exhibition and experience to the viewers they served, while also becoming enmeshed with the entrepreneurial ethos that defined the emergent neoliberal subject. It is not so much that cable operators, and cable networks, functioned as any kind of revelatory space or zone of liberation from the tedium of state television. Rather, the emergence of the video/television nexus—and cable television, eventually—highlights the inadequacy of theorizing the global and the local as somehow linearly or dichotomously related. The conditions that created cable television and cable operators were simultaneously global and local. Their work was a negotiation with both the potentials embedded in new technologies and the historical and cultural restrictions and slights that had shaped their everyday media environments. To read media technologies as a constant process of negotiating relations—between perilous possibility and the immediate, knowable constraints of the present—is the refrain that echoes throughout this chapter.

Ramu, the cable operator whose recollections of video-and-television open this chapter, also showed me his attic of obsolete equipment, stored with the supplies for his wife's self-help group. The equipment included satellite receivers for individual channels, rendered obsolete by the Siti Cable television feed he was now responsible for distributing, several VCRs, analog

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[169]Bhargavi Narayanan,"Piratical Encounters: The Pirate and Mass Mobilisation in the Popular Tamil Imagination," *SubVersions: A Journal of Emerging Research in Media and Cultural Studies*, vol.4, iss.1 (2016): 1-14.

channel mixers and cable amplifiers rendered mostly obsolete by the new fiber-optic lines that Siti Cable was using for its service. Embedded in the equipment was the physical mutability of this media environment; an environment that had once resided in videotapes and analog channel mixers and amplifiers, and was now reliant on fiber-optic lines laid down from Guntur city center, some distance away.

The process of inscribing ordinariness onto television—of television's *becoming* something mundane and unnoticed, in the buses, hotels, and neighbors' homes within the landscape of people's lives—was thus a process intrinsically tied to the desire to experience commercial cinema differently (or in the case of rural areas, to experience commercial films *at all.*) Philip Lutgendorf, writing about the experience of the *Ramayan* on video, observes that the state broadcaster Doordarshan faced increasing competition from videos and video rental shops, "which gave viewers the option of switching off the state-controlled channel in favor of a taped program of their choice." Lutgendorf also notes that prior to Doordarshan's move to commercial sponsorship and more creative programming, some of the most popular programs that Doordarshan offered were film-based: the Sunday afternoon feature-length picture (which varied based on language and area), and *Chitrahaar*, "a weekly program of song and dance clips from hit films."[170]

Writing about the development of cable television in the city of Mumbai, Veena Naregal notes that early cable television operators were inspired by their experiences with video and the VCR to begin developing local infrastructure for cable networks: ``as one operator...put it, the idea came to him when he started renting out his VCR to recover the cost of the hired cassettes his family watched at home—the first cable channel was a way of seeing films and also showing

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[170] Lutgendorf, "Ramayan: The Video," p.133-4.

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them to a few others in the *zopadpatti* where they lived.[171] Naregal also observes that many of the cable operators in Bombay who survived its tumultuous early years were men who hailed from families that owned small businesses or possessed enough capital that they could mobilize for investment. This was also true for the cable operators I met in coastal Andhra Pradesh, most of whom were from the *Kamma* landowning caste, and so possessed medium land-holdings that they could draw on for income. They also possessed the political capital necessary to promote and maintain their business operations.

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[171]Veena Naregal, "Cable communications in Mumbai: Integrating corporate interests with local and media networks," *Contemporary South Asia*, vol 9, no.3: 289-314.

Eenadu and the emergence of the Telugu cable television audience
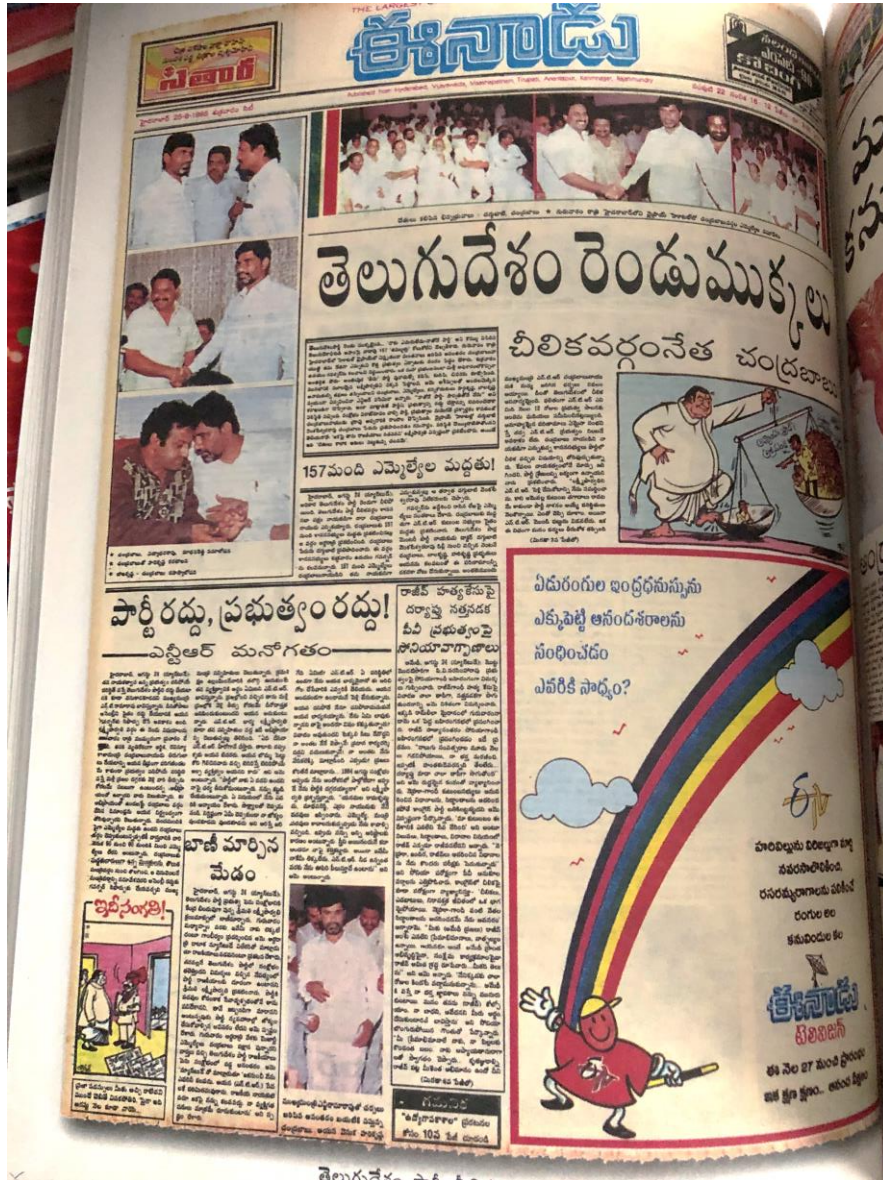
Figure 6: Advertisement announcing launch of Eenadu Television (lower right) on front page of *Eenadu's* Hyderabad edition, August 25, 1995. From *Eenadu paathikela aksharayatra*.

The one moment that the *Kamma* cable operators I talked to returned to time and again as a transformative one in their lives was the start of *Eenadu Television*'s broadcast in the 1990s. ETV, as the channel was popularly known, began as an extension of Kamma newspaper baron Ramoji Rao's *Eenadu* newspaper, which was the most widely circulated Telugu-language newspaper in Andhra Pradesh by the 1990s.

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Let's return to an anecdote from the television repairman Chinna, an anecdote that opens this dissertation. "After Ramoji Rao started ETV, it was [a] 24-hours Telugu channel. Then, TV developed really well here. Televisions went to all the houses. It was the reason [television] developed a lot in Nagayalanka. Because of ETV, the television mechanics finally benefitted." He continued on in this vein: "Before that, I had no work, before ETV, there was no work on the televisions, no?...When the TV is running 24 hours, some part is going to go bad. And that's why the mechanics benefitted, after ETV came."

Cherukuri Ramoji Rao, the *Kamma* founder of the *Eenadu* media empire, got his start as an artist for a Delhi-based advertising agency in the mid-1950s, before returning to Hyderabad in 1962 and starting the Margadarsi Chit Fund—a kind of rotating credit and savings scheme.[172] Using the funds from Margadarsi, Rao branched out into processed foods and hotels before starting the *Eenadu* newspaper in 1974. As Robin Jeffrey notes, Rao wanted to start a newspaper in Visakhapatnam—a growing industrial town in the coastal Andhra region—after he was stung by the ridicule of other newspaper owners at the very idea.[173]

Eenadu's cementing of its news-reading audience was driven by a hyperlocalized strategy, unique among the Telugu-language newspapers of the time. Starting from 1989, it included a "district-edition" tabloid-sized supplement with exclusively local news alongside the main paper published from Visakhapatnam, Hyderabad, Vijayawada, and Tirupati. In a retrospective book produced for the paper's 25th anniversary, *Eenadu paathikela aksharayatra*, *Eenadu* Hyderabad-based chief sub-editor Narasimha Rao describes the importance of the district-level "minis" thusly: "Just like every country, state has a feeling, a character, a history, a

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[172]See Mudit Kapoor et al, "Chit Funds as an Innovative Access to Finance for Low-income Households," *Review of Market Integration*, v.3, no.3 (2011), p. 289.
[173]Robin Jeffrey, "Telugu: Ingredients of Growth and Failure," *Economic and Political Weekly*, February 1, 1997, p.194

theatre, the district has this too....For the people of the district, the "mini" is a guide, it's even a leader."[174].

Scholarly accounts of *Eenadu*'s particularly strong hold on the Telugu-language newspaper market point to the availability of these daily district-level supplements as one of the major causes. Narasimha Rao's linkage and likening of district sentiments to the sentiments of the state and the nation point to the newspaper's new ways of delineating its audience. The district supplement could be physically separated from the main edition and read all its own; national, international and state-level news mingled in the main paper. It was an alternative means of imagining and demarcating the shape of the collectivity a newspaper could speak to: the audience was simultaneously a supremely local one worried about the small-scale routine failures and successes that marked Guntur or Prakasam or Nalgonda district, and was also an audience that took to the main edition's screaming, flame-colored headlines of the first U.S. invasion of Iraq. The two were distinct; the two were conjoined, and the physical structure of the *Eenadu* newspaper reflected this.

By 1995, when *Eenadu* launched *Eenadu Television*, it commanded close to 75 percent of audited Telugu daily newspaper circulation.[175]. Jeffrey also argues that Eenadu Television was an attempt "to defend *Eenadu*'s heavy investment in newspapers by heading off television challenges." This is undoubtedly true, in terms of why *Eenadu Television* was started at all. But in terms of thinking through why *Eenadu Television* bled through my interlocutors' memory at a particular moment—a moment that intersected with a period following the cinema industry and state television's continuing inability to reckon with the mutable, proliferating audiences of video in the 1980s—it seems inadequate to stop there. *Eenadu*, the newspaper, had already

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[174]*Eenadu paathikela aksharayatra*, p.58
[175]Jeffrey, "Telugu: Ingredients of Growth and Failure," p.194

generated a newspaper form that seemed capable of holding together distinct senses of linguistic locality and cosmopolitanism; *Eenadu Television*—and perhaps cable and satellite television more broadly—would do the same for industrial constructions of the audience.

The association that local cable operators (or even, as indicated earlier, television repairmen tangentially connected to the cable television industry) drew between the Telugu region that they lived in and the rise of a 24-hour Telugu television channel is, I think, reflective of the new ways in which cable television was beginning to draw together its audiences—ways that were conducive to generating collectivity out of the "nonintegrated subjects" that Radhakrishnan speaks of in his essay on the "region". Shanti Kumar—in an essay on one of Ramoji Rao's other projects, the studio complex Ramoji Film City—observes that Ramoji Rao's newspaper was closely linked to the Telugu Desam Party of N.T Rama Rao, the film star who argued for a "Telugu Nadu" that defied national subordination and was capable of transcending locality, caste or class affinities.

Kumar notes that this "linguistic trope of imagination" was granted unique power not only by N.T. Rama Rao's cinema-based persona, but also by the mobilization of Ramoji Rao's *Eenadu* newspaper and its audience.[176] S.V. Srinivas writes that *Eenadu*—the conglomerate and the newspaper—were essential in generating the notion of a ``Telugu Nadu. Furthermore, Srinivas argues that the *only* possible way in which a unified "Telugu Nadu" across the territories of Telangana, Coastal Andhra and Rayalaseema could be realized was via media products like newspapers and—key for Srinivas—the film market's unification of its Telugu-language distribution territories. Srinivas writes that

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[176]Shanti Kumar, "Mapping Tollywood: The Cultural Geography of "Ramoji Film City" in Hyderabad," *Quarterly Review of Film and Video*, vol.23 (2006), p. 133.

Whatever notions there may have been of the Telugu nation in different regions, these simply could not be mapped on to the boundaries of the state. The material conditions for an emotional investment in Andhra Pradesh became available only with the film market's expansion...The one thing that Telugus across regional and also class-caste divisions had in common was their cinema.[177]

While the panic over video throughout the 1980s illustrates that the film industry feared its distribution structures could no longer produce a viable account of audiences, Srinivas' illustration of the entanglement between the political entity of a "Telugu Nadu" and the newly-formalized boundaries of the Telugu-language film market show that cinema's audiences were becoming enmeshed within new consumer-political formations—formations that would feed into the evolution of cable television prior to the arrival of Rupert Murdoch's STAR TV. As Srinivas pointedly observes, "In NTR's early 1980s films, as also in the election campaign, the very act of consumption—of films, cassettes and newspapers—inserted the consumer into the circuit of political mobilization."[178] The constituent pieces of the audience emerging out of the 1980s were no longer watchers of films or citizens absorbed with television, but instead consumers of linguistic-cultural products, to borrow Srinivas' phrasing.

Let's return, briefly, to the image that opens this section, a front page from *Eenadu*'s main paper from Hyderabad, dated August 25, 1995, and memorialized in the retrospective book *Eenadu paathikela aksharayatra*. An advertisement announcing the cable channel *Eenadu Television*'s imminent arrival in two days is located on the bottom right side, with a cheery cartoon character at the end of a rainbow. "Who can climb the seven-colored rainbow," the

[177] S.V. Srinivas, *Politics as Performance: A Social History of the Telugu Cinema*, New Delhi: Permanent Black, 2013, p. 332-3.
[178] Srinivas, *Politics as Performance*, p.333-4.

announcement asks (perhaps emphasizing color broadcast), "and join the delights (*anandasaraalanu*) together?" *Eenadu Television* is the answer, and the closing tagline promises, "From now on, every moment will be a happy one." According to Shanti Kumar's account of *Eenadu Television*'s launch, the channel began with a seventeen-and-a-half hour slate of entertainment and film-based programming.[179] The joy embodied in the cartoon mascot and the announcement's promises of continuous moments of happiness stand in stark contrast to the actual headline emblazoned across the top of the page. "Telugu Desam split in two," the headline declaims flatly.

The August 1995 coup by insurgent N. Chandrababu Naidu over party founder N.T. Rama Rao would impact the state of Andhra Pradesh and its future associations with technology, media, and an internationally-oriented neoliberal order. It was while Naidu was in power that the World Bank would forgo the national government of India to lend directly to states, including Andhra Pradesh. Naidu would also become publicly and profoundly associated with the "high-tech" information technology industries in Hyderabad—formal industries that would stand in sharp contrast to the loose confederations that had governed video, cinema, and the newly emerging cable television industry. Naidu will figure prominently in my discussion of the contemporary "digital future" in which television has become embedded, and I will return to him later.

In the next chapter, I look at the emergence of cable television, at both the loose, caste-based networks of local cable operators (LCOs) that were key to its integration into everyday routine, and at the ongoing struggle to integrate the industry into the formal strictures of digital mediation. If video marked a crisis in audience construction and recognition for the state

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[179]Shanti Kumar, *Gandhi Meets Primetime: Globalization and Nationalism in Indian Television*, p.11.

television broadcaster and the private cinema industry, the formalization of cable television demanded a different kind of understanding of the audience, one that flattened out the interweaving of locality, nation, diaspora, and globality integral to its initial emergence; an interweaving that Shanti Kumar has termed the "unimaginable community."[180] Drawing from Kumar's insights, I examine cable television's reshaping of the object of the audience and consider how the nearly 20 year long struggle to regularize and formalize the cable industry illuminates the new limits and calculations demanded by a now-digitizing medium.

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[180]Kumar, *Gandhi Meets Primetime* p.15.

Chapter 3:
Cable Television and the Contingent Calculus of Formalization

Introduction

Media scholar Nalin Mehta, in an essay on the state of contemporary Indian television,
presents this anecdote of regional television in the north Indian state of Chhattisgarh:

> In the early 2000s, for instance, supporters of then chief minister Ajit Jogi in Chhattisgarh
> set up a state-wide private television network—Akash (sky) TV—that bought over, or
> took control of, cable distribution networks across the state...Each time any of the news
> channels broadcast a news item that was even mildly critical of then chief minister Ajit
> Jogi, it was blanked from the air, only to return when the offending news story was over.
> This unannounced censorship would happen only within the territorial boundaries of
> Chhattisgarh...It was an ingenious form of censorship: it was not officially announced, it
> technically did not come from the state and there was nothing any of the channels could
> do about it.[181]

This trait of politically-connected individuals buying into cable television distribution systems—
and altering, in an extremely (and invisibly) localized fashion, the experience of television to suit
their purposes—is a "challenge" that Mehta points to as particularly characteristic of
contemporary regional-language television in India. The situation in Andhra Pradesh was

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[181] Nalin Mehta, "Ravana's airforce: a report on the state of Indian television," *South Asian History and Culture*,
vol.3, iss. 4 (2012), p.618.

particularly dire, by Mehta's reckoning: about 12 out of the 14 available cable television news channels were directly or indirectly controlled by politicians and their proxies.[182]

The symbiotic melding of political parties and media forms in Andhra Pradesh is perhaps not a particularly new entanglement of media and its public loyalties, especially if one stops to think about the nature of Telugu-language cinema, particularly during and after the rise of the Telugu Desam Party in 1983. The 1980s, as I have noted in the previous chapter, was a decade marked by particular consternation in the domains of state-run television and the popular cinema industry over the crisis of audience identification that the video industry brought to their doorsteps by materially melding their potential—and viable audiences—together. The election of N.T. Rama Rao, and the particular melding and consolidation of the Telugu political-media identity it represented, was one way in which the crisis of audience delimitation found some sort of resolution in Andhra Pradesh.

Cable television reflected and reworked the melding of media and the politics—of audiences and publics—that had colored the years leading up to television's widespread adoption in the 1990s. If the previous chapter attempted to articulate the kind of media environment that led cable operators to place their origins in VCRs and the cinema rather than Doordarshan, this chapter is an outline of cable television in the 1990s and early 2000s that does not primarily, or only, think about the time solely as Indian television's globalizing moment, or as a moment of Western invasion, of the Gulf War and CNN. The decade was certainly all of those things, but to think of this period as solely about an uneven absorption into an Anglo-American inflected notion of the "global" would not do justice to the more complicated imbrication of locality and globality that permeated the work of making and distributing cable television in South India.

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[182] Mehta, "Ravana's airforce," p. 619

Shanti Kumar argues that regional-language media barons in South India were driven by the incentives of the multi-channel marketplace established through cable television to "reimagine Indian television both within and beyond the political boundaries of the nation-state."[183] The audiences for this reimagined version of Indian television, Kumar says, are themselves "unimaginable communities," whose sense of space and place is produced more dynamically and tenuously than the bounded "imagined communities" of an older modality of print capitalism and the identifiable nation-state. [184]

The need to capture the cable television audience-produced-in-flux and render it legible across the web of players within of cable television distribution (as numbers, as categories, as containable) was not always a central concern of channels. Kumar observes that prior to its launch, Eenadu Television didn't bother with a viewer survey, utterly confident in its ability to draw in a Telugu-speaking audience.[185] (Judging from the still-meaningful recollections of ETV's emergence to my interlocutors nearly 20 years later, it was perhaps not an unsafe assumption to make.) As the 1990s wore on, however, the drive to render audiences containable and legible to the myriad parties involved in the distribution of cable television would become a more prominent concern, ultimately leading to the amendment of the Cable Television (Networks) Regulation Act by Parliament in 2002 to mandate a conditional-access system (CAS) in cable television networks.

In a somewhat different register from Kumar, Maya Ranganathan lays out an analytical contradiction generated by Sun TV and the Tamil-language television channels for scholars of

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[183] Shanti Kumar, *Gandhi Meets Primetime: Globalization and Nationalism in Indian Television*, p.14.
[184] Kumar, *Gandhi Meets Primetime*, p.15.
[185] Kumar, *Gandhi Meets Primetime*, p.12

media and political economy. Undoubtedly, she writes[186], there are a growing number of partisan channels available to viewers, each putting out its own openly biased perspective on the day's events. But the presence of so *many* of these channels—Sun TV, Jaya TV, Kalaignar TV (briefly), Vasanth TV, Makkal TV, Mega TV, and others—has "indirectly augmented dialogue and discussion in the public space," and "has pluralised the public sphere by introducing a variety of voices with different agendas." How then, are we to understand the nature of the public (or public sphere) generated by these television channels?

Rather than reading these Tamil-language channels unto themselves, Ranganathan adroitly argues, the complex nature of the Tamil televisual sphere is only captured by reading these channels *in concert* with each other: to understand, for example, the pro-DMK Sun TV and the pro-AIADMK Jaya TV as engaged in a dialogic exchange in their contrasting presentations and analysis of the day's events. Ranganathan leaves the question of audiences and viewers untouched in this essay, but the central conceit is worth thinking about in regard to cable television's emergent worry over correctly quantifying and capturing its viewers. If the "public sphere" of Tamil-language television channels were produced in their complex concert with each other—rather than solely within intimate interaction with a viewer at home—how could an audience be meaningfully delimited? Furthermore, if meaningfully delimiting an audience was an impossible task—given the nature of these channels' existence with and against each other in the newly multi-channel environment of cable television—why was the work of quantifying and legibly demarcating viewers seen as necessary by the Central government and (it seemed) the industry?

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[186] [186]Maya Ranganathan, "Television Politics: Evolution of Sun TV in the South," in *Indian News Media: From Observer to Participant*, eds. Usha M. Rodrigues and Maya Ranganathan, p. 55-6.

Divya McMillin, studying the Kannada-language channel Udaya TV in Bangalore, writes that channel executives ran into particular difficulties when trying to create programming for Udaya—simply imitating programs from its parent channel Sun TV resulted in failure.[187] McMillin's interviewees at Udaya consistently characterize the Kannada-speaking urban audience they wish to draw in as a "conservative" one, rejecting programs imitated from other languages or channels. McMillin points to these viewers' demand for authenticity (in a city characterized by inflows of migrants) as indicative of a need for a more nuanced understanding of locality's place within the "global" or the "hybrid." For these viewers, "the local becomes sacred, the banal sanctified."[188]

If we—as my cable operator interlocutors did—think about the emergence of Eenadu Television in 1995 as a defining moment through which to structure our understanding of cable television's emergence into ordinary life, then the story of cable television becomes something less straightforward than a Western invasion of previously uncontested media environments. As Shanti Kumar observes, "When transnational and national (tele)visions collide and collude, they invariably make room for translocal (tele)visions of community that undermine both the transnationalist and the nationalist quest for hegemony."[189] How do we think through the material instantiation of these "translocal tele(visions)" of community? What conditions and rules (and defiance of rules) produced the messy dynamism that Kumar characterizes as the critical result of Indian cable television after Doordarshan?

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[187] [187]Divya C. McMillin, "Localising the global: Television and hybrid programming in India," *International Journal of Cultural Studies*, vol.4, no.1 (2001), p.59.

[188] [188] McMillin, "Localising the global," p.64.

[189] [189]Kumar, *Gandhi Meets Primetime: Globalization and Nationalism in Indian Television*, p.150.

In investigating the material conditions undergirding the "translocal (tele)vision of community," my intent is to illuminate the calculative logics which were embedded within the production of the translocal television community (and commodity). What strictures and desires produced cable television as it mutated throughout the 1990s and 2000s? So often the period has been portrayed as India's shift towards a kind of inevitable global absorption. Kumar's reminder that

> as the uneven flows of television cultures becomes integral to the practice of everyday life, viewers are induced to embrace hybrid imaginations of national identity and cultural differences when they make critical decisions about spiritual and material relations in both the private domain of the home and in the public domain of the world [190]

proves that the actuality of television's intersection with corporate global aspirations and the rhythms of daily South Indian life were somewhat more complicated than stories of inevitable "Westernization" or "cultural imperialism" portended.

The Central government's legislation of conditional-access systems on cable television might be studied as a question of emergent telecom policy—as another shaky step towards a Convergence Bill that lies, as it ever does, just over the horizon. Rather than think about the implementation of conditional-access system in cable television as a relatively straightforward question of policy or legislation, in this chapter I instead consider the (shaky, halted-and-restarted-and-dropped) effort as one that materially embodies that discursive formation Marwan Kraidy has called "hybridity."

Kraidy's theorization of hybridity "assumes that notions of media dominance and audience activity are mutually complementary rather than exclusive because politico-economic

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[190] Kumar, *Gandhi Meets Primetime*, p.199.

structure and sociocultural agency round each other off."[191] Our understandings of hybridity

have tended to draw their evidence from the aesthetics and representational presentations of

media texts. I contend that a similar project of analysis can accompany "politico-economic

structures" as well—that is to say, one can see the mutability, entanglement and struggle of

hybridity within the efforts that thwarted and backed the material realization of the conditional-

access system for cable television, just as one can sift through media texts of this period for

evidence of the representational configurations of hybridity.

In this chapter, then, I will think more closely about that moment in which the "uneven

flows of television cultures becomes integral to the practice of everyday life." The uneasy

integration between everyday life and the uneven flows of television cultures was embedded in

the stories of what cable television was, to my interlocutors—local cable operators (LCOs) and

individuals working for multi-system operators (MSOs)—and what it was turning into. By the

beginning of the 2010s, the logics governing cable television had shifted from open-ended

neglect to a more regimented formalization, buried within the physical and regulatory

reconfiguration my cable operator interlocutors termed "digitalization." Accompanying this

technical shift were changes in how cable television (and the watching audience) were imagined

by broadcasters, local cable operators, and newly corporatized entrants into television

distribution. These evolving imaginations of cable television, its audience and its "numbers," I

illustrate, were ultimately embedded in deeper logics of legibility and calculation that would then

go on to undergird larger projects of digital services and governance in Andhra Pradesh.

To open the chapter, I lay out the tangled regulatory environment governing Indian cable

television in its evolutionary years, and consider how this environment generated a perceived

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[191] Marwan M. Kraidy, *Hybridity, or the Cultural Logic of Globalization*. Philadelphia: Temple University Press, 2005. p.13.

need for a technical solution to formalize and govern the distribution of cable television. The government, alongside broadcasters and corporate multi-system operators (MSOs), would deem CAS, the conditional access system, the necessary technical solution to the regulatory gap within which Indian cable television had come to mushroom and spread across the country. CAS— unlike the later project of digitalization—did not require fundamental changes in registration processes or financial disclosures. It was first and foremost a tool to impose clarity and legibility on the somewhat mutable relationship between cable operators and television viewers—a clarity that was desirable to the newly-burgeoning advertising industries and to broadcasters.

Through insights from scholars of science and political philosophy, I examine how the professed desire for numerical clarity (for broadcasters, for advertisers, for the government itself) pervaded efforts to fundamentally reconfigure hierarchies of value within cable television distribution. Alongside this desire for clarity, I contrast how "fuzzy" or seemingly inaccurate numbers (of subscribers, of monetary value) reflected the intensely social nature of cable television distribution at the local level—a sociality that could not translate to the structures of formalization, transparency and accountability that broadcasters and the government sought to impose upon the cable television industry via CAS.

My interlocutors, for the most part, were local cable operators (LCOs or LMOs—for last-mile operators—in industry parlance). Local cable operators were complex figures in the television industry's imagination. They were seen as absolutely necessary to ensure viewers actually received cable television's plenitude, yet they were also viewed as unprofessional and untrustworthy, unwilling to be easily integrated into the new regimes of professionalization and numerical clarity that soaked through broadcasters' imaginations of themselves and the governmental idealization of the industry as a whole.

In *From Bombay to Bollywood*—a work looking at industrial logics and practices within the globalization of the Hindi-language film industry—Aswin Punathambekar links Bollywood's efforts to (re)define itself as a global media industry to broader political discourses around cleanliness. Cleanliness, Punathambekar observes, pervaded governmental discourse around its formal recognition and reorganization of the Hindi-language film industry. These notions of cleanliness were deeply connected to broader governmental imperatives to cleanse urban spaces of "undesirable" elements and people.[192] In this chapter, I consider how the logics underpinning CAS were linked to similar imperatives to "clean up" the uniquely social, informally established cable television industry to render it more suited to formalized integration into global media systems. These imperatives would go on to undergird Andhra Pradesh's efforts to align itself—against or around the Central government—to global imperatives of development and improvement.

In seeking to align the stories my interlocutors told me of their experiences and lives within cable television with governmental and industrial narratives of the industry's failings and proposed solutions, my goal is to illustrate how the struggle to "properly" regulate cable television served as a prelude to, and an echo of, projects of more intensive projects of digital surveillance and sense-making that colored governance in Andhra Pradesh after bifurcation in 2013. In the following chapter, I consider how the effort to "digitalize" cable television also provided an avenue through which state governments could enter the terrain of television and media distribution (as happened in the South Indian states of Tamil Nadu and Andhra Pradesh), subverting both Doordarshan and the corporate imagination of an Indian community of television. Andhra Pradesh, in particular, would enroll television within a broader nexus of

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[192] Aswin Punathambekar, *From Bombay to Bollywood: The Making of a Global Media Industry*. New York: NYU Press, 2013. p.26-7

digital aspiration and governance that would define the state's post-bifurcation mediation of itself.

Control over Chaos: The Beginnings of CAS

Cable television arose in India in a rather tumultuous regulatory vacuum. The Indian government, much like it had with the video industry, neither severely punished existing cable television operators nor attempted to consolidate the rules governing privately-operated cable television's infrastructure and content until well after the industry managed to develop local roots and political clout. By most accounts, while early cable networks were in operation by the late 1980s in the wealthier suburbs of large metropolises like Delhi and Bombay, they began expanding into small-town and rural India in the mid 1990s. The government's first major intervention into regulating the cable industry—the 1995 Cable Television Networks (Regulation) Act—occurred during this period of small-town and rural expansion. The Act would continue to be amended and altered throughout the 1990s and 2000s.

The move to implement a system that would formalize and regularize the distribution of pay channels—which, as my cable operator interlocutors regularly reminded me, were usually the only channels they believed viewers *wanted* to watch—began in the late 1990s[193] when the Cable Operators' Federation of India (COFI)[194], a group representing the interests of Indian cable operators at the national level, wrote to the Central Government in 1998 asking them to formalize and regularize distribution of pay channels through implementing a conditional-access system (CAS). The then-Minister of Information and Broadcasting, Sushma Swaraj, took up the

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[193]Timeline taken from *Cable Quest*, an Indian English-language cable and satellite television magazine, last accessed March 31, 2019. https://cablequest.org/index.php/important-information/satellite-tracking/item/2158-cas-chronology

[194]See Ministry of Information and Broadcasting, Government of India, "Cable Operators Federation of India (COFI)," accessed April 2, 2019.http://www.digitalindiamib.com/cofi.html

nationwide implementation of CAS as her primary project. News articles at the time speculated that Swaraj's determination to push CAS through Parliament may have had much to do with the independent South Delhi cable operators who formed a crucial part of her (then) Lok Sabha constituency.[195]

In 2002, the Cable Television Networks (Regulation) Act was formally amended to include the requirement to distribute pay television channels through an 'addressable system,' i.e. CAS. The early 2000s was also a period in which the Hindu nationalist Bharatiya Janata Party (BJP)—which led the coalition government in New Delhi—moved towards embracing "globalizing" economic and trade policies, especially in regard to "hi-tech" industries such as the information technology sector.[196] CAS—an effort couched as one that would provide transparency and accountability to an industry steeped in informality and unclear "numbers"— could also be seen as part of this broader effort to standardize and "globalize" Indian industries and their practices.

CAS, ideally, was to provide accountability and transparency between the various tiers that structured the distribution system for cable television. Yet the imagination of cable television's distribution that undergirded the supposed need for CAS was not one that mirrored the mutable realities of distribution that local cable operators encountered. This may be because the operators I talked to worked outside the major metropolises—the initial rollout of CAS was limited to the metropolitan centers of New Delhi, Mumbai, Chennai and Kolkata, and even this rollout was temporarily halted after court challenges and the 2004 elections, which brought down

[195]Kaveree Bamzai, "Cable TV: After two task forces, amended Act, Conditional Access System remains in limbo," India Today, July 14, 2003. https://www.indiatoday.in/magazine/nation/story/20030714-cable-tv-after-two-task-forces-amended-act-conditional-access-system-remains-in-limbo-792366-2003-07-14 Accessed April 2, 2019.
[196]Salim Lakha, "From *Swadeshi* to globalization: The Bharatiya Janata Party's shifting economic agenda," *South Asia: Journal of South Asian Studies*, v.25, no.3 (2002).

the BJP-led coalition government at the Centre that had originally proposed the plan. (It would

be left up to their opposition—the Indian National Congress and their allies—to actually

implement a nationwide rollout of CAS and later, digitalization). Even with all these stops and

restarts, the continuing struggle to implement CAS—and the shift in power that it marked within

the distribution chain—was one that many of my cable operator interlocutors marked as

significant in their recollections of their involvement in the cable industry.

The Ministry of Information and Broadcasting, in a "Frequently Asked Questions on

CAS" posted to their website,[197] described CAS thusly:

> Conditional access system (CAS) or addressable system is a description normally used
>
> for a set of hardware devices and connected software (including a set-top box) through
>
> which normally the pay channels are transmitted in encrypted form. The subscriber is
>
> given an authorization depending upon his request to view one or more of such encrypted
>
> pay channels of his choice. The authorization is given and controlled by the Multi System
>
> Operator (MSO) who owns the Conditional Access System in a Cable Television
>
> Network. In this, he is often assisted by the Local Cable Operator. The words
>
> "Conditional Access System" and "Addressable System" are quite often used
>
> interchangeably. "Addressable system" signifies that a subscriber is identifiable. The
>
> Multi System Operator and the broadcaster will know the exact number of subscribers of
>
> a pay channel or a bouquet of pay channels and the amount that is due from that
>
> subscriber.

This particular description of CAS—which entangles the multi-system operator (MSO) owners

and the local cable operators in a relationship mediated through the hardware and software

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[197]Ministry of Information and Broadcasting, Government of India, "Frequently Asked Questions on CAS," https://www.mib.gov.in/frequently-asked-questions-cas#bq1, accessed March 28, 2019.

necessary to implement CAS, a system primarily concerned with encrypting pay channels (and thus guarding them from theft by unidentifiable subscribers)—was one that ascribed no particular affective value to the plenitude of channels that *all* subscribers had access to under the flat-rate system that governed cable television network pricing in most areas of India in 2004, when the government mandated the transition to and rollout of CAS in the major metropolises. In the Ministry's vision of CAS in this help document, the system was to initiate an individualized relationship between the subscriber on one end, and the unique, particular collection of channels that they wished to watch on the other. Selection, over abundance, was the priority. More importantly, *individually legible* selection—which could then be used to clarify and render exact payments to broadcasters—is posited in this description as an ideal result of the implementation of CAS.

Sevanti Ninan recounts in her book *Through the Magic Window* that early cable operators were video parlour owners whose

> video rental business died when satellite TV came in with its reruns of old Western programming. He looked around, found his fellow parlour owners buying locally manufactured satellite dishes, and decided to jump on the bandwagon...one important offshoot of this phenomenon was that every cable operator opted to run a channel himself, on which he would put movies, often pirated, five or six a day, and local advertising.[198]

Cable television's roots were grounded in quasi-legality, or what Ravi Sundaram has famously termed a "pirate modernity." Early cable television, as Nikhil Sinha notes, was essentially a

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[198]Sevanti Ninan, *Through the Magic Window: Television and Change in India*, New Delhi: Penguin Books, 1995. p. 157.

"retransmission service" of satellite channels uplinked from outside the country;[199] Eenadu Television, for example, broadcast out of Singapore and Sri Lanka before obtaining an uplinking facility in India from VSNL, the state-owned telecom provider.[200]

The easy associations Ninan makes in her recollections—between illegality, entrepreneurs "jumping on the bandwagon" to fill an unmet demand, and the figure of the piratical cable operator stringing together movies and locally-relevant programming and advertisements—all emphasize the minor scale of the enterprise, the almost tangibly-localized nature of the business. Cable operators serviced single buildings, or blocks of physically legible territory. The small-scale entrepreneurship that characterized the early industry—the fact that its roots were embedded in "video parlour owners" (itself a tenuously legal media industry) jumping root to small cable networks to cover the cost of a satellite dish and transmissions—would deeply affect cable television's ability to integrate within more formalized, calculative corporate logics that emphasized transparency, accountability and end-user legibility.

In South India, the cinematic-political nexus of the 1980s was transmogrified into an altogether more intense interweaving of the televisual medium and regional political presentation, best exemplified in the neighboring state of Tamil Nadu's Sun TV, one of the most popular television networks in South India. Kalanithi Maran, who owned Sun TV's stable of channels, also ran Chennai's largest cable television provider, Sumangali Cable Vision (SCV). An industry website, indiantelevision.com, noted that this arrangement "assured...the eternal and preferential carriage of his Tamil channels in the city."[201] The arrangement, as we shall see,

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[199]Nikhil Sinha, "Doordarshan, Public Service Broadcasting and the Impact of Globalization: A Short History," Cardozo Journal of International and Comparative Law 5, no. 2 (Fall 1997): 372

[200]Nazki, Bilal. Judgment in "Ushakiran Movies vs State of Andhra Pradesh," Andhra High Court, June 30, 2006. https://indiankanoon.org/doc/108224/. Accessed April 30, 2019.

[201]indiantelevision.com team, "Cable TV seeking its place under the Indian sun," indiantelevision.com, December 29, 2000. http://www.indiantelevision.com/ye2k/y2kcatv.htm, accessed April 24, 2019.

would also have unfortunate consequences for the Central government's inaugural efforts to roll out CAS in the city in 2003.

Kalanithi and his brother Dayanidhi Maran traced their beginnings in politics and media to their voluble grand-uncle, M. Karunanidhi, head of the Dravida Munnetra Kazhagam (DMK) party—which Sun TV was rather transparently aligned with—and one of South India's most important political figures. However straightforwardly and mechanically the conditional-access system was presented by the Central government to local stakeholders, politics—invoked in a bare-knuckle, emotive register—was continually deployed in opposition to its rollout. This was in sharp contrast to the much more successful effort to "digitalize" cable television in 2011, a contrast I will attend to in the following chapter.

The process of implementing CAS across the country and its growing legions of cable television networks was a tortured one. Beginning in 2003, the system was first mandated for cable television networks in four major urban centers: the Chennai Metropolitan Area, the Municipal Council of Greater Mumbai Area, the Kolkata Metropolitan Area, and the National Capital Territory of Delhi.[202] Meant to be launched simultaneously across the four cities on July 15, CAS was instead launched first in Chennai, and subsequently delayed in the other three cities after the government issued a notification on July 10 deferring implementation until September in Kolkata and Mumbai, and de-notifying the National Capital Territory altogether in August.[203] This denotification was then thrown out by the Delhi High Court.[204] Among the parties expressing pleasure with the court outcome were the CEOs of Zee Telefilms and SET—major

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[202]Telecom Regulatory Authority of India, "Consultation Paper No. 9/2004: Consultation paper on Issues relating to Broadcasting and Distribution of TV Channels," April 20, 2004, p.22.

[203]indiantelevision.com team, "CAS deferred in Delhi; future tense elsewhere," August 25, 2003. http://www.indiantelevision.com/headlines/y2k3/aug/aug197.htm. Accessed April 28, 2019.

[204]indiantelevision.com team, "CAS ball back in government court after HC quashes Delhi denotification," December 4, 2003. http://www.indiantelevision.com/headlines/y2k3/dec/dec46.htm. Accessed April 28, 2019.

broadcasters—and larger MSOs such as Hathaway. Local cable operators' opinions were far more mixed.

Reporters for indiantelevision.com noted somewhat acerbically that "for politicians vote banks are more important than (good or bad) policies and this government is known for announcing policy decisions then rolling them back under pressures from various quarters."[205] Ambivalence, ambiguity and strident opposition—even within the distribution chain that CAS was supposed to lend transparency to—dogged the initial implementation period, ramping up as the 2004 Lok Sabha and Assembly elections approached. In Mumbai the Shiv Sena's leader Bal Thackeray came out in opposition to CAS, declaring it 'anti-consumer,' in a move the *Times of India* described as having the effect of "an angry parent gate-crashing a clangorous teenage party."[206] Thackeray linked the implementation of CAS to local electoral consequences: the Sena-BJP alliance governing Maharashtra, he warned, would be at risk if the Central government continued its attempts to implement CAS.[207] The Left Front-led government in West Bengal also began expressing reservations about implementing CAS in Kolkata's cable television networks, leading to Ministry of Information and Broadcasting officials meeting with West Bengal's principal secretary to discuss the issue—all the year immediately prior to the 2004 Lok Sabha and Assembly elections.[208]

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[205]indiantelevision.com team, "Pressure may build up within BJP on CAS," May 20, 2003. http://www.indiantelevision.com/headlines/y2k3/may/may147.htm. Accessed April 28, 2019.
206Abhijit Majumdar, "After Thackeray threat, CAS finds voice again," *Times of India*, June 11, 2003. https://timesofindia.indiatimes.com/city/mumbai/After-Thackeray-threat-CAS-finds-voice-again/articleshow/16410.cms, accessed April 21, 2019.
207TNN, "CAS will burden ordinary citizens, says Thackeray," *Times of India,* June 7, 2003. https://timesofindia.indiatimes.com/city/mumbai/CAS-will-burden-ordinary-citizens-says-Thackeray/articleshow/10222.cms, accessed April 21, 2019.
208indiantelevision.com team, "No CAS in Mumbai - asserts Sena supremo Thackeray," indiantelevision.com, August 27, 2003. http://www.indiantelevision.com//headlines/y2k3/aug/aug215.htm. Accessed April 27, 2019.

In January 2004,[209] the Central government delegated the authority to regulate technical standards in broadcasting services to the telecom regulator, the Telecom Regulatory Authority of India (TRAI). (Content regulation was still the purview of the Ministry of Information and Broadcasting). TRAI's new authority did not lend the project any more haste, however. The troubled effort to roll out CAS in the major metropolises was finally halted on February 27, 2004 through a government notification following the High Court order to re-start CAS rollout ahead of the elections. The BJP-led coalition was then defeated at the polls a few months later,[210] leaving CAS' ultimate implementation across the country (or even in just these four cities) uncertain.

In 2006, the High Court again mandated that CAS be rolled out completely and without delay to Delhi, Mumbai and Kolkata by January 1, 2007[211]—Chennai's cable television networks had already implemented CAS by then. It is during this later period—around 2007, with the Congress-led government in place and more comprehensive regulatory systems for direct-to-home satellite television services already implemented—that notions of a "digital headend-in-the-sky" and set-top boxes capable of delivering not only television, but various added services begin appearing in broadcasters and larger MSOs' plans for their set-top boxes.[212] This vision—of a cable television that could reach beyond itself through digitalization to provide expansive

[209]Telecom Regulatory Authority of India, "Consultation Note on Issues relating to Broadcasting and Cable Services," January 15, 2004. https://main.trai.gov.in/sites/default/files/Consultation note.pdf. Accessed April 29, 2019.

[210]Amy Waldman, "In Huge Upset, Gandhi's Party Wins Election in India," *The New York Times*, May 13, 2004. https://www.nytimes.com/2004/05/13/international/asia/in-huge-upset-gandhis-party-wins-election-in-india.html. Accessed April 28, 2019.

[211]indiantelevision.com team, "HC sets 1 Jan '07 deadline for CAS implementation," July 20, 2006, http://www.indiantelevision.com/content/hc-sets-1-jan-07-deadline-for-cas-implementation. Accessed April 28, 2019.

[212]BS Reporter, "New model for digitalising cable TV proposed," *Business Standard*, July 25, 2007. https://www.business-standard.com/article/economy-policy/new-model-for-digitalising-cable-tv-proposed-107072501097_1.html

services to its now-legible viewer—would continue to animate imaginations of cable television

throughout the later 2000s and 2010s, as digitalization was rendered into the law and

subsequently (slowly, haltingly, and with uncertainty) brought into infrastructural reality.

An equally complicated formalization of payment accompanied these initial plans to

implement CAS in the major metropolises' cable television networks. In the name of the public

interest, the Central government specified in the 2002 amendment to the Cable Television

Networks Regulation Bill—the same amendment that mandated CAS—that a "basic service tier"

of free-to-air channels could be specified by the broadcasters, and the basic tier would provide a

"programme mix of entertainment, information, education and other such programmes."[213] The

exact pricing of this basic tier of channels, however, was murky. The Central government

reserved the right to declare what the *maximum* price of the basic service tier ought to be in the

amended Act. The basic tier's composition of television channels would not necessarily be

identical across the country—broadcasters could decide where and whether they wanted the

channels in their stable to be free-to-air. The one programmatic mandate that cable networks

under CAS had to follow (aside from the Ministry's regulations on content) was to carry

Doordarshan.

In early 2003, the Finance Ministry recommended that the basic service tier's price be set

to Rs. 45.90—with service and entertainment taxes, this came out to about to Rs. 75.90.[214] This

price, industry source indiantelevision.com noted, had not "taken into account the distribution

margin for cable ops, MSOs, and also the broadcaster." Nevertheless, the reporters concluded,

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213Government of India, "Cable Television Networks (Regulation) Amendment Act, 2002," December 31, 2002. https://www.wipo.int/edocs/lexdocs/laws/en/in/in036en.pdf. Accessed April 30, 2019.
214indiantelevision.com team, "Finance ministry moots Rs. 46 FTA price," http://www.indiantelevision.com/headlines/y2k3/mar/mar111.htm. Accessed April 30, 2019.

"the way matters were progressing," it seemed likely that the task force would agree to a price

for the basic tier of channels soon, and with it, CAS would begin to be implemented.

This opinion proved somewhat optimistic. In Chennai—where the process to implement

CAS had already been underway when delays were announced in mid-2003 for the other

metropolises—indiantelevision.com reported that CAS' reception in the city was lukewarm.

Sources speculated that this was primarily due to the major Tamil channels, including Sun TV

and Jaya TV, remaining free-to-air. Eenadu Television, the Telugu-language cable television

channel mentioned in the previous chapter, split its decision—remaining free-to-air in Chennai

and becoming a pay channel in Mumbai in 2006 (and proving, perhaps, the difficulty of thinking

about an *Indian* community of cable television experience, even in this brief period).[215]

Sumangali Cable Vision—owned by, as I have noted, the conglomerate that also owned Sun TV

and one of the two major multi-system operators (MSOs) in the city—claimed that they had

already sold 1,200 set-top boxes since the scheduled start of CAS in July 2003, and had fully

prepared their lower-level staff in the work of operating and installing set-top boxes for

consumers. [216]Another news report from the time,[217] however, emphasized a severe shortage of

set-top boxes—counting only 2000 set-top boxes in a city with a cable television subscriber base

of 1,000,000. The report also noted, somewhat breathlessly, that when pay channels went off the

air at midnight, viewers in the city "woke up to Chinese TV instead, illegally downloaded by

individual cable operators."

215indiantelevision.com team, "ETV and ETV2 switched to pay mode," February 11, 2006, http://www.indiantelevision.com/headlines/y2k6/feb/feb142.htm, accessed April 28, 2019.
216indiantelevision.com team, "Lukewarm response to CAS in Chennai: SCV's Dayanidhi Maran," September 1, 2003. http://www.indiantelevision.com/headlines/y2k3/sep/sep12.htm, accessed April 22, 2019.
217Zee News, "CAS Day 1: Chennai watches Chinese TV: The Pioneer," https://zeenews.india.com/home/cas-day-1-chennai-watches-chinese-tv-the-pioneer_119374.html, September 3, 2003. Accessed April 22, 2019.

Discontent took on a regional character[218]—the head of a local NGO pleaded with then-Chief Minister J. Jayalalithaa to "not allow Chennai to become the testing ground for federal schemes." Another report from Chennai in *The Hindu* that focused on the upper and upper-middle class television viewers most likely to buy the set-top box needed to watch pay channels under the CAS found bemusement and caution: "Chennaiites might not have had much of a choice in being made the 'guinea pigs' for the CAS experiment," the reporter observed. "But when it comes to doling out a hefty amount for the STB [set-top box], they have adopted a wait-and-watch policy, because they are not sure what they are in for."[219]

The Local Life of Cable Television

Siti Cable—a subsidiary of the corporate entity that also owned broadcaster Zee Entertainment[220]—was dominant in both Guntur and Vijayawada in 2016. What struggles the local cable operators attributed to the implementation of CAS centered mostly on the consolidation of power it gave to the MSOs. Whereas local cable operators had once been able to negotiate the travails of the cable industry individually (by virtue of selecting what particular channels they could afford or maintaining flexibility with how they implemented payment schemes or controlled their territories), the local cable operators almost universally said they no longer possessed such fine-grained control over their work. Control, such as it was, had moved into the MSO.

218Ibid.
219Nathalia Jones, "CAS confounds Chennai," *The Hindu Business Line*, September 8, 2003. https://www.thehindubusinessline.com/life/2003/09/08/stories/2003090800070100.htm. Accessed April 28, 2019.
220Anushi Agrawal, "Fables of SITI Cable: Ownership Matters in Cable TV Distribution in India," The Indian Medialogue, November 5, 2015. https://indianmedialogue.com/2015/11/05/fables-of-siti-cable-ownership-matters-in-cable-tv-distribution-in-india/. Accessed April 28, 2019

Samina Mishra[221], writing about *cable-wallas* (cable operators) in the capital city of New Delhi, emphasizes the operators' focus on locality in the productions and services they provided to their customers—even as corporate ownership was moving in to claim the (unregulated) industry's profits. Looking at a single neighborhood—Lajpat Nagar—Mishra observes that while independently operating local cable operators servicing small areas were the norm in the late 1980s and early 1990s, they were soon integrated into a corporate structure—an effort accelerated by the technological demands of CAS and later digitalization efforts. Siti Cable bought over many independent operators in coastal Andhra Pradesh and turned them into franchisees, a process that digitalization would only serve to accelerate.

Franchising did not necessarily alter the practiced reality of cable operators' informally-enforced territories or their individual sense of ownership over said territories, a fact that I encountered many years later during my own fieldwork in Guntur. Sharma, a family friend and Siti Cable operator, provided the cable television connection to my apartment when I had moved in. A few weeks after I had set up the cable connection, a young man knocked on my door in the evening. Hesitant, he told me that my apartment block fell under Digi Cable's territory, and that I had to get my cable connection from them. I refused, telling him that I was happy with my current provider. I offered to give him Sharma's phone number, so they could figure out what had happened. Slightly discombobulated from my refusal, he repeated the fact that this apartment block was supposed to be serviced by Digi Cable, and then said he would call Sharma himself before leaving.

Sharma said that it had cost him 5 lakh (500,000) rupees to buy the cable "area" he currently operated. Acquiring the "cable area" was a bit of a long-winded process: he bought his

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[221]Samina Mishra, "Dish is Life: Cable Operators and the Neighbourhood" in *Image Journeys: Audio-Visual Media and Cultural Change in India*, eds. Christiane Brosius and Melissa Butcher. New Delhi: Sage Publications, 1999.

"cable area" from someone who was "already established", and paid approximately Rs. 2,500 per "connection." He estimated there were about 200 connections in his "area" when he bought it, so he had to pay 5 lakh. He paid 1,50,000 from his own money, and had to get a loan for the rest of the money. Sharma, however, didn't seem particularly fazed by the debt required to obtain the "cable area"—he considered it a source of steady monthly income. From the money he obtained from the customers in his "area," a portion went to Siti Cable, and through careful management of his monthly income, he said he had paid off the rest of the loan he had taken out to obtain the cable area.

Sharma's account of owning and operating a local "cable area" aligns with Mishra's accounts of the *cable-wallas* in Delhi's Lajpat Nagar, whose franchises were split between Siti Cable and Satellite Vision. Satellite Vision was a locally-founded competitor to Siti Cable in the area (much like Digi Cable seemed to be Guntur's answer to Siti Cable in some neighborhoods). Mishra's interlocutors also tell her that most of the returns on their initial investment of 5 lakhs come mainly from the monthly subscription fee—which at the time of writing was Rs. 100/month, per connection. Satellite Vision also distributed "local" cable channels, which were funded by advertising slots sold to local businesses and telecast local events and happenings, productions often handled by the *cable-wallas* themselves. Mishra observes that the advertising rates for these local channels were not fixed by the *cable-wallas*, but were in fact quite flexible, and sometimes free. Mishra's interlocutors tell here that local ads were used "not to generate an income but to build relations."[222] I will return to these "local" cable channels—which also mushroomed in Guntur, both in Siti Cable and Digi Cable's networks—later in this chapter.

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[222]Mishra, "Dish is Life," p. 268.

Mishra's observation of the flexibility utilized by some *cable-wallas* in monetary matters bears unwinding a bit more, as it was a flexibility that was embedded in other numerical and calculative practices used by local cable operators, and their mid-tier bosses—the multi-system operators (MSOs)—in the day-to-day running of their businesses. As Sharma recalled it, local cable operators like himself collected a monthly amount from their customers, of which Siti Cable took a cut; a cut that steadily grew alongside increasing customer charges. Siti Cable set the cut that they took after negotiating with the "pay channels," whom they had to pay in order to carry their channels on their network. Even though corporate franchising had thoroughly permeated the cable television industry in Andhra Pradesh by the late 1990s, at the last mile local cable operators still maintained a great deal of control over their particular "cable areas." Veena Naregal, studying the local cable operators of Bombay, wrote that this process of consolidation by corporate players did not lead to the expected steadiness. Instead, she observed, "the ongoing consolidation within the industry has been accompanied by high levels of volatility, seen equally in the all-too-common allegations of the use of force between rival companies and operators, as well as in the high rate of mergers and acquisitions observed at different levels within the cable business."[223]

Violence also came up in the stories Sharma told me about the early days of cable in Andhra Pradesh. "Siti Cable came here in 1999," he recalled. "There used to be a company called "Master Channel" in Vijayawada, Ramakrishna [Potluri Ramakrishna, later the M.D. of Siti Cable in Andhra Pradesh] set it up. Ramakrishna launched Siti Cable to all of Andhra Pradesh through "Master Channel." It was a *big* success. There was Siti Cable in every village. But, after four or five years, they killed him. Shot him...I think it was a business thing. He was

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[223]Veena Naregal, "Cable Communications in Mumbai: integrating corporate interests with local and media networks," *Contemporary South Asia*, vol.9, iss. 3 (2000), p.291.

growing so much, and so many profits were coming in. They thought he would soon have the

entire state in his hand. They brought someone over from Bombay, and they shot him while he

was coming out of the club. His partner is still involved in this business, even now."

Sharma's recollection, while not precise—newspaper reports pin Potluri Ramakrishna's

murder to 1998[224]—does give a tangible sense of how central Siti Cable was to the expansion of

cable television in coastal Andhra Pradesh, as well as the tangle of violence that accompanied

cable television's infrastructural expansion. More than 20 years later, during my own fieldwork,

one could watch the death remembrances for Potluri Ramakrishna on Siti Cable's local

channels—the notoriety of his rise and demise lingered in my interlocutors' vague recollections

of him.

Searching for "cable television" in the online archives of the English-language national

newspaper *The Hindu* pulls up seemingly banal stories from the past 15 or so years of Telugu

Desam Party and Congress Party officials battling over cable networks in Anantapur district[225], a

cable television office ransacked in Narasaraopet—an act of vandalism the police judged was

possibly "a fallout of rivalry between the two cable operators in the town"—following an

accusation by one cable operator that their rival "was trying to poach into their region and cut

their cable connections,"[226] and the Andhra Pradesh Rural Cable Operators' Association chapter

in Karimnagar protesting direct-to-home (DTH) satellite services.[227] Territorial control and the

implied violence to hold on to it—even for a "cable area" that might only encompass a very

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[224]"Accused in SitiCable MD murder acquitted," *The Hindu*, January 7, 2005.
https://www.thehindu.com/2005/01/07/stories/2005010707710400.htm
225B. Chandrasekhar,"War for cable network control hots up," *The Hindu*, July 7, 2004.
https://www.thehindu.com/2004/07/08/stories/2004070804080300.htm
226P. Samuel Jonathan, "Cable TV office ransacked in Guntur," *The Hindu*, March 16, 2015.
https://www.thehindu.com/news/national/andhra-pradesh/Cable-TV-office-ransacked-in-Guntur/article10727895.ece
227"Cable operators protest against DTH services," *The Hindu*, October 6, 2007. https://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/Cable-operators-protest-against-DTH-services/article14851696.ece

limited number of buildings, streets and potential subscribers—defined local cable operators'

interactions with each other and with their customers, as the discomfited representative from

DigiCable who came to my door could attest to.

Naregal argues that the volatile battle to control the emerging industry of cable television

"exemplifies a key site to analyse the changing nature of state-society relations in the post-

economic reforms period."[228] She points out that cable television gave rise to a new breed of

close-to-the-ground entrepreneurs in the *cable-walla*, and restructured political and economic

networks in Bombay, "including the connections between big business, politics and the

underworld." As Potluri Ramakrishna's murder—lingering on the edges of my interlocutors'

recollections—illuminates, concern over these entanglements was hardly limited to the confines

of the metropolis.

An accountant for an MSO (multi-system operator) in Telangana told me that the cable

business was a "mafia business," something that the head of the MSO humorously agreed with.

Anushi Agrawal has illustrated that the rather complicated ownership structure of Zee

Entertainment and Siti Cable (involving interlinked ownership of subsidiaries and employees of

Siti Cable working for other subsidiaries, among other things) was a historical practice of Indian

business houses, "evolved to hide, rather than reveal, the ownership of the firms."[229] Santosh, the

aforementioned head of the MSO—which operated in six districts of Telangana—observed that

the MSOs *needed* the LCOs (local cable operators) to deliver services at the last mile. Local

cable operators I talked to seemed to agree with this assessment of the industry's ultimate need

for them, even if they were less sanguine about their prospects and continuing relevance. By

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[228]Veena Naregal, "Media Reform and Regulation since Liberalisation," Economic and Political Weekly, May 27, 2000, p.1817-21.
229 Agrawal, "Fables of SITI Cable: Ownership Matters in Cable TV Distribution in India."

2000, indiantelevision.com could report that relations between the different sections of the cable

television distribution chain—the local cable operators, the broadcasters, the emerging corporate

MSOs—had strained to such a point that an "explosive situation" was imminent. "Estimates

are," the website reported, "that of every Rs. 100 that a cable operator collects from his subs, he

has to pay out Rs. 60-70 to the telecast rights holder, pay TV programmers, in entertainment tax,

etc." This, the report continued, was the exact opposite of the early 1990s, when operators

pocketed most of what their subscribers paid them.[230]

Sharma, who worked in Guntur city, declared that multinationals could enter the industry,

but that they would still need cable operators to successfully operate. When I asked why this was

so—why multinationals would still need to rely upon local cable operators instead of directly

reaching customers themselves—Sharma answered, "If multinational companies come here,

they'll find it hard to pull a wire to every customer and give them service. (If it was) without

wire, if it was wireless they would be successful. But as long as there are wires direct service

won't be successful." Even so, Sharma conceded, it would take a *lot* of money for newcomers to

break through the duopoly of Siti Cable and DigiCable in Guntur, especially after post-

digitalization consolidation.

Srinivas, a local cable operator in one of the villages adjoining Guntur city, told me that

multi-system operators had essentially arisen out of the need to better manage the negotiations

between local cable operators and the mushrooming "pay channels" over the rates that they

would have pay each "pay channel" to carry their channel for broadcast. "We used to pay for

each and every channel (*okoka channel ki*)." he told me. A recurring sight, as I went from cable

operator to cable operator across the Guntur district, were abandoned rooms of satellite channel

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230indiantelevision.com team, "Cable TV seeking its place under the Indian sun," indiantelevision.com, December 29, 2000. http://www.indiantelevision.com/ye2k/y2kcatv.htm, accessed April 24, 2019.

receivers. Ramu hid his old receivers under spare *lungis* in a storage room, while the Siti Cable

franchisee in Chebrolu (also in Guntur district) simply let the channel receivers sit, unused, their

fading stickers peeling in the humidity and unwavering summer sunlight. The unused rooms of

receivers were a physical instantiation of the uncertainty and shifting regulatory regimes that

continued to govern cable television, even in a seemingly inevitable digital age.

Before "digitalization" forced a sharp consolidation of the cable distribution market,

turning formerly independent local cable operators into franchisees of corporate multi-system

operators (MSOs), each cable operator had to corral together the mix of pay channels they would

distribute to their subscribers. The implementation of CAS meant that they had to purchase a

receiver (which also served as a decoder) for each channel, before mixing and sending out the

package of channels to their subscribers. But this significant infrastructural investment would

subsequently be undercut by the 2011 implementation of "digitalization." The channel receivers

were now, as Ramu put it, so valueless that the scrap dealer wouldn't trade them for onions.

CAS, insofar as it represented some kind of solution to the multitude of perceived problems with

cable television in India, would itself be ultimately superseded by digitalization.

Figure 7: Unused satellite receivers in a control room. Guntur District.

Another account of small-town cable operator travails comes to us from the Telugu-language magazine *A.P Cable Times*. The monthly magazine published both industry and general news of interest to cable operators, including a list of available television channels and their satellite coordinates at the end of the magazine. One regularly-occurring section, "Local Roundup," gathered stories from local cable operators' welfare associations (*sankshema sanghaalu*), which ranged from summaries of meetings and birthday celebrations to descriptions of *rangoli*-making competitions for the *Sankranti* festival. These stories appeared alongside news of new shows from the pay channels and accounts of new technologies in the industry.

The magazine also occasionally published letters from local cable operators, which gives us some insight into the challenges they encountered in their "cable areas." Prabhakar Rao, a cable operator from the Warangal district (in contemporary Telangana), opens his 2004 letter to *A.P Cable Times*[231] by observing that he writes with an eye towards the conditions of village-level cable operators like himself. Noting that there are over 50 "mandal centers" (*mandala kendralu*) in his district, he comments that only two villages per *mandal* currently received pay channels. Customers, he reported, were none too happy: "Why don't we get all the channels? Why don't we get STAR? It's coming over there, aren't they? Why aren't they coming over here? What dish, what kind of network are you running?" Every *mandal*, Rao repeats, has 10 to 15 villages that don't receive *any* pay channels.

Rao's purported solution to this issue—the letter is titled "An elegant solution (*chakkati parishkaram*) to the troubles of village operators"—is intriguing, as it provides an imagination of what a desirable future for cable television looked like, and what incentives could transform cable television. Rao's imagining of a future cable television was one that bore striking

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[231]*Grameena operatorla samsyalaku idhe chakati parishkaaram*, *A.P Cable Times*, February 2004, p.29-30.

similarities to what would eventually come to be instantiated in the Andhra Pradesh state government's AP Fiber project. Prabhakar writes that five or six *mandal* units should band together and build a consolidated control room, with all villages in the *mandals* connected via the new technology of optical-fiber cables (OFC).

While part of Rao's imagination of cable television's future rests upon a technological unification via optical-fiber cables, it is the political and social future of cable television operators that makes for the more interesting part of his proposal. Rao envisions that this cable network—now able to provide pay channels to the villages that currently do not have them—will be of great interest to local politicians and political parties needing to make announcements that are wide-reaching and easily comprehensible. He writes in his letter:

> Whatever issue arises, whatever "problem" happens, in one minute you will be able to reach everyone in the locality (*niyojika vargam*). Presently, in the villages, political parties rely on flyers, daily newspapers and meetings for publicity. But those are useful only to party members and people able to read. With the T.V. media, however, people unable to read could understand politicians' problems and publicity (*sandesaani, prachaaraani*). Not only that, it will be very good publicity for all parties involved.

Rao's easy assumption that political parties and local politicians *would*, as a matter of course, be interested in the possibilities of cable television (and that this interest would be beneficial to developing the kind of cable television network more suited to local needs) stands in some contrast to Nalin Mehta's surprise at how deeply political parties and figures were embedded in the running of cable networks and news channels.

In pointing out this contrast, I do not want to downplay the corrosive effects that Mehta highlights as consequences of the deep entanglement of political forces and media distribution.

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Rather, I want to illustrate the unsurprising banality of this political entanglement to those

workers embedded in building out and maintaining cable television networks. Rao's acceptance

of the normalcy of political entanglement within the cable television industry in his letter was

mirrored by the local cable operators I talked to. Sharma, for example, said that there were

several cable operators who participated in politics, but that they usually hailed from larger

cities, such as Vizag or Vijayawada, where each cable operator could control larger pools of

connections: "....people who have 5000 connections each, or 4000, there are plenty of people like

that who have gotten into politics. People who have money from this and that (*daani medha*

deeni medha) and have gone into politics—there are a lot of those."

Crucial to the failure of the government's first effort to implement CAS in the major

metropolises in 2003 was the strident opposition of the Shiv Sena's leader Bal Thackeray, as

mentioned earlier in this chapter. Shiv Sena *vibag pramukh* and Mumbai cable operator Anil

Parab observed in an interview with indiantelevision.com that he first become involved in the

effort to defeat CAS when "Balasaheb Thackeray gave a clarion call opposing CAS," and that

"like any other *saccha* (true) Shiv Sainak, I would not rest till our leader's orders were

followed."[232] That such an affectively-laden response could be mustered against a seemingly

bloodless implementation of technical equipment and protocol was perhaps not anticipated by

either the Central government (whom the Shiv Sena were aligned with both at the local and

parliamentary level) or the telecom regulator.

Using his experience from working in trade unions, Parab managed to unify Mumbai's

fractious cable operators in opposition to CAS. Key to Parab's characterization of CAS was

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232Ashwin Kotian, "'Coda will become the single most powerful national association of cable operators in the country': Anil Parab, Cable Operators and Distributors Association president," indiantelevision.com, http://www.indiantelevision.com/interviews/y2k3/executive/anilparab.htm, September 9, 2003. Accessed April 25, 2019.

disgust at its perceived "foreignness," in line with the Shiv Sena's wider "sons-of-the-soil" political ideologies. In his interview with indiantelevision.com, Parab characterized CAS as a tool of "foreign broadcasters," sharply asking, "Why couldn't the highest body in one of the largest democratic countries of the world force these foreign broadcasters to toe the line? The government and ministry officials haven't been able to assert their strength and power."[233]

This assertion of holding ground against foreigners was reflected in the major North Indian broadcasters' public proclamations against and with each other—in a 2003 article[234] predicting the ultimate deferral of CAS implementation, *India Today* quoted Zee Telefilms' additional vice-chairman Jawahar Goel darkly noting that if there was a delay, it would be because "there was a lot of lobbying by broadcasters." Goel added, naturally, that "this was not the way things were done in India." The reporter termed this a *swadeshi - videshi* split (the other two broadcasters of note being Star India and Sony Entertainment).

Claiming that the cable television business was one in which no one had ever lost (*nashtam evariki jaragala*), Sharma added that cable operators ran diverse businesses alongside their cable networks or invested in real estate, and lost and earned money accordingly. I was surprised by his claim that the cable television business was one in which there were no losers, and he explained in more detail that: "If any competition comes, suppose...I'm there, in Arundelpet (a neighborhood in Guntur), I only give Siti Cable. There's competition if 2 or 3 people, like me, say that we're going to give this [connection] too." I asked if this meant that DigiCable simply didn't operate in the area that he claimed as his. Sharma nodded, continuing:

233Ibid.
234Kaveree Bamzai, "Government firm on implementing Conditional Access System, splits television industry." *India Today*, June 16, 2003. https://www.indiatoday.in/magazine/nation/story/20030616-government-firm-on-implementing-conditional-access-system-splits-television-industry-792690-2003-06-16. Accessed April 30, 2019.

That's the understanding. We don't go to their area, they don't come (*vaala raaru*) into our area. It's so that business won't be disturbed. What would happen if they came [into my area] is that they won't make any money and we won't make any money. We all have to hand over money for the pay channels. Whether it's me or the DigiCable man, or someone else, anyone else, we have to pay. It's all pay channels now. Who's going to pay for the pay channels with the money in their pocket?...There are a lot of people who have lifted stakes and left because they couldn't compete with Siti Cable. Siti Cable became well established.

A certain uneasiness exists in Sharma's narration: the certainty of protective non-competitive custody in localized "cable areas" between Siti Cable and DigiCable is subsumed to a broader disquiet over the market dominance of Siti Cable and its crushing of independent local cable operators not under its umbrella. The functionality of cable television in Guntur was marked by instability between the (seemingly intractable) need for local cable operators at the last mile— operating in protected, agreed-upon "areas"—and the encroaching efficiencies of formalization, as seen in Siti Cable's relentless absorption or ouster of independently-operating cable television operators with its ability to afford and more broadly distribute the wide variety of pay channels that made cable television worth watching (Both *Eenadu Television* and *Gemini Television*, channels that marked the early memories of my interlocutors, were now pay channels).

The physicality of cable television network setups—particularly at the last mile, when local cable operators delivered television signal to their "territories"—meant this vision was rendered somewhat illegible to the end viewer. Viewers themselves could disrupt this legibility and individuation—and not necessarily for any radical purpose. In the authorized repair center in Guntur that I observed, there was only one set-top box (the primary device governing

individualized subscriber recognition and pay channel decryption) to share amongst the many television sets that needed testing.

Narendra, resourceful repairman that he was, used a sharp knife to cut open the thick coaxial cable that attached the television to the set-top box, revealing its copper core. Twisting out the strands, he split the cable into two, binding the newly split strands with electrical tape and attaching connector pins to the split wires that would allow more televisions to be tested using the single cable connection and set-top box. The markers of indecipherable encryption and poor transmission—static-infused visuals, choppy sound—were all over the channels as Narendra tested out the televisions for customers and himself. However, the spliced cable still did its job, demonstrating that screens and speakers were physically working in the television sets that needed to be returned to their owners.

CAS and the Dream of Transparent Viewers

Why think through the history of CAS at all, given how it was ultimately absorbed into a larger, later project of TV digitalization and reconfiguration? CAS, I argue, represents an early salvo to integrate a largely informal and localized industry within pervasive logics of numerical understanding and formalization—logics that would soon come to shape other modes of everyday life, governance and practice in South India.

Taking a step back from the political infighting that dogged CAS' implementation, it is worth examining more closely the purported reasons for why a conditional-access system was deemed necessary or beneficial in the first place. A reader letter published in *The Hindu* argued

that the set-top boxes only benefited the broadcasters because of the kind of data they'd be able

to provide[235]:

> The installation of STBs [set-top boxes] benefits only the broadcasters. Why this is so? A
>
> constant suspicion of broadcasters is that the cable operators routinely under-declare what
>
> they collect from viewers. This is a source of acrimony between broadcasters, MSOs and
>
> operators. Once the STBs are installed, the broadcasters are in a position to know exactly
>
> the numbers of viewers and to control the viewing as per the payment made by the
>
> viewers upon selecting the pay channels.

In his study of how numbers and accounting became important to scientists as forms of

knowledge, the historian Theodore Porter writes

> Perhaps most crucially, reliance on numbers and quantitative manipulation minimizes the
>
> need for intimate knowledge and personal trust. Quantification is well suited for
>
> communication that goes beyond the boundaries of locality and community. A highly
>
> disciplined discourse helps to produce knowledge independent of the particular people
>
> who make it.[236]

A desire for transparency—and an abiding concern over transparent "numbers" to more

faithfully represent the viewers watching particular channels via particular distributors—

pervades materials from both regulatory authorities and mainstream English-language press

coverage in regards to CAS and its presumed benefits. As Power points out, "numbers" allowed

shareable knowledge to be formed without the uncertainty, intimacy and locality that colored

235Buddhi Kota Subbarao, "Set top boxes, pay channels and free channels," The Hindu, June 17, 2003.
https://www.thehindu.com/thehindu/op/2003/06/17/stories/2003061700050200.htm. Accessed April 30, 2019.
[236] Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life,* p.ix.

community—the precise communities of viewers that were managed (however opaquely to an outsider's eye) by local cable operators.

What (or who) were the broadcasters and multi-system operators pushing for the implementation of CAS seeking to know numerically through their demand for transparent numbers? A consumer-oriented Q&A about CAS published in the English-language newsmagazine *Outlook* posited this:

8. Surely it can't just be about protecting consumers' interest...Who else gains from CAS?

Consumers aren't the only ones to benefit from CAS. MSOs will benefit from a more faithful reporting of their subscriber base. Until now, they were victims of the local cable operators' underreporting of this base. The plugging of that revenue leak is expected to give an incentive for existing players to make additional investments in providing better service...

The government too will mop up more entertainment tax and service tax, since there will be greater transparency in respect to number of subscribers.

9. And who loses?

Your local cable operator—if he has been underreporting subscriptions and pocketing the money. CAS will plug that revenue leak to some extent. Additionally, he'll now have to get transparent with channel subscription or face the prospect of penal action.

The couch potato who wants all the pay channels: he'll likely pay more than he does now—but he deserves to (just like your farmhouse neighbour deserves to pay more for their power consumption).

Broadcasters like Star, Zee, Sony etc.—to an extent. For them, CAS is expected to be a

double-edged sword. They'll benefit from a higher subscription base, but if viewership

falls—as is expected to—their ad revenues will be hit.[237]

CAS, unlike digitalization, did not demand expanded disclosures or financial reorganization on

part of the cable operators. As Vibodh Parthasarthi notes,[238] there had been no licensing

requirements for local cable operators in the early 1990s, when privately-operated cable

television was establishing itself in India. The first major regulations for cable television, the

1995 Cable Television Networks (Regulation) Act only mandated local cable operators to

register with their local post office by filling out a form. In contrast to cable television, direct-to-

home (DTH) satellite television faced stricter reporting and registration requirements, creating

what Parthasarathi termed "a regulatory imbalance." The imbalance would only be corrected

through the new rules laid down to govern television digitalization in 2011.

News articles about CAS published in the English-language media in the early 2000s

were ambivalent about CAS' supposed benefits to the consumer of cable television—some even

comparing the long process of passing legislation for (and then trying to implement) CAS to a

television serial[239]. In an article titled, "CAS: The fading picture,[240]" Paranjoy Guha Thakurta

writes that while CAS was intended to "bring about a semblance of order in an anarchic

industry," what it ended up doing was exposing "the fissures among different sections of the

[237]V. Venkatesan, "CAS is King, The Consumer Rules," *Outlook*, June 20, 2003.
https://www.outlookindia.com/website/story/cas-is-king-the-consumer-rules/220473. Accessed April 29, 2019.
[238]"Between Strategic Intent and Considered Silence: Regulatory Contours of the TV Business," in *The Indian Media Economy: Volume 1, Industrial Dynamics and Cultural Adaptation*, eds. Adrian Athique, Vibodh Parthasarathi and S.V. Srinivas. New Delhi: Oxford University Press, 2018, p. 151.
239See Bipin Chandran, "Chaos behind the screens," December 20, 2003, rediff.com, https://www.rediff.com/money/2003/dec/20cas.htm, accessed April 2, 2019, and Manoj Pant, "CAS: A needless controversy," Economic Times, January 23, 2004. https://economictimes.indiatimes.com/cas-a-needless-controversy/articleshow/439977.cms
[240]Paranjoy Guha Thakurta, "CAS: The fading picture," *The Hindu* Business Line, January 6, 2004, https://www.thehindubusinessline.com/2004/01/06/stories/2004010600030800.htm

industry." The various "sections" Thakurta listed as constituting the world of Indian cable television included local cable operators (or as he terms them, "last-mile operators"), "wholesale distributors" or multi-system operators, broadcasters (particularly "private ones running pay channels"), advertisers, and the government. Ironically, Thakurta points to transparency as the precise reason why the government's implementation of CAS was failing, writing that "the most important reason why the implementation of CAS has proved so difficult is on account of the fact that a transparent system would drastically curb corruption—something that nobody in India seems to want."

Thakurta expands upon this point by observing how a certain fuzziness over subscriber/viewer counts exists at all levels of the distribution chain of cable television: local cable operators underreported subscriber counts to MSOs and broadcasters to keep their payout (and fees charged to customers) low, while broadcasters made unverifiable claims about "reach and viewership" to advertisers and media buying agencies. That a certain opacity within the distribution chain of cable television was isolated as a problem is in and of itself unsurprising; similar claims of opacity and unverifiability are leveraged against social media behemoths in the present moment, though on behalf of end-users[241] rather than distributors.

Ambivalence over the presumed benefits of CAS were not just limited to the English-language press. In the Telugu-language *A.P Cable Times*, articles decrying CAS and the institution of TRAI were published alongside Telugu-language translations of consultation notes and notifications that had been released by the government during the implementation of CAS. One such article from the February 2004 issue, titled "This is not a time for differences; come

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241See Will Oremus, "Who Controls Your Facebook Feed," January 3, 2016. *Slate.com*, http://www.slate.com/articles/technology/cover_story/2016/01/how_facebook_s_news_feed_algorithm_works.html, accessed April 5, 2019.

together and prepare for protest," (*Vibhedaalaku samayam kaadu; andaru kalasi udhyamaalaku siddham kandi.*[242]) was authored by K. Prabhakar Reddy, the president of the Andhra Pradesh state cable operators' welfare association. The letter is declarative and rallying, accompanied by a serious-looking photo of the author — a letter to the presumed troops who read an industry magazine like *A.P Cable Times*. Reddy claims in his remarks to *A.P Cable Times'* readers that

> This is a very, very difficult time for cable. (*Cable parisramaku idhi chaala sanklishtamaina kaalam.*) Our industry has not faced this kind of situation in its history. CAS, which we thought would do good for the operators, has itself become an issue to oppose (*hamsapaadu eduraindi.*). On the other side are the pay channels' various demands and rate increases, which keep stretching on. (*maamulga konasaaguthunayi.*) DTH services have started in the country and are slowly creeping up on us. Aside from this growing mass of problems, in the past five or six years increasing construction costs (production costs?), current charges, labor charges?, upgradation needs, and various works have created an environment in which it is impossible for the cable operator to breathe (*oopirisalupani paristhithi aerpadindi.*). With all of this, an entirely new problem has made space for itself. With cable services coming under TRAI's authority, I have heard that the way has been cleared for telecom companies to descend into this work. If that happens, not only cable operators, but hundreds of associate MSOs will also find themselves having to pack up shop.

CAS is listed here among a litany of other problems, some presumably to be expected in any industry, such as increasing costs, wages and upgrades. That CAS is called out specifically for becoming something it was not touted to be—for something that was initially thought to be good,

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242*A.P Cable Times*, February 2004, p.49-50.

but then was not—illuminates the complicated nature of cable television distribution in the

Telugu states. CAS may have been beneficial to some parts of the distribution chain—the local

cable operators specifically called out the pay channels—but its uptake was not universally seen

as a benefit by all those entities and people responsible for bringing cable television to the

viewer. In a 2002 report on a seminar on CAS conducted by the Consumer Electronics & TV

Manufacturers' Association, the differing reasons between local cable operators and broadcasters

as to why the transparency promised by CAS was necessary is notable.[243]

> If Shantanu Aditya, head of Sony Entertainment TV Discovery Pvt. Ltd, a cable
>
> distribution company, felt that the amendments...would not help India leapfrog where
>
> technology is concerned and also does not address the issue of under-reporting by cable
>
> operators, Vikki Choudhury, an independent cable operator in Delhi was of the opinion
>
> that the broadcasters, most of the time, do not take into account the problems of cable
>
> operators which include financial ones too. "In such a scenario, CAS is a good thing for
>
> the whole industry as it will bring about some transparency," he added.

In the April 2004 consultation note on broadcasting and television distribution, TRAI echoed this

linkage of CAS with a sort of desirable transparency:[244]

> The task force observed that in the existing arrangement, the consumer was paying for all
>
> the channels, irrespective of what he actually watched or desired to watch. There is a
>
> need to make the system transparent in respect of pay channels/pay programmes, which
>
> can be watched by selective subscribers. The subscription of all pay channels should be
>
> transparently known and the payment receivable by individual 'pay' channels should be

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243indiantelevision.com team, "Many issues covered, little by way of solutions at CETMA seminar on CAS," July 11, 2002. http://www.indiantelevision.com/headlines/y2k2/july/july60.htm. Accessed April 29, 2019.
[244]"Consultation Paper No. 9/2004: Consultation Paper on Issues relating to Broadcasting and Distribution of TV Channels," Telecom Regulatory Authority of India, New Delhi: April 20, 2004, p. 20

fully determinable. This transparency should also allow entitled revenue to accrue to the

different links in the distribution chain of Cable TV...The Task Force recommended that

the Government should mandate CAS by law.

Transparency—at multiple levels of the cable television distribution chain—was central to

TRAI's vision of the possible benefits of implementing CAS; and as the CETMA seminar

proves, even some local cable operators thought transparency would help them negotiate with the

broadcasters. But even those corporate broadcasters and MSOs—the two corporate poles in the

cable distribution chain best positioned to profit from the implementation of CAS and the

attainment of some kind of "transparency" over viewer constitution—seemed to hardly know

what was going on with *each other*, let alone the much-maligned local cable operator. A 2003

interview with Star India's COO, Sameer Nair, indicates as much. Nair, speaking of Mumbai

MSO INCableNet and the seemingly stalled effort to get set-top boxes into homes, says:[245]

> By the time you are actually ready to get the box 30-40 percent of the work [*referring to*
>
> *publicity efforts around the set-top box*] has already been done. You must either want or
>
> not want to do it. Subhash Chandra [*CEO of Zee Entertainment*] wants to do it. We set
>
> our differences aside. But, as you are actualising the process and putting a plan in place,
>
> your partner INCable says we will not pay your current bill.
>
> How can you be sure of doing business with someone like INCable in the future when
>
> they are not paying your current bills? It slows down the process. Then all the other
>
> operators get wary. Hathaway is left wondering what is the INCable *chakkar* suddenly in
>
> the middle?

245Thomas Abraham, "'A concerted effort is needed to get CAS into homes,': Sameer Nair, Star India's Chief Operating Officer," indiantelevision.com, May 17, 2003.
http://www.indiantelevision.com/interviews/y2k3/executive/sameern_cas.htm, accessed April 30, 2019.

The local cable operators that I spoke to still emphasized an unpredictable unsteadiness as central to what their experience with distributing cable television had been and continued to be. Cable operators in rural areas mentioned that they had trouble collecting money on a predictable schedule from their customers, given how payment revolved around the agricultural season. Others talked about how the ability to remotely disconnect non-paying customers from cable television was surprisingly positive—as they no longer had to risk physical confrontation for cutting off someone's television. This fuzzy, non-transparent sociability was also manifest in the informal non-compete agreements that shaped cable operator "territories," the primary cause for the lack of competition between local cable operators, rather than any dictums from higher-order corporate entities like Siti Cable. (As I found out, being a Siti Cable subscriber in a building under DigiCable's purview, it was not a matter of physical impossibility.)

Krishna Jayakar, in an article[246] studying the implementation of telecom policy surrounding the government's decision to implement the conditional-access system, observes that TRAI's process was in itself a transformation of regulatory processes surrounding technology and broadcasting. Jayakar—echoing TRAI's claims for the conditional-access system's benefits—describes TRAI's regulatory processes as also generative of a welcome transparency. He writes, "Compared to the MIB [Ministry of Information and Broadcasting], TRAI has a statutory responsibility to ensure transparency in its decision-making." This desirable transparency, as Jayakar sees it, was implemented through (among other things) TRAI's use of publicly-accessible "consultation notes," through including consumer groups and NGOs in the telecom and broadcasting sectors to consult, and through increased in-house technical expertise and no direct role in politics or governance.

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[246]Krishna Jayakar, "The Conditional Access System: The Dynamics of Á La Carte Pricing for Cable Television in India," *International Journal of Communication* 5, p.1502-1522 (2011)

Transparency, as Clare Birchall[247] reminds us, is more a relation than an absolute. Birchall writes:

> Despite many instances in which we are encouraged to choose between transparency and secrecy, and to think of them as irreconcilable approaches to social problems, there are also plenty of contexts in which the intractability of the relation is plain for all to see: we live with the tension on a daily basis. If we pause to work within and through the tension, such contexts will show up the difficulty, absurdity even, of the presentation of a 'choice.' Absurd not only in the face of an irreducible relation, but also because transparency can have the same effects as secrecy, and secrecy can flourish in 'transparent' realms.

Vibodh Parthasarathi, in an article on the regulation of TV business in India[248], writes of the Central government's regulatory stance to television as vacillating between 'strategic intent' and 'considered silence.' Parthasarathi observes that the distribution sector of cable television—as opposed to the production-linked work broadcasting and uplinking television channels—was seen as ancillary, and only lightly regulated until the 2011 Cable Television Networks (Amendment) Act, which I will describe in more detail later. The story of CAS—a parallel, but not identical attempt to regulate cable television distribution—illuminates the consequences of a regulatory stance of 'considered silence' particularly well. Transparency commingled with secrecy in ways that the technical structure of CAS did not necessarily address—CAS could give you an accurate count of subscribers to a service, of viewers to a channel, but it did not render

[247]Clare Birchall, "Introduction to Secrecy and Transparency: The Politics of Opacity and Openness," *Theory, Culture and Society*, v.28, no.7-8 (December 2011): 7-25, doi:10.1177/0263276411427744, p.13.
[248]Vibodh Parthasarathi, "Between Strategic Intent and Considered Silence: Regulatory Contours of the TV Business." In *The India Media Economy, Vol. 1: Industrial Dynamics and Cultural Adaptation*, edited by. Adrian Athique, Vibodh Parthasarathi and S.V. Srinivas, New Delhi: Oxford University Press, 2018, p. 144-5.

any clearer the structures that bound together newspapers and television channels together, for instance, or the ownership imperatives that drove distributors or channels; even if these imperatives seemed plainly apparent to the trade press or local operators.

The vision of pre-CAS cable television being a zone where the consumer lacked control and clarity and transparency were needed also marked the Ministry's understandings of the cable television environment, as the FAQ document illustrates. The Ministry's vision of cable television's ground presence (a vision that was not dissimilar to TRAI's assessment of how cable television worked) was one where a single operator, who the customer could not escape, provided a bundle of channels that could not subsequently be altered to match the customer's preference. This vision aligns with the illustrations of "cable areas" my interlocutors described.

However, what this particular understanding of cable television elides is the intensely social work of being a last-mile local cable operator. Local cable operators were neighbors, friends, relatives and enemies to the people they served. They could be capricious in their decisions to service and cut people off from cable television—Srinivas told me unceremoniously that he once cut service to the village's Christians (the unspoken implication being, from a Kamma cable operator to a Kamma researcher, that these were Dalit Christians) for causing some unspecified trouble in the bazaar.

Absent from corporate and regulatory imaginations of the way already-existing cable television had failed was an acknowledgement that the proliferation embedded in the flat bundle of channels could be perceived as desirable by television viewers. As Prabhakar Rao's letter to *A.P Cable Times* illustrates, not having *enough* channels could be a source of friction and discontent between customer and cable operator. My interlocutors—some bemusedly, others irritated—similarly recalled their own customers' desires for channels they did not necessarily

watch with any regularity. Ramu, the cable operator in Ananthavarappadu, near Guntur, observed of his customers that

> If they like the channel(s), it'll be great (*mustha vuntudhi*), but if they don't have the
>
> channel(s), they'll get the feeling that they're lacking something (*emo leddani feeling*).
>
> They'll feel like, why am I not getting that channel? The guy next to me is getting it, why
>
> am I not getting it? Even if he's just watching it for half an hour, he's going to say he's
>
> getting it, but I'm not getting it.
>
> ...What it is is that they want to feel like they've got all the TV channels in their house.
>
> You want to feel like your house is full of things, whether or not you use them or not. It's
>
> like you want to feel as if the box is full (*dabba ninda feeling vundali*), whether or not
>
> you use the things (*vaada vaadakapoyina*). It's like that. You have to *feel* like you have
>
> all the channels (*anni channels vundatuga anipeeyali*).

One of Ramu's friends, listening to his musing, raspily agreed. "It's just like that. They'll ask if something's not coming. This isn't coming, that isn't coming. News channels, anything...And then they still won't watch it."

The contrast between TRAI's and the Ministry's imagining of a television viewer rationally choosing only those programs which they wished to watch and Ramu's invocation of an affective relationship to the number of television channels one had access to is particularly telling. Ramu's understanding of how customers perceived the number of channels available to them through a cable connection placed it within a larger spectrum of consumer desires—the feeling of a "full house," the perception of a cable connection not as a singular entity, but as a collection whose completeness could be measured up against a neighbor's—that shaped middle-class understandings of contemporary consumption.

Ever onward, towards the expanding promises of the digital

In 2005, with CAS still in limbo in the major metropolises—and the new Congress-led coalition governing in Delhi—the Telecom Regulatory Authority of India released a Consultation Paper on the Digitalisation of Cable Television. Arguing for a broader introduction of digital transmission across the cable television industry, the paper observed that "In 2003, a mandate was given to introduce CAS in the four metros. This could have been done in an analogue mode or a digital mode. A few operators decided to provide CAS through the digital mode. As a consequence in the metro areas of Delhi, Mumbai and Chennai, a few MSOs have already started providing many digital TV channels to their subscribers."[249] Along with direct-to-home satellite television, these were the few already-existing sources of digitally-transmitted television in India; almost everywhere else still relied on an analogue signal.

The paper clarifies shortly after that CAS and digital television are not the same thing, though they are often confused. "The conditional access system (CAS)," the paper helpfully reminds us, "is encryption and decryption of programme material to ensure that only the authorised subscriber receives the programme. Digital transmission on the other hand, interalia, squeezes more channels into the space previously occupied by a single analogue channel. However subscribers in both cases require special devices to decrypt/decode the signals so that these could be viewed on the conventional television set."[250]

The benefit mentioned here—the ability to cram more television channels into the same physical signal that had previously only carried a few analogue channels—was one mentioned time and time again by the local cable operators I talked to, and is not one that shows up in

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249Telecom Regulatory Authority of India, "Consultation Paper on Digitalisation of Cable Television," January 3, 2005. https://main.trai.gov.in/sites/default/files/consulpaper3jan05.pdf. Accessed April 30, 2019.
250"Consultation Paper on Digitalisation of Cable Television", p.6.

documents or articles that deal with CAS. Ramu even drew me a careful sketch of how the compression and transmission worked. If CAS was bound to a certain notion of futurity—with its promises of transparency and legible viewer numbers—it did not necessarily imply a *digital* transformation; CAS could still be achieved with an analogue setup. Though, as the Consultation Paper observes, only a few broadcasters tried it, given how limited the mandate for CAS was. CAS—and the promise of transparency it represented to broadcasters and the government—is in this paper again reduced to its technical specifics. It is only an encryption requirement, not the key to a television future that makes sense for all the players in the distribution chain. Hope—for clarity, for the plenitude of channels that (at this point was quite clear) viewers desired—resided in the digital signal and its possibilities. Many MSOs, the paper explained, "set up sophisticated head-ends capable of delivering 60-90 channels. These channels are delivered in analogue mode. The existing capacity of cable systems is far less than the demand."[251] Unmentioned—and perhaps, still bearing the brunt of the blame—is the figure of the local cable operator. The technical upgrades to deliver digital television, the paper warned, would require "huge capital investments." The world that relatively independent local cable operators had strung together was not one that was equipped to deliver on the digitally-delivered dream.

In contrast to the pure technical solution that CAS (supposedly) represented, the Consultation Paper made it clear that implementing nationwide digital transmission would require a more fundamental overhaul of the industry. TRAI suggested the introduction of licenses in the context of digitalisation, "since there are very few players," in contrast to an estimated fifty thousand local cable operators. Imagining digital television to be in competition

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[251] "Consultation Paper on Digitalisation of Cable Television," p.3.

with telecom companies, new regulations for ownership restrictions and foreign direct investment were also proposed.[252]

The 2005 Consultation Paper was TRAI's first attempt at setting down ideas and standards for digitizing television. The actual Act promulgating and mandating the transition would not come until 6 years later, in 2011. Another government—the second BJP-led coalition government, this time under Narendra Modi—would be in power at the Centre by the time the digitalisation mandate reached Guntur, Vijayawada, and the rest of coastal Andhra Pradesh.

The final chapter takes up television's digitalisation, and considers how this imagination of television's digital potential intersected with concurrent projects of digital infrastructure and governance in the recently-bifurcated state of Andhra Pradesh. If ordinary cable television was now to be a plenitude of channels and services—made possible by the digital signal and the hard changes it would enforce upon the industry—it would also come to represent a decisive step away from the cobbled-together technical knowledge and plant that had constituted cable television (and perhaps, television more generally) up to that point. If CAS was the first salvo, digitalisation would be the decisive blow in reshaping television and cutting it out of the (unexceptional) chaos that had birthed it.

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[252]"Consultation Paper on the Digitalisation of Cable Television," p.21

Chapter 4:
AP Fiber and the Dreaming of Digitalization

Introduction

On March 17, 2016, flanked by various state officials, MSO owners and Cisco Executive

Chairman John Chambers, Andhra Pradesh Chief Minster N. Chandrababu Naidu announced the

beginnings of a statewide, state-run broadband network project—the AP Fiber Grid Project—in

the city of Visakhapatnam.[253] By the end of April, the chief minister promised, cable connectivity

would be achieved in North Andhra, and by the end of July, across the entire state. The major

offering of this broadband service would be a "triple-play package" of services: television, VoIP

phone service, and broadband internet service, placing the state in direct competition with both

cable television operators and emerging internet service provider corporations, such as ACT

Fibernet. Key to this endeavor, reports observed, would be the participation and investment of

local cable operators and MSOs, who would be required to lay down new optical fiber cables to

consumers' residences.[254]

On the front page of the Guntur edition of *Eenadu*[255]—still the "largest circulated Telugu

daily," after all these years—the above-the-fold headline announcing the project, "In 4 months,

the whole state" (*4 nelalo rashtramantha*) itself adjoined a similarly anticipatory headline and

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[253]Santosh Patnaik, "Fiber Grid will lead to digital empowerment, says Naidu," *The Hindu*, March 18, 2016. https://www.thehindu.com/news/national/telangana/fiber-grid-will-lead-to-digital-empowerment-says-naidu/article8368289.ece. Accessed May 4, 2019.

[254]G.V.R Subba Rao, "State to provide internet, phone and TV at just Rs. 150," *The Hindu*, March 15, 2016. https://www.thehindu.com/news/cities/Vijayawada/state-plans-to-provide-internet-phone-and-tv-at-just-rs-150/article8353879.ece, accessed May 4, 2019.

[255]Eenadu, March 18, 2016, Guntur city volume 20, no.343 [city samputi 20 sanchika 343]

photos depicting the construction site of the Cabinet building in Andhra Pradesh's new state capital, Amaravati (*Sachivalayam nirmanam, saravegam*). The close association of two future-facing projects on *Eenadu's* front page was perhaps coincidental, but it seems unusually illuminating as well.

The future that Naidu's government was dreaming up for the state would be delivered via the installation of this broadband network; an installation that relied upon local cable operators who were already working as franchisees of larger corporate MSOs whose existing services or future plans would compete directly with the government's offerings. Yet this seeming contradiction was not touched upon in news coverage of the launch, though it lingered in my interlocutors' minds as they thought about whether or not they would get involved with the project. Ramu—the same cable operator who stored his unused satellite receivers in his attic—told me that he thought AP Fiber would be a hard sell to most cable operators, because there seemed to be few helpful financial incentives to assist in last-mile delivery.

Figure 8: Announcement of AP Fiber (large headline, center) along with Amaravati construction (upper headline, with photos), in *Eenadu*, Guntur main edition, March 18, 2016.

A few months after the launch, in early September, I went to visit AP Fiber's temporary office at Andhra University in Visakhapatnam. A poster with the tagline "Towards a Digital

AP"—adorned with the Chief Minister's smiling visage, as was most of the AP Fiber promotional material I would find later—decorated an outer wall of the office building. (The project, it seemed, was also "powered by TeraSoft," the developer of a number of government websites.) In contrast to most government offices, the AP Fiber office bore most of the architectural hallmarks of Silicon Valley-sourced startup culture; glass doors with biometric locks, painted white walls, glass whiteboards and markers in my interlocutor's office, English and Hindi floating down the hallway from open doors. The employees who passed by me wore ID badges at their belts, much like workers of the IT firms whose aesthetic the government office was emulating.

Figure 9: Sign on the AP Fiber temporary office, Andhra University, Visakhapatnam

My cousin—who had arranged the meeting with an engineer working on the AP Fiber project, a testimony to the invisible structuration of family, friendship and caste in even these mundane endeavors—and I sat in the narrow hallway in steel-mesh chairs across from what seemed to be a storage room, though it too had a glass door like the other offices. Through the closed door, I could see that the room was full of materials—thick spools of cable and stacks of

boxes from Cisco and ZTE-branded networking equipment—to be deployed in service of the Fiber Grid project as it expanded across the state. The office and storage space bore all the marks of a melding between television and digital services, a melding that had only become possible to envision and implement only a few years before.

The AP Fiber office, in some ways, was the physical embodiment of an earlier promise— the promise of television digitalization and the potential of the "digital" signal. As mentioned in the previous chapter, the Telecom Regulatory Authority of India had proposed the implementation of digital signals for television broadcasting in its 2005 "Consultation Paper on the Digitalisation of Television" within the midst of the failed implementation of CAS in India's metropolises. The way out of the uncertainty of that failure was via the digital signal; a digital signal that would soon be made mandatory for all.

In framing television as a social-technological entity that was ultimately absorbed into a broader rhetoric of digitalization and digitally-mediated services—an absorption on clear display in the AP Fiber project—my aim here is to consider, once again, how television lives (or is fashioned to live) within a world inhabited by other forms of media and other media industries. If video in the 1980s represented one kind of melding between media forms—an informally-driven and somewhat condemned form of mashing cinema and television together, then the "triple-play" package of AP Fiber in 2016 represented a publicly-celebrated and formalized instance of unifying media forms into a singular set of services, once more delivered by the state to its citizens.

The discursive transformation of television from a venue of illicitly-obtained entertainment to a node of services (at least, in Andhra Pradesh and in TRAI's consultation notes) was one that relied upon the presumed capacities of the digital signal and its transmission.

"Digitalisation," then, was not just the material transformation of how a television signal encoded and delivered content. It was also a reimagination of the television's presumed capabilities and centrality to a desirable daily routine. If television had, at its inception, been lumped in with small-scale entrepreneurship and questionably legal activity to exceed or escape the strictures of the national broadcaster, television was now being embedded within the provision of state services and the inherent promise of the digital future.

These promises—of telemedicine, of exams and educational provision over distance—echoes an earlier era of development-via-information-technology discourse. In an article thinking through the discursive strategies of ICTD (Information and Communication Technology for Development) projects and practitioners, the anthropologist William Mazzarella writes that "the hype was not just empty; rather it brought about its own social effects 'on the ground.'"[256] In this chapter, I will link the particular promises made about and AP Fiber to this earlier instance of technological hype and promises, and consider how the rhetoric surrounding "the digital"— whether embodied by the now-respectable IT industry or the now-digital signal of television and the AP Fiber project—was reinvigorated by this new imagination of the state's modulation of governance.

In thinking through the discursive qualities of the promises surrounding AP Fiber, I hope to better illuminate the magnitude of the qualitative shift digitalization induced in the state's imagination of television in Andhra Pradesh. If the state's earlier interaction with South Indian television had been mediated through the bodies of particular politicians and their patronage or control of particular television *channels* (the ties between Sun TV and Karunanidhi; *Eenadu* TV, NTR, and N. Chandrababu Naidu; *Sakshi*, Y.S. Rajasekhara Reddy, and Jagan Mohan Reddy, for

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[256]William Mazzarella, "Beautiful balloon: The digital divide and the charisma of new media in India," *American Ethnologist*, v.37, no.4 (2010): 783-804.

example), it had turned into something else in the announcement of AP Fiber. Tracing through this shift, I contend, can provide us with a more nuanced, historically-grounded means of understanding the political valences which technologies understood or constructed as "digital" can inculcate or immiserate.

Ascribing dreams to the digital: regulatory imaginaries and the move from CAS to DAS

Jung-Bong Choi, in his study of the digitalization of Japanese television[257], writes that his concept of "digitalization" is one that "wrestles with an ongoing process by which the values and functions of digital television are pronounced and negotiated within specific political, economic, cultural, and technological environments."[258] I find Choi's concept of "digitalization" a fruitful one to engage with in the context of South India as well. In particular, Choi's emphasis on unpacking the discursive and material entanglements produced *via* deregulation between state entities and non-state actors such as trade associations seems especially helpful when trying to understand how TRAI, broadcasters, multi-system operators, and local cable operators were enmeshed in the process of imagining and implementing digital television.

The initial recommendations for the digitalisation of cable television were issued by the Telecom Regulatory Authority of India in September 2005.[259] These early recommendations linked digitalisation to the ongoing effort to implement addressability in cable television—i.e., the effort to roll out CAS. TRAI observed that MSOs in particular "have indicated that mandatory digitalisation should not take place till addressability is notified and the launch date can be the same as the date of notifying CAS." (The suggestion would seemingly fall victim to

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[257]"Digitalization of Television in Japan: State, Economy, And Discourse" (Jung-Bong Choi, PhD diss., University of Iowa, 2005)
[258]Choi, "Digitalization of Television," p. 5.
[259]Telecom Regulatory Authority of India, "Recommendations on Digitalisation of Cable Television," New Delhi, September 14, 2005. https://main.trai.gov.in/sites/default/files/Recom14sep05.pdf. Accessed May 11, 2019.

the interminable delays that would plague CAS' rollout and ultimate halt.) The paper also suggested that "every effort be made to exploit" the 2010 Commonwealth Games in Delhi for digitalisation (much like the 1982 Asiad had been used to justify the crash expansion of the National Network in the 1980s).

Even at this early stage, digitally-delivered television was imagined to contain the potential to deliver multiple *services*, as well as remaining a venue for consumption. Among the reasons constituting the "need for digitalisation" was "the potential to provide triple play: voice, video and data."[260] Competing television distribution technologies, such as DTH ("direct-to-home" or satellite television), already relied on digital transmission, and TRAI anticipated that internet-protocol television (IPTV) would also emerge as a competing distribution platform to cable network television.

Of greater importance in these early recommendations was the emerging realization that cable television would have to be brought into some sort of regulatory parity with its major competitor, satellite television.[261] As noted in the previous chapter, satellite television had larger financial barriers to entry—namely, a high entry fee and annual license fee. In contrast, the 1995 Cable Television Networks (Regulation) Act which governed cable television only required an annual payment of Rs. 500 as a continuing registration fee. Digitalization, the recommendations stated, "would bring in vast changes in the Cable Industry." This new kind of cable television (one heavily integrated with the provision of multiple services) would require—it seems, at least, from the Authority's point of view—a new sort of owner.

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[260]"Recommendations on Digitalisation," p.1.
[261]"Recommendations on Digitalisation," p.12.

The recommendations suggested that a new license be established for cable operators

wishing to offer digital services, beginning in April 2006. While licenses would be offered to

existing cable operators on a non-exclusive basis, the Authority added that

> to ensure that serious players only enter the market all licensees would be required to
>
> provide a bank guarantee of Rs. 50 lakhs for each city/urban agglomeration of over one
>
> million and of Rs. 25 lakhs for each city/urban agglomeration that has a population of
>
> less than one million in case such a city is also considered for a digital license.[262]

Conditions would also have to be created, TRAI said, that evaluated the "seriousness" of

potential cable operators and pay channel creators. A "serious player" would have "credentials in

terms of capacity to make investment, a good business track record [and] capacity to comply

with the conditions of license." Along with the requirement of a bank guarantee, TRAI reasoned

the bar for entry into the cable television industry would be raised enough to be brought into line

with satellite direct-to-home (DTH) television. TRAI also wished to add language to the existing

Cable Act strengthening its ability to revoke registration if cable operators had been convicted of

criminal activities.

The suggestions to restructure licensing requirements in cable television—and thereby

more strongly regulate who could and could not enter the industry—were further emphasized in

a second set of recommendations released by TRAI in 2008, the "Recommendations on

Restructuring Cable TV Services."[263] In these recommendations, TRAI observed that there was

no system in place to track renewals or for supervisory intervention, such as de-registering

under-performing or defunct cable operators. These recommendations, like the 2005 ones, also

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[262]"Recommendations on Digitalisation," p.16.
[263]Telecom Regulatory Authority of India, "Recommendations on Restructuring Cable TV Services." New Delhi, July 25, 2008.

insist upon the newness of the technical and regulatory environment that digital television and services will bring to India. Describing the need for a new scheme to license cable operators, TRAI posited a "changed scenario"[264] in which cable television operators would "offer more than one service under growing convergence."[265] To achieve this convergence—which would be mediated by the digital signal and its accompanying infrastructure, "a certain minimum technical knowledge and financial strength backed with organizational ability [was] required" of cable television operators.[266]

In contrast to the Ministry's and cable television industry's suggestions for CAS before the passage of the 2002 bill, TRAI's recommendations for digitalization directly considered the deeply changed structure of cable television distribution, echoing the observations I heard from local cable operators that they simply no longer possessed individual power over their networks with the arrival of multi-system operators (MSOs). The 2008 recommendations on restructuring suggested that—alongside revising entry requirements for the industry—separate licensing schemes for local cable operators and MSOs be developed, in order to reflect "their distinct functional role at higher level in transmission system hierarchy." The LCOs, TRAI observed, were now primarily "entrusted with the responsibility for providing TV signals to the customers" (as opposed to negotiating with the pay-channel broadcasters).

The changes in licensing suggested by TRAI included explicit requirements for documentation from potential cable TV operators; a condition that TRAI noted had been applied rather flexibly by the local post offices who had been in charge of issuing licenses. TRAI also addressed the notion of operator-exclusive "service areas" in its recommendations for

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[264]"Recommendations on Restructuring Cable TV Services," p.22.
[265]"Recommendations on Restructuring Cable TV Services," p.22
[266]Ibid.

restructuring the industry. New licenses, it recommended, would not have restrictions on the area of operation—"it is envisaged that once a Local Cable Operator (LCO) obtains the license, he will have complete freedom to operate in any part of licensed area." This freedom to operate, of course, made no mention of the resolutely unwritten ways in which local cable operators maintained the stability of their cable distribution "areas."

In its effort to re-imagine what cable television as an arena of "serious players" with considerable financial resources—as opposed to the more rhizomatic networks of small and large entities that constituted Indian cable television in the early 2000s—TRAI was engaging in a kind of world-making, bringing about the imaginative structure necessary to fundamentally re-envision what television could be (or *ought* to be, in the eyes of the state and larger corporations). In an essay on the "living" documents of policymaking, Shona Hunter[267] theorizes that policy documents are

> constituted collectively through the emotions and they also constitute a means by which affect and the emotions move.[Policy] documents move us, we move them, they constitute points for collective investment and they connect us to others. Once we understand them in this way we can begin to understand their important role in both sustaining and disrupting social relations.

Hunter here speaks of policy documents directly connected to the work of managing social welfare, but the broader point she makes—about policy documents being a point in which collective investment can manifest—is worth holding on to when one considers the usefulness of thinking through consultation documents that were not required to be implemented into law or practice.

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[267]Shona Hunter, "Living documents: A feminist psychosocial approach to the relational politics of policy documentation," *Critical Social Policy*, v.28, no.4 (2008), p.508.

In my fieldwork, competition between local cable operators seemed to be subsumed to the emerging competition between multi-system operators (MSOs). The duopoly of Siti Cable and DigiCable (later Sunny Vision) supplied most of the local cable operator "territories," but there were a few others as well. (The looming presence of satellite television haunted all these endeavors, and dishes bearing Sun Direct, Airtel, Videocon d2h and Tata Sky logos dotted many a terrace, roof and balcony in the areas I studied.) In Guntur, Asianet—a Malayalam television channel that initially rose to prominence in Kerala the early 1990s before its acquisition by Star India—had entered the cable television fray through its wholly-owned subsidiary Asianet Digital. Asianet's newer consumer and distribution equipment was its primary attraction for potential customers, the head of the MSO told me.

The Asianet Digital office in Guntur possessed a optical-fiber cable splicing & joining machine costing at least a few thousand U.S. dollars, a machine needed since they pulled their own fiber to the premises, unlike other MSOs who relied on other companies or newly-established ISPs for the cables they utilized. Asianet was still in the process of setting up shop when I went to visit them, and told me confidently that their newer equipment, combined with their "local channel" offerings, would attract customers to them, away from the dominant duopoly of Siti Cable and Sunny Vision.

A brief aside into the regulations governing direct-to-home (DTH) satellite television is necessary here, as their guidelines were the seeming standard against which cable television networks were being re-evaluated. Direct-to-home satellite television, broadcast on the K_u

band,[268] was permitted in India starting in 2001.[269] The guidelines for obtaining a DTH broadcasting license were somewhat more extensive than the requirements for a cable operator license at that point in time. Ownership restrictions were put in place that specified "broadcasting companies and/or cable network companies shall not be eligible to collectively own more than 20% of the total equity of the applicant company at any time during the license period," with requirements for yearly updates on ownership changes and structure. Furthermore, a nonrefundable entry fee of *10 crores*, a bank guarantee of 40 crores, a security clearance from the Ministry of Home Affairs, and clearance from the Department of Space were all required to be submitted to the Ministry of Information and Broadcasting in order to be considered for a DTH license.[270]

As Vibodh Parthasarathi has pointed out, this discrepancy ensured that DTH television distribution would essentially be a corporate affair, unlike the patchwork of local cable operators and consortiums which TRAI attempted to corral via CAS. An Open Society Foundations report on digital media in India noted that TRAI itself functioned primarily as an advisory body—"sometimes key decisions are taken and revised by various ministries totally without regard to TRAI's recommendations—which themselves, it must be mentioned, have not always been in the public interest. The result has been an institutional framework dogged by political favoritism,

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[268]K$_u$ band refers to microwave spectrum at the 12-18 GHz frequency, used by communications satellites. See "521-2002: IEEE Standard Letter Designations for Radar Frequency Bands,"
https://ieeexplore.ieee.org/servlet/opac?punumber=8332, accessed May 17, 2019.
[269]Ministry of Information and Broadcasting, "Guidelines for Obtaining License for Providing Direct-to-Home (DTH) Broadcasting Service in India," March 15, 2001.
https://mib.gov.in/sites/default/files/GuidelinesforDTHServiceDated15.3.2001.pdf, accessed May 17, 2019.
[270]"Guidelines for Obtaining License for Providing Direct-to-Home (DTH) Broadcasting Service in India", p.3. The existence—and success—of Sun Direct (the same Sun of Tamil Nadu's Sun TV) illustrates that there still existed ways around even these codified changes.

bureaucratic partisanship, legal loopholes, and corporate malpractice."[271] The large-scale,

corporate interests served by the DTH guidelines were markedly different than the political

constituencies that local cable operators had come to embody. This is not to claim that local

cable operators and cable television networks were less dogged by political favoritism or

corruption—as my interlocutors in the previous chapter observed, cable operators with political

inclinations and desires were not exactly hard to come by. Instead, I believe that this shift—

towards controlling cable operators and welcoming codified corporate investment—is one that

illuminates the complex nature of the futurity that "digitalisation" came to embody for the

regulators and the Central government.

Even if TRAI's recommendations were subject to delays or being ignored altogether by

the Central government, the consultation papers and recommendations can still be understood as

an imaginative exercise: as a means of envisioning what cable television (or satellite, or telecom)

ought to be. TRAI's effort to restructure licensing for cable TV operators was a discursive effort

that enfolded local cable operators within formalized constructions of expertise and perceived

business acumen. How, in other words, did these ideas for new regulations embed a new notion

of "serious players" within the work of cable television distribution, and exclude the knowledge

and expertise embedded within the smaller-scale work of local cable operators?

In a piece thinking through regulatory processes for prescription drugs at the U.S. Food and Drug

Administration, the anthropologist Linda Hogle[272] observes that

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[271]Vibodh Parthasarathi, Alam Srinivas, Archna Shukla et al., "Mapping Digital Media: India," December 15, 2002. https://internetdemocracy.in/wp-content/uploads/2014/02/mapping-digital-media-india-20130326-2.pdf, accessed May 17, 2019.

[272]Linda F. Hogle, "Claims and Disclaimers: Whose Expertise Counts?" *Medical Anthropology*, v.21, p.275-306 (2002). doi:10.1080/01459740214077.

Focusing upon regulatory processes is one way of examining the negotiations of authority

and expertise that, in turn, determine the right to represent and intervene in social

processes of health. The regulatory process is a less-studied site, where classifications,

definitions, and truth claims are made; where boundaries of jurisdiction are constituted;

and thus, where alternate voices of authority and expertise are included or excluded.

TRAI's regulatory stances—whether or not they were embraced or ignored by the Ministry of

Information and Broadcasting and the Centre—can similarly be understood as a site in which the

notion of necessary "expertise" and "business acumen" could be debated and prescribed as it had

not been initially. The 1995 Cable Networks (Regulation) Act contained no documentation

requirements that operators were required to fulfill, outside of the application to the local

postmaster (the usual local "regulating authority") and the 500 rupee fee. With the advent of

digitalization and the promise of services, a new kind of expert (and level of financial

commitment) was seen by the regulator as absolutely necessary to provide good service to the

end-viewer. Alternative modes of entry into the cable industry—which colored nearly all of my

cable operator interlocutors' stories; they had abandoned bank exams or ran dry-goods stores or

were living off family farms before entering the industry—seemed to be out of the question; it

was only a matter of figuring out the smoothest mode of transition for existing small-scale

operators instead of encouraging new entrepreneurs with similarly informal training and

"practically"-acquired expertise to join the industry.

TRAI's 2010 recommendations[273]—which would ultimately find realization with the 2011

Cable Networks (Regulation) Amendment Act passed by the Centre—point out the sheer

abundance of local cable operators as a problem that multi-system operators (and a changed

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[273]Telecom Regulatory Authority of India, "Implementation of Digital Addressable Cable TV Systems in India," August 5, 2010. https://main.trai.gov.in/sites/default/files/finalreom5agust_0.pdf, accessed May 21, 2019

regime in cable television) would need to continue to address. In the recommendations, the

regulatory authority notes that

> In the early days of cable, there were no MSOs and the broadcasters negotiated directly
>
> with LCOs as the number of broadcasters was limited and most channels were Free to
>
> Air. However, the number of operators grew significantly, *largely by the prospects of this*
>
> *industry and the absence of a regime to cap the number of operators...*The MSO then
>
> emerged as a "master distributor" who would purchase content from multiple channels
>
> and provide it to multiple LCOs.[274] [emphasis mine]

The local cable operator—and the notion of small-scale cable television networks covering a few

neighborhoods or even a few buildings—is here portrayed as inadequate to managing the

abundance that colored Indian broadcasting (around 550 down-linked channels in India), an

abundance that digitalization would only intensify. Managing digitalization and its seemingly

inherent abundance would require different kinds of cable distributors—distributors who

possessed the financial wherewithal to successfully navigate what was already anticipated to be

an expensive transition to digital television.

MSOs themselves were far from uniform. The two MSO operators I spoke to—one based

in Telangana, and one in Andhra Pradesh itself—ran substantially different operations.

Brightway, the MSO based in Telangana, operated as a "society" of seven smaller MSOs, who

rented out underground optical fiber cables from Airtel and Reliance to deliver signals to their

customers, who were located in rural Telangana, outside of the Ranga Reddy district (where the

capital Hyderabad is located). Brightway's managing director, Subhash, was a fervent supporter

of the recent movement for a Telangana state, placing advertisements in *Cable Samachar* (a

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[274]"Implementation of Digital Addressable Cable TV Systems in India," 12-13.

Telugu-language technical magazine Brightway financially supported) and *AP Cable Times* in support of the state after it was successfully created in 2013.

Sreedevi, an MSO based in Guntur, was a single entity rather than a consortium, and Sreedevi's managing director, Suresh, enthusiastically espoused the virtues of the new AP Fiber Grid project, even in face of the obvious competition to his own business. The "technologist" chief minister Chandrababu Naidu, he told me, had invented a system to provide convergent government and telecommunications services into a single subscriber's home (*all services— videoconference, IPTV, telephone, internet—oka single subscriber intilo edhi kavalanna, provide chese system ni theesukovacharu*) via the Fiber Grid project, and this was something to be spread and implemented, instead of treated as competition.

I highlight these varying political commitments and arrangements to highlight the fact that—recalling a theme raised in the previous chapter—television was multiple things, all at once. In Telangana under Brightway, cable television was governed by a consortium of MSOs having (judging by Subhash Reddy's boisterous recollections) negotiations with the Centre and various local MLAs. With Sreedevi, the political commitment was clearer to discern—it was one that imagined cable television as perfectly in line with the governing Telugu Desam Party and N. Chandrababu Naidu's high-tech infrastructure plans. This commitment wasn't uniform among the cable operators I interacted with in coastal Andhra Pradesh; with local cable operators bearing considerably more skepticism towards the project and its potential success.

In his book *Convergence Culture*, media scholar Henry Jenkins describes the world of "convergence" thusly:

> In the world of media convergence, every important story gets told, every brand gets sold, and every consumer gets courted across multiple media platforms...This

circulation of media content—across different media systems, competing media

economies, and national borders—depends heavily on consumers' active

participation...convergence represents a cultural shift as consumers are

encouraged to seek out new information and make connections among dispersed

media content.[275]

Jenkins is primarily interested here in a consumer-oriented vision of convergence, where media

consumer-producers skillfully navigate multiple kinds of media for pleasure and purpose. This

cultural shift, I contend, was also accompanied by governmental and regulatory shifts that

deployed "convergence" as the infrastructural future that lay ahead for "old media" such as

television. The cultural shift of convergence was thus accompanied by an underlying process of

infrastructural and regulatory reimagination.

In the TRAI consultation papers concerning television's digitalization, as I have shown,

television was steadily and consistently re-imagined as capable of providing multiple kinds of

services to end-viewers; a capability that would only arise with the proper implementation of the

digital signal. Convergence, then, was more than a form of media consumption. It was also a

distinctive realignment of governmental and regulatory priorities towards creating and securing a

digitally-mediated abundance of services. This realignment contained within it imaginations of

the sorts of people and entities suitably prepared to deliver these new services, regardless of the

actually-existing conditions that shaped television's presence in viewers' (and distributors')

everyday lives.

What are the stakes of thinking through convergence not solely as an environment

modulated by the desires of media consumers and producers, but as a simultaneously

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[275]Henry Jenkins, *Convergence Culture: Where Old and New Media Collide*. New York: NYU Press, 2006. p.3.

consequential project of rethinking the work of governance? Convergence, as Jenkins observes, is a logic that structures public and popular culture, rather than a contained process of consumption. Jenkins declares in the close of the introduction to *Convergence Culture* that "[w]e are entering an era of prolonged transition and transformation in the way the media operates. Convergence describes the process by which we sort through those options."[276] The "we" in this statement seems to be limited to those parties most associated with media—namely, those individuals and associations with a direct stake in the production-consumption nexus—but it is not hard to see a logic of convergence structuring governmental interactions with media technologies (and media's producers and consumers) as well.

What impact would thinking of governance embedded within a cultural logic of convergence have on our understandings of television's quotidian existence in Andhra Pradesh? In his book on special economic zones in Andhra Pradesh, Jamie Cross writes that the work of building out special economic zones in Visakhapatnam (where this chapter starts)

> encourage modest dreams of profit among those who are most affected by their construction, interweaving and overlapping with other projects of personal and social transformation. As a consequence, attempts to realise blueprints for SEZ projects in India rarely produce clean-cut narratives of resistance or opposition to market futures. Instead, they bring visions of economic growth, industrialisation and employment into conflict or messy alignment with the dreams and desires of wealthy high-caste landlords, small-scale farmers and Dalit communities as they pursue political power and projects of upward social mobility.[277]

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[276]Henry Jenkins, *Convergence Culture: Where Old and New Media Collide*, p.24.
[277]Jamie Cross, *Dream Zones: Anticipating Capitalism and Development in India*, p.56.

The cultural logic of convergence Jenkins posits (and the digitalization of media infrastructures that undergirds its possibility) can—if we take Cross' account of the multifaceted nature of anticipation and transformation seriously—be understood as mode of reckoning with seemingly emergent possibility. Convergence was one means by which the Telecom Authority—and the governmental agents that subscribed (in some ways) to the Authority's regulatory stances—could envision, delimit and implement new modalities of mediated possibility. Whether or not these imaginations of mediated possibility lined up with the mundane realities of technological life and existence that colored everyday life in Andhra Pradesh (or even, in a more limited sense, the everyday experience of cable television in the state), remained an unsettled question at the time of AP Fiber's inaugural launch.

Subscribers, multi-system operators, and remaking the cable industry: imagining and implementing the Digital Addressable System for Cable Television

In April 2012, following a series of consultation papers and comments from stakeholders and the passage of an Ordinance in 2011, the Central Government passed the Cable Television Networks (Amendment) Rules.[278] These amendments to the original Cable Television Networks (Regulation) Act passed in 1995 introduced several regulatory changes to the cable industry, not least of which was the formal recognition of the Multi-Systems Operator—the MSO—that until then had gone unacknowledged in the legislation governing television. The 1995 regulation only made mention of registering as an individual "cable operator," a designation that could easily slide between local cable operators and their (recently emerged) MSO overlords.

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[278]Government of India, "Cable Television Networks (Amendment) Rules, 2012," New Delhi, April 28, 2012. https://mib.gov.in/sites/default/files/cab8.pdf, accessed June 13, 2019.

The 2012 amendment also included with it a new form that would have to be submitted to the "registering authority" (the Central Government itself, for multi-system operators, in sharp contrast to the local postmaster who sufficed previously) to register as a cable operator. Separate forms were introduced for local cable operators and multi-system operators, and the necessary requirements for registering as a multi-system operator were far more extensive than the cursory licensing requirements to register as a cable operator in the 1995 legislation, indicating the magnitude of the imaginative distance between what cable television had been in 1995 and what it had now become, in the 2010s. Among the requirements for registering as a multi-system operator were (in the case of individuals) to not be "an un-discharged insolvent" nor a "a person of unsound mind as declared by a competent court." Persons convicted of any criminal offenses were also barred from registering as multi-system operators. The 1995 regulations did not carry explicit instructions as to who could not constitute a suitable cable operator, simply stating that a cable operator would have to fulfill any prescribed eligibility criteria, if they existed, in order to obtain registration.[279]

The regulatory construction of the "multi-system operator" again functions as a sort of belated acknowledgment of the fact that the cable television industry had mutated far beyond the minimally sketched imaginations that lived in the 1995 regulations (themselves belatedly admitting that such a thing as privately-operated television existed, years after it had begun to sprout in the apartment blocks of Bombay). In the regulatory formalization of the multi-system operator was an attempt to bring financial and legal stability on par with those rules that governed direct-to-home satellite television, which by the time the regulations were promulgated had mostly been rendered into a corporate affair, with large telecom companies like Airtel and

[279]Government of India, "The Cable Television Networks (Regulation) Act, 1995," New Delhi, March 25, 1995. http://legislative.gov.in/sites/default/files/A1995-7.pdf, accessed June 13, 2019.

conglomerates like Tata and Videocon (as well as the ever-present Sun) constituting the majority

of DTH television providers. Cable television, however, was still a more chaotic arena, as the

Telecom Authority's own 2008 consultation paper[280] on restructuring cable television observed.

The new rules served as the formalization, perhaps, of a new governmental imaginary—an

imaginary that envisioned the future of television first and foremost as a terrain dictated by larger

flows of cash and technical investment. The entry requirements for registering as a multi-system

operator included a processing fee of "rupees one lakh" (100,000). It had previously been (for

"cable operators" of any stripe under the 1995 regulations) Rs. 500 a year to maintain

registration.

Alongside the formalization of the "multi-system operator" was the recognition of

another related figure in the chain of television distribution: that of the subscriber. The 2012

rules also mandated that cable television be transmitted over a digitally addressable system—and

with this requirement emerged the figure of the "subscriber." The 1995 regulations have little to

say about those who *watched* television, and were instead focused mostly upon those who

participated in the work of distributing or creating television. By the time the 2012 regulations

were promulgated, the figure of the "subscriber" (and one's ability to *correctly* discern the

subscriber's nature and desires) seems to haunt the promises of protection embedded in the

legislation. Consider these excerpts from the revised section 4A, dealing explicitly with the

Central Government's right to mandate a digital addressable system for cable television and the

necessary procedures to implement such a system:

> (5) It shall be obligatory for every cable operator to publicise the prescribed information
>
> including but not limited to subscription rates, standards of quality of service and

[280] Telecom Regulatory Authority of India, "Consultation Paper on Restructuring of Cable TV Services," March 4, 2008. https://main.trai.gov.in/sites/default/files/cpaper4mar08.pdf, accessed June 13, 2019.

mechanism for redressal of subscribers' grievances in such manner and at such periodic

intervals as may be specified by the Central Government or the Authority for the benefit

of the subscriber.

(6) The cable operator shall not require any subscriber to have a receiver set of a

particular type to receive signals of cable television network:

Provided that the subscriber shall use a digital addressable system to be attached to his

receiver set for receiving programmes transmitted on any channel.

The figure of the "subscriber" (unlike the more amorphous viewer that had earlier haunted the

cinema and television industries) was tied quite explicitly to the availability of a digital

addressable system—the relationship between the cable operator and the subscriber was now

modulated through it. The Authority's earlier consultation papers and recommendations on the

implementation of conditional-access systems in cable television make mention of "consumers"

(a term that also shows up in the revised 2012 regulations) rather than subscribers.

Why hone in on this particular coupling, of multi-system operator and subscriber? The

pairing isn't particularly *unique* to the text of the regulations—it shows up in industry press

coverage of the digital addressable system rollout in a manner-of-fact sort of fashion, mostly in

terms of a unified "subscriber base" ascribable to an individual MSO rather than as a collection

of individual viewers dealing with their physically proximate local cable operator.[281] But its

mundane deployment as a set of terms to describe the work of television distribution points to the

larger industrial transformation that the implementation of a digital addressable system was

mediating–one that had consequences on how the industry re-imagined its relationship with

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[281]Visakha Chakrapani, "TRAI: Phase I and II CAF collection nearing completion," indiantelevision.com, February 1, 2014. http://www.indiantelevision.com/regulators/trai/trai-phase-i-and-ii-caf-collection-nearing-completion-140131, accessed June 14, 2019.

audiences (now subscribers). Subscription revenue for pay channel broadcasters—as opposed to advertising—was anticipated to increase with the implementation of DAS, and seemingly, it did. By 2015, TRAI could report that subscription revenue—and not advertising—constituted the bulk of the television' industry's revenues.[282]

One of these transformations—increased consolidation of cable television providers—was hardly surprising. Industry website indiantelevision.com described it as "an expected fallout."[283] Consolidation meant previously independent local cable operators were subsuming their services to corporate MSOs or joining up amongst themselves to create new MSOs (as was the case with Brightway, the Telangana-based MSO I visited). Consolidation, by most accounts, was driven by the increased costs associated with upgrading equipment to comply with the mandatory digital addressable system. Jagdish Kumar, CEO of Hathaway—one of India's largest multi-system operators—specifically invoked "convergence" in his reasoning behind the emergence of consolidation within the cable television industry: "With digitisation," he reasoned, "has come the convergence of technologies and features like high definition content, VAS [value-added services] and broadband accessibility. All this in turn requires large amount of investment to manage economies of scale, thus ushering consolidation."[284]

Again, an association of the digital signal with an almost-unmanageable abundance (of possible future content, of space for channels to be managed and sold, of possible services to be delivered to possible subscribers) is discernible in Kumar's remarks. If the corporate vision of the digital signal was one that allowed for the delivery of television to be rendered secondary to

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[282]indiantelevision.com team, "Subscription is biggest contributor to TV industry's revenues: TRAI." indiantelevision.com, April 2, 2015. http://www.indiantelevision.com/regulators/trai/subscription-is-biggest-contributor-to-tv-industry-revenues-trai-150402, accessed June 14, 2019.
[283]indiantelevision.com team, "Cable TV DAS and the head end factor," indiantelevision.com, November 5, 2013. http://www.indiantelevision.com/digital/y2k13/nov/novdig06.php. Accessed June 14, 2019.
[284]Ibid.

amorphous "services" that consumers could be charged for, the vision behind AP Fiber—an entity that combined the imperative of the state government with the perceived new possibilities of the digital signals—harkened to a differently aligned vision, one that I will return to in the next section.

This is not to say consternation and confusion didn't mark the system's rollout, or that the actually-existing nature of cable distribution had no impact on the system's implementation. With the revised 2012 regulations, TRAI included a timetable prescribing rollout dates for DAS. The rollout was divided into four "phases": Phase I covered the four major metropolitan areas, Phase II covered select large cities outside the four metropolises, Phase III the remaining urban areas and Phase IV the "rest of India." The Guntur and Krishna districts where I conducted my research fell under Phase III and IV. The local cable operators I talked to in 2016—two years after the rollout was anticipated to be completed nationwide—said that the switchover was still unfinished, though it was slowly reaching completion.

But even in the early days of DAS' implementation in the major metropolises, the future-laden optimism of regulators and broadcasters (who, once again, seemed to be the party most desiring the transformation wrought by digital transmission) ran headlong into the seeming indifference and reluctance of television viewers to make the switch. A reporter for English-language newspaper *The Hindu*, writing from New Delhi during an already-extended Phase I,[285] observed

> Even in a middle-class area like Vikaspuri, this indifference is apparent. At Raj Cable
> Network, technician Brijesh enters the office to pick up two more STBs for installation.
> "The channels are being switched off – sometimes sports, sometimes news – and that is

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285Ministry of Information and Broadcasting, "Modification in Switchover Date to Digital Cable TV System," June 20, 2012. https://cablequest.org/pdfs/das/modification_in_Switchover_DAS 20-06-12.pdf, accessed June 14, 2019.

forcing people to get an STB. Otherwise, why will they want to buy it?" he asks. Eight to

10 STBs are installed in the area every day, not at the pace required to meet the

deadline.[286]

Reactions at the state level were also mixed. West Bengal Chief Minister Mamata

Banerjee threatened an "agitation" if television transmission in Kolkata was cut after the revised

deadline of October 31, leading to cable operators simply ignoring the deadline. Banerjee's cited

a lack of set-top boxes in Kolkata as her reason for delaying the DAS rollout. [287] The Madras

High Court granted an five-day extension to Chennai after the multi-system operators in the city

said they could not meet the deadline due to a lack of set-top boxes—an extension that would

later stretch on for a few years after chief minister J. Jayalalithaa expressed her opposition on

behalf of the state-owned Arasu Cable corporation. In contrast to CAS, there was no vocal

opposition to DAS in either Delhi or Mumbai, though reporting from both cities suggested that a

smaller percentage of viewers than expected had obtained set-top boxes.[288] A moralizing editorial

on the English-language news website *Firstpost* suggested that Mamata Banerjee was playing

populist politics in her outspoken opposition to the switchover by acknowledging the "real" ways

in which people obtained and watched television, even if they relied on bending the rules:

> We are used to getting our cable for cheap and illegally from the neighborhood cable-
>
> *wallah*. We are used to getting one connection and *sharing* it around the house.
>
> Even Mamata alluded to that in her press conference:

286Priscilla Jebaraj, "What's in it for us, ask consumers," *The Hindu*, September 9, 2012.
https://www.thehindu.com/news/national/whats-in-it-for-us-ask-consumers/article3875066.ece, accessed June 14,
2019.
287TNN, "Mamata threatens stir against digital cable switch," *Times of India*, October 30, 2012.
https://timesofindia.indiatimes.com/india/Mamata-threatens-stir-against-digital-cable-
switch/articleshow/17026628.cms, accessed June 14, 2019.
288Aminah Sheikh and S. Bridget Leena, "TV blackout for those who failed to make th switch in Delhi, Mumbai,"
Livemint, November 2, 2012. https://www.livemint.com/Politics/nMLj1RX4dVX2YbDkS3QPMM/TV-blackout-
for-those-who-failed-to-make-the-switch-in-Delh.html, accessed June 14, 2019.

"One cable connection allows us to run four TVs at home. Elderly parents, young children, adult couples, all have different tastes. So there are three-four sets in several households now. With digitisation, one set-top box will transmit signals to one TV." Mamata says she's speaking up for the "common people" and against the *dadagiri* of the centre. But in the name of a law and order situation she is also condoning all those cable operators, who with a wink and a nod and a little extra cash, allow multiple connections from one house with signal boosters.[289]

The figure of the deviant local cable operator (who nevertheless seemed to provide exactly what their customers would pay for or wanted) was one that persisted in press coverage, as news of rogue analogue transmissions crisscrossed the major metropolises in the wake of the DAS implementation. Corporate cable television companies—perhaps to avoid TRAI's scrutiny—reported that they had indeed switched off analog transmission by the deadline[290], and it was solely local cable operators and small MSOs who were continuing to provide analog television. In 2015—after a new BJP-led coalition had come to power at the Centre and well after the Phase I deadline had passed—industry news site indiantelevision.com reported that there were pockets within the major metropolises that continued to provide analog transmissions. DAS' rollout in Chennai had been barred by the Madras High Court, leading to continued uncertainty as the deadline approached for other urban areas and the "rest of India."

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[289]Sandip Roy, "Mamata's cable war: Protecting aam aadmi or encouraging theft?" *Firstpost*, October 31, 2012. https://www.firstpost.com/politics/mamatas-cable-war-protecting-aam-aadmi-or-encouraging-theft-509344.html, accessed June 14, 2019.

[290]indiantelevision.com team, "TV industry gives mixed reaction to MIB's DAS III & IV extension," December 26, 2016. http://www.indiantelevision.com/regulators/ib-ministry/tv-industry-gives-mixed-reaction-to-mibs-das-iii-iv-extension-161226, accessed June 15, 2019.

The reasoning provided for the delays, most of the time, was lack of set-top boxes.[291]

Despite the Central government's push for local manufacture of set-top boxes through the "Make in India" initiative,[292] most MSOs relied on "cheap" Chinese-manufactured set-top boxes, and consequently were hit with shortages and import duties.[293] In December 2016, the Ministry of Information and Broadcasting extended the deadline for Phase III and IV (smaller cities/towns and the "rest of India") to March 31st, 2017, and issued instructions "to ensure that no analog signals would be transmitted over the cable networks in Phase III areas after 31st January, 2017."[294] Again, news reports after the deadline seemed to indicate that localized pockets of analogue transmission continued after the deadline had passed.[295] In early December 2016, the chief minister of Andhra Pradesh wrote to the Ministry of Information and Broadcasting asking for an extension until December of 2017 to accommodate the then under-construction AP Fiber

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[291]Lack of set-top boxes was such a common reason that the Supreme Court of India accepted the government's plea for the Delhi High Court to take up all the cases related to delaying the DAS rollout in Phase III that had been filed in different jurisdictions, as there was a lack of clarity over whether these judgments could be considered applicable to all of India, given the plaintiffs' similar reasoning behind their delays. See "All Phase III DAS cases to be heard by Delhi High Court early next month," indiantelevision.com, August 24, 2016. http://www.indiantelevision.com/regulators/high-court/all-phase-iii-das-cases-to-be-heard-by-delhi-high-court-early-next-month-160824, accessed June 15, 2019. The Delhi High Court dismissed most of the cases and stays in November 2016. See Gaurav Laghate, "Digitisation Phase III: Delhi High Court dismisses multiple stay orders," *The Economic Times*, November 7, 2016. https://economictimes.indiatimes.com/industry/media/entertainment/media/digitisation-phase-iii-delhi-high-court-dismisses-multiple-stay-orders/articleshow/55295198.cms, accessed June 15, 2019.
[292]"Make in India," from the Government of India's Department of Industrial Policy & Promotion, is an initiative to "transform India into a global design and manufacturing hub" through the encouragement of foreign direct investment (FDI) in manufacturing and streamlining taxation and industrial policy. Make in India logos were often utilized in advertising by multinational corporations like Samsung to emphasize their domestic production. The initiative adopts language from the "maker" movement, though it seems to target manufacturing by large multinational firms. See http://www.makeinindia.com/home.
[293]B.B. Nagpal, "Political, bureaucratic wrangles likely roadblocks for the new I&B secretary," indiantelevision.com, May 2, 2016. http://www.indiantelevision.com/regulators/i-and-b-ministry/political-bureaucratic-wrangles-likely-road-blocks-for-the-new-ib-secretary-160502, accessed June 15, 2019.
[294]Press Information Bureau, Government of India, "I&B Ministry revises timeline for Phase III & Phase IV of Cable TV Digitization." December 23, 2016. http://pib.nic.in/newsite/PrintRelease.aspx?relid=155768, accessed June 15, 2019.
[295]TVP Bureau, "Analogue signals still on in Hyderabad," televisionpost.com, February 20, 2017. https://www.televisionpost.com/analogue-signals-still-on-in-hyderabad/, accessed June 15, 2019.

project.[296] Television's futuristic delivery—and with it, the long-desired transparency and stability—was still being contentiously forged.

Most notable among the entities still broadcasting analog television signals at the time of the (seemingly final) Phase III and IV deadline in 2017 was Arasu Cable, the state-run cable television provider of the southern state of Tamil Nadu—which had also requested (and been granted) a stay for the 2012 rollout of DAS in the city of Chennai. Arasu had been waiting on a permanent MSO license for the city of Chennai and the state of Tamil Nadu following the revised cable television regulations in 2012. The company had been granted a provisional license during the implementation of CAS in Chennai, back in 2006. In recommendations sought by the Ministry of Information and Broadcasting, the Telecom Authority opposed granting Arasu a permanent license, stating in recommendations from 2008[297] that public broadcasting was the responsibility of the Central Government and Parliament, and that states' entry into what was largely a market of privately-operated entities would constitute unfair competition and/or be perceived as propaganda by the public.

The recommendations remain silent on the effect of "para-state" (to borrow Choi's terminology) media entities like the Sun Group and *Eenadu* on the television industry. Despite the Telecom Authority's misgivings, the Ministry of Information and Broadcasting ultimately granted a provisional MSO license to Arasu Cable in 2017, following years of deferral by Tamil Nadu in implementing digital television transmission in Chennai and the state.[298] The provisional

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[296]indiantelevision.com team, "DAS: Andhra seeks extension even as MIB warns," indiantelevision.com, March 31, 2017. http://www.indiantelevision.com/cable-tv/das/das-andhra-seeks-extension-even-as-mib-warns-170331, accessed June 15, 2019.

297Telecom Regulatory Authority of India, "Recommendations on Issues relating to entry of certain entities into Broadcasting and Distribution Services," November 12, 2008, p.30.
https://main.trai.gov.in/sites/default/files/Recom12nov08.pdf, accessed June 15, 2019.

[298]TNN News Service, "Arasu gets digital license." *The New Indian Express*, April 19, 2017.
http://www.newindianexpress.com/states/tamil-nadu/2017/apr/19/arasu-gets-digital-license-1595267.html, accessed June 15, 2019.

license was granted on the basis that Arasu comply with implementing the digital switchover in Tamil Nadu, and turn off analog broadcast within three months.[299] The Central Government did not take a decision on TRAI's recommendations against Arasu's MSO license by the time Arasu launched digital television services in September 2017.

It was, in some ways, Arasu's success in convincing entities at the Centre to ignore TRAI's (rather explicit, and repeated) recommendations that paved the regulatory and imaginative pathway for the AP Fiber project. Like Arasu, AP Fiber was strongly tied to the political fortunes of a political party: J. Jayalalithaa's All-India Anna Dravida Munnetra Kazhagam (AIADMK) in Arasu's case and Chandrababu Naidu's Telugu Desam Party in AP Fiber's case. Both parties were in alliance with the BJP-led coalition at the Centre while these projects were being mooted. Arasu and AP Fiber both intended to provide internet services alongside cable television—the Tamil Nadu government having received an ISP license from the Telecom Ministry in 2015.[300]. Unlike AP Fiber, which was envisioned primarily in the register of digital infrastructure, Arasu was a television provider long before it entered the realm of "digital" services provider.

Crucially, Arasu also existed in a contradictory competitive symbiosis with last mile local cable operators. Both Arasu and AP Fiber relied on local cable operators to distribute their set-top boxes after digitalization was implemented; cable operators who were, in many cases, already bound up with private MSOs and distributing *their* set-top boxes. Arasu cited clear benefits for local cable operators if they remained with their network, such as 50% share in the

[299]indiantelevision.com team, "Including Arasu, total number of MSOs goes up to 1376, to ensure DAS implementation," indiantelevision.com, April 24, 2017. http://www.indiantelevision.com/cable-tv/multi-system-operators/including-arasu-total-number-of-msos-goes-up-to-1376-to-ensure-das-implementation-170424, accessed June 15, 2019.
300PTI, "Telecom ministry grants ISP license to Tamil Nadu," *The Economic Times*, October 2, 2015. https://economictimes.indiatimes.com/industry/telecom/telecom-ministry-grants-isp-licence-to-tamil-nadu/articleshow/49194037.cms, accessed June 15, 2019.

Rs. 125 monthly subscription plan and Rs. 100 per connection under the Rs. 175 subscription plan, though the requirement to distribute their set-top boxes for free clashed with private MSOs who allowed customers to be charged up to 2000 rupees for a set-top box.[301] From the cable operators in Andhra Pradesh I spoke to in the early days of the AP Fiber project, in 2016, it was unclear what benefits would be on offer for them for joining up with AP Fiber. Promises of formal loan guarantees from Andhra Bank were mentioned by a few cable operators, but no concrete enticements or profit-sharing plans.

But to return to the ordinariness of television, to its place within everyday life in Andhra Pradesh, what did the changes wrought by a now digitally-transmitted television portend, and how did they feed into the imagination behind the Andhra Pradesh government's AP Fiber project? In an essay on DAS, media scholar Shanti Kumar writes that

> As is evident from the recent attempts by major players in the media industry like DISH TV to integrate the DAS platform with KYC [Know Your Customer] and Aadhaar systems, the rise of digital addressable systems and their ability to uniquely address viewers as both consumers and citizens raises new questions about the changing relationships between public and private spaces, privacy and surveillance, and the state and its subjects.[302]

The imposition of the digital addressable system, I contend, allowed industry players, regulators, and (in some cases) state entities to re-imagine their relationships to people who had once simply been viewers of television. Now viewers were "subscribers," responsible for upholding a bottom

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[301]C. Jaisankar, "Private multi-system cable operators make a come back," *The Hindu*, October 27, 2017. https://www.thehindu.com/news/cities/chennai/private-multi-system-cable-operators-make-a-come-back/article19927655.ece, accessed June 15, 2019.
[302]Shanti Kumar, "Know Your Audience: The Quest for Digitally-Addressable Systems in India," *FLOW*, http://www.flowjournal.org/2012/08/know-your-audience, August 14, 2012.

line, now viewers were citizens of the state being under-served or fleeced by private entities (the public argument—however flimsy—used to justify the creation of Arasu Cable in Tamil Nadu), now viewers were "connections" to be reported to pay-channel broadcasters in the eternal fight over who owed whom, and how much. The relatively rapid (and absolute) switchover to digital transmission also forced considerable consolidation in the industry—consolidation that was encouraged with the regulatory formalization of the "multi-system operator" and its increased financial commitments. At a more tangible level, it forced viewers to contend with the physical equipment of the set-top box and the patterns of watching that were embedded within the one set-top box-to-one-television set linkage. The linkage was hardly a viable one, whether in venues like the repair shop or in the home of the *aam aadmi* evoked by Mamata Banerjee in her opposition to the DAS timetable in Kolkata.

The material and practical refashioning of the television industry to accommodate its (anticipated) digitally-mediated abundance was not without its consequences: Shanti Kumar's evocation of the state as surveillant service provider is finding its material instantiation in AP Fiber and Arasu Cable. Vibodh Parthasarathi and Alam Srinivas have also pointed out[303] that while distribution is one of the least studied aspects of television in India, it shapes how information is disseminated, how viewership is constructed (through the denial or promotion of television channels on distribution networks—an internecine struggle in Andhra Pradesh), and how the interlocking commercial arrangements that constitute the industry are constructed.

Outside of the importance of studying distribution for television studies itself, examining the switchover to digital transmission in India has broader consequences for how we envision the

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[303]Vibodh Parthasarathi and Alam Srinivas, "Problematic Ownership Patterns: The Evolution of the Television Distribution Networks in India," *Economic and Political Weekly*, v.54, no.12 (March 23, 2019). https://www.epw.in/engage/article/television-networks-political-ownership-patterns, accessed June 15, 2019.

"digital" as an object of analysis. Far from being a kind of walled-off environment in which "new" players like Amazon Prime Video, YouTube, and Netflix are parasitically remaking media consumption and distribution wholesale, it seems to me that it is more fruitful to think of the "digital" simultaneously as environment and mode of transmission. Integrating the "digital" into the Indian television distribution industry was a fractured, contentious, oft-delayed effort— one that required substantially reshaping the underlying imaginaries of what television had been, and what it ought to be. Investigating how these material and imaginative processes intertwined and found form in new rules, infrastructures, and public-private entities seems to me a more grounded way of thinking about the digital not as a media form entirely severed from its seeming predecessors, but as a contemporaneous process integral to the making and refashioning of media labor in our current moment.

Digital India, subnational neoliberalism, and the fever dreams of future-making infrastructures

The network map that Seshu, an engineer working on the AP Fiber project, drew me on the office's glass-faced whiteboard was all boxes, ovals and sharp straight lines, somewhat reminiscent of a corporate flowchart, though more chaotic in its execution. Seshu commented on the map as he talked, slowly drawing out the infrastructural organization that undergirded the AP Fiber project. Some of the custom features his team had developed for the project included a Raspberry Pi-powered security module for the network's Optical Line Terminals (OLTs), which would be located at power substations in each district across the state. An attached camera module could snap a picture of anyone who accessed the OLT, as well as broadcast the OLT's

status via a 3G wireless connection to make locating cut cables or other problems easier. By

December 2017, AP Fiber claimed 200,000 subscribers.[304]

Figure 10: Network map of an AP Fiber connection, including details about routers, optical fiber cables and signal transmission capabilities.

Over the drone of the office's air conditioner, in English interspersed with the occasional

Telugu phrase, Seshu described the technical specifications of the fiber-optic cables and routers

that the AP Fiber project was planning to utilize in its statewide network. Cisco was responsible

for supplying the routers that formed the backbone of the system, and Seshu—while impressed

by his team's bargaining capabilities over the routers' price—knew that Cisco had their own

designs in working with AP Fiber. "It's like," he said in English, "this is going to be a role

model. If this thing goes fine...he's [Cisco's] going to get so many representatives from other

states and they'll study our networks. They might want to implement the same thing in their

place, then Cisco will make money. So they have their own plans."

304Special Correspondent, "Two lakh to get fiber grid connection by month-end," *The Hindu*, December 16, 2017.
https://www.thehindu.com/news/cities/Visakhapatnam/fiber-grid-connection-naidu-households-
channels/article21823866.ece, accessed June 15, 2019.

Seshu also, interestingly, claimed that AP Fiber wasn't seeking to disrupt the existing cable television industry, saying

> Even the MSO will remain in business. We asked them to still send the signal from their head-end system, since they invested in the equipment, but just route through our network. The MSO is confined in one place. But now, he can be everywhere in the state. Virtually, he can reach anywhere. The only point is, I need to route him. If a guy in Vizag, tomorrow, wants to start up in your place in Guntur, what would I need to do? I need to let him go through all our routers. For that I'll charge him and he'll pay me. His headend can expand anywhere in the state...We need to serve each and every one. Because the whole system has to survive. Fighting with the guys, it doesn't make business sense....It's always up to customer service, it's by force or something like that, by this guy showing the government order. Let the customer decide.

In Seshu's reckoning, AP Fiber wasn't necessarily remaking the structure of the cable industry—it relied on local cable operators, after all, to distribute set-top boxes to subscribers. It was, instead, offering a back-end infrastructure on which local cable operators and MSOs could rely on to distribute their own channel offerings, if they so chose to. Ultimately, it would be up to the customer to decide whether the state's offerings were worth buying into. A customer (unlike, perhaps, a citizen) couldn't be forced into a transaction by virtue of government ownership—the relationship was transactional, choice-oriented. "Let the customer decide," after all.

It was a relationship of service provision, a goal to "serve each and every one" in order for the existing system to survive, but in a better way. It is worth holding on to the easy slippage between Cisco and the state-provided AP Fiber here—the fact that one could easily think about the provision of a public service (indeed, if we are to take the Digital India mandate seriously, a

public *good*) as a case study for a multinational corporation to market to other entities. This mundane blending of business imperative and public provision illuminates the casual ordinariness of neoliberal models of governmental practice, a casualness that took over 20 years to be successfully inhabited.

The broadband provisions of the AP Fiber "triple-play" package were linked—by Naidu and the English-language press[305]—to the wider "Digital India" initiative that had become (one of) the early hallmarks of the first Narendra Modi administration, before being overtaken by (not entirely unrelated) controversies over the 2016-17 demonetization effort and the subsequent Goods and Services Tax (GST) revision. "Digital India"—coordinated by the (now) Ministry of Electronics and Information Technology—was a far-reaching initiative spread across various the Central Government ministries and departments to implement "e-governance" practices and solutions, and in doing so provide Indian citizens with a range of digital services. Among the "vision areas" of Digital India was a promise to extend "Digital Infrastructure as a Core Utility to Every Citizen."[306] This promised "digital infrastructure" included "cradle-to-grave digital identity that is unique, lifelong, online and authenticable to every citizen," a "shareable private space on a public cloud" and "mobile phone & bank account enabling citizen participation in digital and financial space." (a not-entirely subtle nod to the 2017 rush to implement cashless payment systems in the wake of demonetization.)

The "cradle-to-grave digital identity" alluded to here is *Aadhaar*, the "unique identification number" and biometric identity card assigned to residents of India and used for a

305Press Trust of India, "AP CM launches Fiber Grid project for net connectivity," *Business Standard*, March 18, 2019. https://www.business-standard.com/article/pti-stories/ap-cm-launches-fiber-grid-project-for-net-connectivity-116031800028_1.html, accessed June 16, 2019.
306Ministry of Electronics and Information Technology, "Vision Areas of Digital India," https://digitalindia.gov.in/content/vision-and-vision-areas#, accessed June 15, 2019.

variety of mundane identity-proving tasks in both the private sector (obtaining a mobile phone number) and with the government (obtaining food and gas rations), until a 2018 Supreme Court decision barred the private sector from obtaining Aadhaar data to provide services.[307] The decision also limited the government's usage of the ID number, though it did not bar the requirement of an Aadhaar number for adults obtaining public benefits.

But there is a larger question at stake with the broader project of e-governance that relies on Aadhaar's existence and an ability to track the "unique" number across government records, collections and databases—all, seemingly, in the effort to efficiently, *properly* deliver "services" of all kinds to those citizens that are deserving of them. What does it mean, in a bare and brutal sense, to reinvent the work of governance as a "service" in need of delivery—to insert within it business-derived logics of efficiency and plenitude that undergirded cable television's uneasy transition to the digital? Digitalization resulted in a fairly monumental remaking of the relationships and logics that constituted the cable television industry, and it is a reformation whose consequences are still being worked out.

In an early essay on the politics of the UIDAI—the authority responsible for implementing and maintaining the Aadhaar databases—researcher Anant Maringanti writes of its re-imagining of citizenship and the state:

> After nearly two decades of restructuring, it has finally become possible for the Indian state to abandon the appearance of confident projections and master plans, and instead acknowledge and embrace the entrepreneurial (read: venture capitalist) that underscores the current phase of reforms...

[307]Vindu Goel, "India's Top Court Limits Sweep of Biometric ID Program," *The New York Times*, September 26, 2018. https://nyti.ms/2MZmP3q, accessed June 16, 2019.

...An important feature of the UIDAI intervention is that it is a significant step towards

deepening the reach of e-governance which can have dramatic consequences for

everyday lives and for the organisation of physical space in which citizens move. The

portability, instant transmittability and interoperability of information across a variety of

hardware and software platforms across space, reconfigures and rescales extant power

relationships.[308]

There is no clear way to draw a line between the logics of transparency and

individualized legibility that drove the Central government's efforts to implement the

conditional-access and digitally-addressable systems for cable television and those logics that

undergird UIDAI's re-engineering of the citizen-state relationship. But the similarities are there

to see, and it is not hard to envision a much longer, and multi-faceted effort to more thoroughly,

intimately mediate the fundamental unknowability that marks the state's relations with its

subjects, or the market's knowledge of the consumers it attempts to envelop—with the two

desires melding in the strange nexus of citizen-customer that AP Fiber serves.

Andhra Pradesh—and Chandrababu Naidu in particular—had long had a fascination with

a state driven by (and riven through with) futuristic, "high-tech" infrastructure. Diganta Das'

studies of Naidu's efforts in the 1990s to build out "Cyberabad" in the former capital city of

Andhra Pradesh, Hyderabad, illuminate these earlier efforts to materialize the perceived future-

at-hand. Das writes of the "AP Vision 2020" document that provided justification for building

out the state in the image of "Cyberabad":

The AP vision document (filtered through the Malaysia experience) provided the Indian

elite with a road map to emulate neoliberal strategies that they wanted to apply in

[308]Anant Maringanti, "Sovereign State and Mobile Subjects: Politics of the UIDAI," *Economic and Political Weekly*, v.44, no.46 (November 14-20, 2009), p.38. https://www.jstor.org/stable/25663788, accessed June 16, 2019.

India...The vision document emphasized the growth and development of the whole state, but the document became a tool for city-centric initiatives in the global South...Although the making of Cyberabad has created a global level of connections and elite projections, the process has also caused disconnections, displacement and loss of livelihood of local families. These shortcomings are not reflected in the state planning report, real estate pamphlets and other glossy publicity documents.[309]

That these sorts of city-centric efforts continued into the new decade and the new state of Andhra Pradesh under Chandrababu Naidu is unsurprising. But if the remaking of Hyderabad and the construction of "Cyberabad" served as an effort to test out city-centric modes of investment and development—to the abandonment of rural citizens and their claims—AP Fiber and the broader Real-Time Governance effort it was entangled with hearkened towards a different sort of vision and developmental mode, one that enveloped rural and urban citizens alike within a platform of surveillant techniques to better ensure their cross-checked legibility for purposes of delivering the services of government.

Reporters from *HuffPost India* who were allowed into the Real-Time Governance Centre at the Andhra Pradesh Secretariat in the new capital city of Amaravati painted a somewhat grimmer picture of what a state bound together by services of data collection and sharing looked like:

Across the hall from Chief Minister Chandrababu Naidu's office in the Andhra Pradesh Secretariat is a windowless room with giant wall-sized screens that display the intimate details of 43 million of the state's 50 million residents: GPS coordinates of their homes, the medicines they use, the food rations they eat, what they say about the Chief Minister

[309]Diganta Das, "Making of high-tech Hyderabad: Mapping neoliberal networks and splintering effects," *Singapore Journal of Tropical Geography*, vol.36, no.2 (2015), p.239-40. DOI: 10.1111/sjtg.12112

on their social media accounts, real-time feeds of thousands of security cameras (with

some cameras inside people's homes—voluntarily, of course), their castes and sub-castes,

their religion, their student scholarships and old-age pensions, their movement in every

state ambulance, and of course—their Aadhaar numbers.

Welcome to the dawn of "Sunrise AP 2022" — Naidu's ambitious, and

unnerving, vision of a society governed entirely by a giant, searchable database, called

"e-Pragati," that integrates all the information, held by every government department,

about every resident in AP using their e-KYC authenticated Aadhaar numbers.[310]

The blend of analog and high-tech efforts in this effort is striking. The Aadhaar number was the

linkage that ensured disparate data could be bound together in an individual form, but the various

bits of information—caste, sub-caste, religion etc.—were gathered via a statewide census, the

Praja Sadhikara Survey[311] (translated as "Smart Pulse Survey" by HuffPost), where Android

tablet-equipped surveyors traveled around the state asked people a range of questions, the

answers to which were then uploaded to the state's database.

If an engineer working on the AP Fiber project could claim that the project's desire was

not to subsume competing services but instead serve as their ultimate backbone, a similar

subsumption of technological futurity is at work here. If Cyberabad was about concentrating

technological provision within closed-off sites, distinct from venues of broad public services,

Real-Time Governance envelopes the entire project of public provision within the mechanics of

surveillance-driven logistics; an imaginary attached entirely to the presumed possibilities of

"digital" infrastructure.

310Gopal Sathe, "How Andhra Pradesh Built India's First Police State Using Aadhaar and A Census." *HuffPost India*, July 23, 2018. https://www.huffingtonpost.in/2018/07/23/how-andhra-pradesh-built-indias-first-police-state-using-aadhaar-and-a-census_a_23487838/, accessed June 16, 2019.
311Ibid.

A final addendum, lest we think that these initiatives were the project of one man and one party. In the 2019 general elections, where Narendra Modi's Bharatiya Janata Party once again consolidated power at the Centre, Chandrababu Naidu and the Telugu Desam Party were defeated in a landslide by his bitter rival, Y.S. Jagan Mohan Reddy and the YSR Congress Party.[312] The website for the Real-Time Governance Centre remained much the same, only this time with new Chief Minister Reddy's picture replacing Naidu's ever-present visage. Much as the urban remaking and infrastructural splintering of Hyderabad and "Cyberabad" continued well after the defeat of the Telugu Desam Party that had initiated it and the bifurcation of the state itself, it seems that these projects of surveillant subnational governance—projects where the imaginative constructions of the citizen and the customer are knitted ever tighter—are bound to continue.
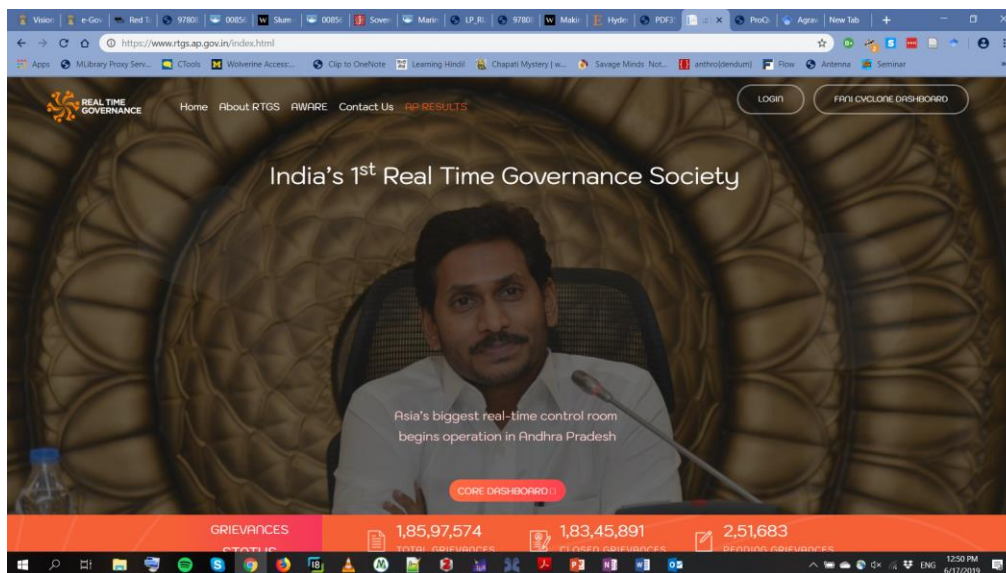

Figure 11: Screenshot of Real Time Governance Centre website with Chief Minister Y.S. Jagan Mohan Reddy, June 17, 2019.

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[312]"Assembly Results 2019, Andhra Pradesh," *The Hindu*, https://www.thehindu.com/elections/andhra-pradesh-assembly/. Accessed June 17, 2019.

Coda:
The Skein of Television and Everyday Life

One of the odder aspects of life in the authorized service center was watching the "team leaders"—responsible for keeping up the front desk and updating the online database of repairs—call up customers who had summarily abandoned their televisions after bringing them in to the shop for repairs or an evaluation. Sometimes it had been a few days since they last showed up, sometimes a few weeks. Usually, the sets were older CRTs. Most times, it seemed like the owners would never return for the set. Abandoned television sets were common across the repair shops I visited, both the authorized service center and the independent repair shops. Television sets—some quite old, dating from the early 1980s and bearing the names of long-dead companies—sat in back-rooms, took up space along the walls, had to be stepped around or over.

The abandoned sets spoke to the unexceptional status televisions now possessed in everyday life. Far from (only) being an object of oddity, rarity or desirability, television sets now possessed a kind of easy anonymity, an unloveliness that left them subject to abandonment more often than other electronics (at least, from my cursory observations at the authorized service center). The forces that produced this unremarkable anonymity, I have tried to show in this dissertation, were themselves contentious and contingent in their nature, binding together disparate media forms in uneasy coexistence, generating aspirational dreams and impulses that today seem to be reshaping fundamental notions of what constitutes the relation of governance in the state of Andhra Pradesh.

Media are simultaneously material (the clunky CRT television set, sometimes inhabited by spiders, sometimes smelling sharp of nitrocellulose thinner after cleaning out the circuit board), and transmitters of content (films, countdown shows, serials that—according to repairmen, anyway—compelled wives to get their husbands to quickly get the television fixed when it broke). This much, it seems, is obvious. What remains relatively under-explored in the context of television studies in India, I think, is the way in which the material presence of Indian media *itself* carries within it certain ideologies, aspirations and contentious imaginations—all of which come to bear upon media's availability and presence within everyday life and practice.

For example, the abundant and unexceptionally fragile flat-screen television presumes the existence of a certain kind of controlled supply-chain, a certain kind of environment—one not subject to summer "load shedding", to dust and damp corroding internal connections. I am not saying that it is *impossible* to repair flat-screen televisions, simply that the difficulty of the work—in comparison to the device's now-unsurprising abundance—speaks to a certain valuation of repair work and replacement within the goings-on of daily life. This valuation is markedly different from the one that inhabits CRT television sets and their generic and interchangeable parts, the compromises customers were willing to accept with them.

The repair shop was a site in which these competing and contradictory valuations and imaginations would have to be struggled with and worked through, and repairmen were ambivalent about their continued ability to do so, with the closure of the television set to the sorts of technical work and knowledge they had absorbed and engaged in over the years. All this, while the promise of software entrepreneurs, hackathons and the high-tech future were being publicly celebrated as Andhra Pradesh's chief minister Chandrababu Naidu drummed up

international support for the new capital city and the innovative modes of governance it would deliver.

It is only by thinking through the material history of the television set and its viewing that we can begin to appreciate the importance of cinema to breaking television out of its normalized presence as a pipe for state-produced and approved content. Television sets and VCRs, after all, brought all sorts of films (officially censored or not) to small-town and rural audiences in a more contemporaneous fashion. No longer would they have to struggle with damaged film reels and prints slowly circulating out of the metropolises to make their winding way down to them. Regional-language cinematic content also provided private television broadcasters an easy way to both distinguish themselves from each other and draw in early viewers when they began broadcasting in the mid 1990s. Thinking through the material entanglement of television and cinema via videos and VCR also allows us to expand our analysis of television to environments outside the familial and the domestic, something that I believe is vital to unpacking the early history of television in India.

Thinking through the enactment of ideology via the materiality of technologies also allows us new ways to come to terms with the presence of digital infrastructures and technologies with the realm of everyday life. In this dissertation, I do not consider the "digital" as a completely separable realm from other forms of media, like television or cinema. Rather, I think of the digital as a media form which is imbricated within the ongoing evolution of these other media forms. The set-top box and the attempt to impose a conditional-access system on cable television were early efforts to impose "transparency" and legibility upon what had been a media form with a particularly murky legal history.

These efforts coincided with a broader push by the 1st Bharatiya Janata Party-led coalition at the Centre in the early 2000s to bring governance and welfare provision in line with "global" standards, often through technological means. The success of their efforts remains debatable, but it is the affect and spirit of these neoliberal enactments which bled into the laws and regulations that governed cable television's presence in people's lives. Alongside a more careful analysis of the material histories and presence of media, a consideration of policy and regulatory documents not simply as bureaucratic rules to be abstractly enacted but as social creations imbued with affect, imagination and intent is also necessary if we are to get a nuanced understanding of media's entanglement within the mundane routines of our everyday practices. Embedded within the dry bureaucratic reinventions of cable television (first under the conditional-access system, then under the digitally-addressable system) were powerful re-imaginings of how audiences ought to be constructed in relation to the work of distribution, and of what kinds of people (or corporations) were suited to the task of distributing television. Enacting these re-imaginings was not without its consequences, as I've tried to illustrate in the previous chapters.

Lastly, this dissertation is an effort to try and take seriously the work of thinking through media forms as entangled and co-constitutive. Most obviously, this effort is reflected in my attempt to think through the ways in which the video and VCR bound the cinema and television industries together, while giving rise to the new form of cable television. But the final chapter—where I consider how television was enrolled within the larger project of the "digital"—is also an effort to try and think about the digital as an entity and category that evolves and is constituted by other media forms.

In the last chapter, I examine the establishment of the AP Fiber municipal broadband network in Andhra Pradesh alongside the Central government's efforts to digitalize television signals on a nationwide scale and do away completely with analog transmission. Notions of "convergent" media—media that were construed as services to be provided and delivered to the customer-citizen—undergirded both efforts. Convergence demanded the implementation of a system that could render viewers individualizable and universally legible to broadcasters, distributors, and the government. Somewhat unsurprisingly, these systems were laden with surveillant possibility, a possibility that finds itself most clearly expressed in the establishment of the Real-Time Governance initiative.

But, in a subtler register, the potential of AP Fiber serving as the backbone to most mediated interactions within the state—as it provided services to all, competitors and citizens alike—bears similar surveillant aspirations. Whether surveillant desire and the establishment of digital infrastructure is inextricably linked, I cannot definitively say from this study alone. But television's enfolding within the realm of pervasive digital infrastructures was justified in terms of advertisers' and broadcasters' ability to receive "transparent" accounts of viewers and their watching habits—transparency only rendered possible through technologies that heightened surveillant potential.

To return, then, to the nature of my analysis of television, and its imbrication within everyday life and the imaginaries (governmental and otherwise) that structure said everyday life. In the Foreword to the *Critique of Everyday Life*, Henri Lefebvre writes

> Dialectical reason criticizes understanding and dispels its determinants but only so as to better grasp the unity behind its contradictions. It understands categories in their real historical development and their connections. It is defined by the *critical movement* of

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these categories. *It is the function of the universal* and of the *totality* operating through negation, and through contradictions, that are known and dominated. It relativizes categories in order to grasp the universal within them more surely. At the same time, whereas understanding always hopes to close and conclude its discourse on the universe, dialectical reason knows that *its* work can never be completed.[313]

This dissertation has been my effort to explicate a dialectical reasoning of television in South Indian everyday life—a reasoning does not seek to resolve the contradictions, contingencies and constituent bits, but rather contend with their interrelations on an ongoing basis in an attempt to grasp the outlines of television's presence as an everyday medium, or maybe a medium that constitutes everyday South Indian life. If the study of television in India has been one that has wrestled primarily with the medium's allegiances firstly to the state and then to private enterprise, this is an attempt instead to think about the presence of Indian television as one generated by an ongoing series of instabilities in different registers, some of whose consequences remain to be seen.

If, as Lefebvre declares, "we cannot step beyond the everyday",[314] then it falls to us as scholars of media-in-the-world to fashion ways in which to think more carefully through and with the constant evolution of television's being-with-us, alongside-us, ever present (and sometimes absent) in the background of our daily labor and life.

313Henri Lefebvre, *Critique of Everyday Life, Volume I: Introduction*. New York: Verso, 2008. p.76.
314Lefebvre, *Critique of Everyday Life*, p.40.

Bibliography

_____. "Assembly Results 2019, Andhra Pradesh," *The Hindu*. https://www.thehindu.com/elections/andhra-pradesh-assembly/, accessed June 17, 2019.

_____. "Barjatya's new company," *Screen*, May 9, 1986.

Adas, Michael. *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance.* Ithaca: Cornell University Press, 1989.

Agrawal, Anushi. "Fables of SITI Cable: Ownership Matters in Cable TV Distribution in India," *The Indian Medialogue*, November 5, 2015, https://indianmedialogue.com/2015/11/05/fables-of-siti-cable-ownership-matters-in-cable-tv-distribution-in-india/, accessed April 28, 2019.

Ali, "Video in Jawahar," *Screen*, April 29, 1983.

Andhra Patrika January 1, 1985.

Andhra Patrika, January 14, 1987.

Andhra Patrika January 16, 1987.

Andhra Prabha January 3, 1987.

AP Cable Times, February 2004.

Arnold, David. *Everyday Technology: Machines and the Making of India's Modernity.* Chicago: University of Chicago Press, 2013.

Arnold, David and Erich DeWald. "Everyday technology in South and Southeast Asia: an introduction." *Modern Asian Studies* 46, iss.1 (January 2012): 1-17. DOI: 10.1017/S0026749X11000540.

Ashraf, Tariq. "Information technology and public policy: a socio-human profile of Indian digital revolution," *International Information and Library Review* 36, iss.4 (2004): 309-18. DOI: 10.1080/10572317.2004.10762650.

Balsari, Saumya, R.K.K Menon, Ranjana Kacker and Nilofer Ahmed, "How Video Has Changed Our Lives," *TV & Video World* 1, no.12 (November 1994): 14-17**.**

Bamzai, Kaveree. "Cable TV: After two task forces, amended Act, Conditional Access System remains in limbo," *India Today*, July 14, 2003. https://www.indiatoday.in/magazine/nation/story/20030714-cable-tv-after-two-task-forces-amended-act-conditional-access-system-remains-in-limbo-792366-2003-07-14, accessed April 2, 2019.

Bamzai, Kaveree. "Government firm on implementing Conditional Access System, splits television industry," *India Today* June 15, 2003. https://www.indiatoday.in/magazine/nation/story/20030616-government-firm-on-implementing-conditional-access-system-splits-television-industry-792690-2003-06-16, accessed April 30, 2019.

Benbabaali, Dalel. "Caste Dominance and Territory in South India: Understanding Kammas' Socio-Spatial Mobility," *Modern Asian Studies* 52, no.6 (2018): 1938-76. DOI: 10.1017/S0026749X16000755

Bhaktavatsala, M. "Video: The wind of change," *Screen*, April 27, 1984.

Birchall, Clare. "Introduction to Secrecy to Transparency: The Politics of Opacity and Openness," *Theory, Culture and Society* 28, no.7-8 (December 2011): 7-25. DOI: 10.1177/0263276411427744.

Birtchnell, Thomas. "*Jugaad* as systemic risk and disruptive innovation in India," *Contemporary South Asia* 19, iss.4 (2011): 357-372. DOI: 10.1080/09584935.2011.569702

Bloch, Ernst. "Nonsynchronism and the Obligation to Its Dialectics," trans. Mark Ritter. *New German Critique*, no.11 (1977): 22-38. www.jstor.org/stable/487802.

Bowker, Geoffrey C., and Susan Leigh Star. *Sorting Things Out: Classification and its Consequences.* Cambridge: MIT Press, 2000.

Brosius, Christiane. *India's Middle Class: New Forms of Urban Leisure, Consumption and Prosperity.* London: Routledge, 2010.

Brown, Bill. "How to Do Things with Things (A Toy Story)," *Critical Inquiry* 24, no.4 (Summer 1998): 935-64. DOI: 10.1086/448902

Brown, Bill. "Thing theory," *Critical Inquiry* 28, no.1, Things (Autumn 2001): 1-22. https://www.jstor.org/stable/1244258.

BS Reporter, "New model for digitalising cable TV proposed," *Business Standard*, July 25, 2007. https://www.business-standard.com/article/economy-policy/new-model-for-digitalising-cable-tv-proposed-107072501097_1.html, accessed June 24, 2019.

Bunnell, Tim, and Diganta Das. "Urban pulse---a geography of serial seduction: urban policy transfer from Kuala Lumpur to Hyderabad," *Urban Geography* 31, no.3 (2010): 277-284. DOI: 10.2747/0272-3638.31.3.277

Butcher, Melissa. *Transnational Television, Cultural Identity and Change: When STAR Came to India.* Thousand Oaks: Sage Publications, 2003.

Caldwell, John Thornton. *Production Culture: Industrial Reflexivity and Critical Practice in Film and Television*. Durham: Duke University Press, 2008.

Cavell, Stanley. "The Uncanniness of the Ordinary," Tanner Lectures on Human Values, Stanford University, Stanford, CA, April 3 and 8, 1988. https://tannerlectures.utah.edu/_documents/a-to-z/c/cavell88.pdf, accessed June 18, 2019.

Chadha, Kalyani and Anandam Kavoori. "Mapping India's television landscape: constitutive dimensions and emerging issues," *South Asian History and Culture* 3, iss. 4 (2012): 591-602.

Chakrabarty, Dipesh. *Provincializing Europe: Postcolonial Thought and Historical Difference.* Princeton, NJ: Princeton University Press, 2000.

Chakrapani, Visakha. "TRAI: Phase I and II CAF collection nearing completion," indiantelevision.com, February 1, 2014. http://www.indiantelevision.com/regulators/trai/traiphase-i-and-ii-caf-collection-nearing completion-140131, accessed June 14, 2019.

Chakravartty, Paula. "Telecom, national development and the Indian state: a postcolonial critique." *Media, Culture & Society* 26, no. 2 (2004): 227-249.

Chandran, Bipin. "Chaos behind the screens," *Rediff.com*, December 20, 2003. https://www.rediff.com/money/2003/dec/20cas.htm, accessed April 2, 2019.

Chari, Sharad. *Fraternal Capital: Peasant-Workers, Self-Made Men, and Globalization in Provincial India.* Stanford, CA: Stanford University Press, 2004.

Choi, Jung-Bong. "Digitalization of Television in Japan: State, Economy and Discourse." PhD diss., University of Iowa, 2005. ProQuest (UMI Number: 3184701).

Cowan, Ruth Schwartz. "The Consumption Junction: A Proposal for Research Strategies in the Sociology of Technology." In *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology,* edited by Wiebe E. Bijker, Thomas P. Hughes and Trevor J. Pinch, anniversary ed. Cambridge, MA: MIT Press, 2012, p. 253-72.

Cross, Jamie. *Dream Zones: Anticipating Capitalism and Development in India.* London: Pluto Press, 2014.

Damodaran, Harish. *India's New Capitalists: Caste, Business and Industry in a Modern Nation.* New Delhi: Permanent Black, 2008.

Das, Diganta. "Making of high-tech Hyderabad: Mapping neoliberal networks and splintering effects," *Singapore Journal of Tropical Geography* 36, no.2 (2015): 231-248. DOI: 10.1111/sjtg.12112.

Das, Diganta, and Tong Lam. "High-tech utopianism: Chinese and Indian science parks in the neo-liberal turn," *BJHS Themes* 1 (2016): 221-238. DOI: 10.1017/bjt.2016.11

Denis, Jérôme, and David Pontille. "Material ordering and the care of things," *Science, Technology, & Human Values* 40, iss.3 (2015): 338-367. DOI: 10.1177/0162243914553129

Desai, M.S.M. "Porn wave turns city into erotic wonderland; Startling disclosures about extent of video evil," *Screen,* August 3, 1984.

Doron, Assa and Robin Jeffrey. *The Great Indian Phone Book: How the Cheap Cell Phone Changes Business, Politics, and Daily Life.* Cambridge, MA: Harvard University Press, 2013.

Edgerton, David. *Shock of the Old: Technology and Global History since 1900.* London: Profile Books, 2006.

Edwards, Paul N. *The Closed World: Computers and the Politics of Discourse in Cold War America.* Cambridge: MIT Press, 1996.

Edwards, Paul N. "Infrastructure and Modernity: Force, Time, and Social Organization in the History of Sociotechnical Systems," in *Modernity and Technology*, edited by Thomas J. Misa, Philip Brey and Andrew Feenberg. Cambridge: MIT Press, 2003.

Eapen, K.E. "SITE Experience: Some Suggestions," in *SITE to INSAT: Challenges of Production and Research for Women and Children*, edited by Binod C. Agrawal and Arbind K. Sinha. New Delhi: Concept Publishing Company, 1986, 47-55.

Eenadu paathikela aksharayatra 1974-1999. Hyderabad: Eenadu Quality Cell, 1999.

Eenadu 20, no.343 (Guntur), March 18, 2016.

Fernandes, Leela. "Nationalizing the 'Global': Media Images, Cultural Politics and the Middle Class in India," *Media, Culture and Society* 22, iss. 2 (2000): 611-28. DOI: 10.1177/016344300022005005

Fox, Richard G. "*Varna* Schemes and Ideological Integration in Indian Society." *Comparative Studies in Society and History* 11, no. 1 (January 1969): 27-45.

Ganti, Tejaswini. *Producing Bollywood: Inside the Contemporary Hindi Film Industry.* Durham: Duke University Press, 2012.

Garg, M.P. "Video fever grips MP," *Screen*, December 14, 1984.

Goel, Vindu. "India's Top Court Limits Sweep of Biometric ID Program," *The New York Times*, September 26, 2018. https://nyti.ms/2MZmP3q, accessed June 16, 2019.

Gothoskar, Sujata. "Free Trade Zones: Pitting Women Against Women," *Economic and Political Weekly* 21, no.34 (August 23, 1986): 1489-92. https://www.jstor.org/stable/4376036

Government of India, "Cable Television Networks (Amendment) Rules, 2012," April 28, 2012. https://mib.gov.in/sites/default/files/cab8.pdf, accessed June 13, 2019.

Government of India, "Cable Television Networks (Regulation) Amendment Act, 2002," December 31, 2002. http://www.wipo.int/edocs/lexdocs/laws/en/in/in036en.pdf, accessed April 30, 2019.

Government of India, "The Cable Television Networks (Regulation) Act, 1995," March 25, 1995, http://legislative.gov.in/sites/default/files/A1995-7.pdf, accessed June 13, 2019.

Greenberg, Joshua. *From Betamax to Blockbuster: Video Stores and Invention of Movies on Video.* Cambridge: MIT Press, 2010.

Guhathakurta, Subhrajit. "Electronics Policy and the Television Manufacturing Industry: Lessons from India's Liberalization Efforts," *Economic Development and Cultural Change* 42, no.4 (Jul. 1994): 845-68.

Hartley, John. *"Invisible fictions: Television audiences, paedocracy, pleasure," Textual Practice* 1, iss. 2 (1987): 121-38. DOI: 10.1080/09502368708582010

Hilderbrand, Lucas. "Cinematic Promiscuity: Cinephilia after Videophilia," *Framework: Journal of Cinema and Media* 50, no.1-2 (Spring/Fall 2009): 214-17. DOI: 10.1353/frm.0.0039.

Hogle, Linda F. "Claims and Disclaimers: Whose Expertise Counts?" *Medical Anthropology* 21, p.275-306 (2002). DOI: 10.1080/01459740214077 https://www.thehindubusinessline.com/2004/01/06/stories/2004010600030800.htm, accessed April 2, 2019.

Hughes, Thomas P. *Networks of Power: Electrification in Western Society: 1880-1930.* Baltimore: Johns Hopkins University Press, 1983.

Hunter, Shona. "Living documents: A feminist psychosocial approach to the relational politics of policy documentation," *Critical Social Policy* 28, no.4 (2008). DOI: 10.1177/0261018308095300.

Ilaiah, Kancha. *Why I am Not a Hindu: A Sudra Critique of Hindutva Philosophy, Culture, and Political Economy.* Kolkata: SAMYA, 2002.

Indiantelevision.com team, "Cable TV seeking its place under the Indian sun," indiantelevision.com, December 29, 2000. http://www.indiantelevision.com/ye2k/y2kcatv.htm, accessed April 24, 2019.

Indiantelevision.com team, "Cable TV seeking its place under the Indian sun," indiantelevision.com, December 29, 2000. http://www.indiantelevision.com/ye2k/y2kcatv.htm, accessed April 24, 2019.

Indiantelevision.com team, "CAS ball back in government court after HC quashes Delhi notification," indiantelevision.com, December 4, 2003. http://www.indiantelevision.com/headlines/y2k3/dec/dec46.htm, accessed April 28, 2019.

Indiantelevision.com team, "CAS deferred in Delhi: future tense elsewhere," indiantelevision.com, August 25, 2003. http://www.indiantelevision.com/headlines/y2k3/aug/aug197.htm, accessed April 28, 2019.

Indiantelevision.com team, "ETV and ETV2 switched to pay mode," indiantelevision.com, February 11, 2006, http://indiantelevision.com/headlines/y2k6/feb/feb142.htm, accessed April 28, 2019.

Indiantelevision.com team, "Finance ministry moots Rs. 46 FTA price," indiantelevision.com, March 31, 2003, http://www.indiantelevision.com/headlines/y2k3/mar/mar111.htm, accessed April 30 2019.

Indiantelevision.com team, "HC sets 1 Jan '07 deadline for CAS implementation," indiantelevision.com, July 20, 2006, https://www.indiantelevision.com/content/hc-sets-1-jan-07-deadline-for-cas-implementation, accessed April 28, 2019.

Indiantelevision.com team, "Lukewarm response to CAS in Chennai: SCV's Dayanidhi Maran," indiantelevision.com, September 1, 2003, http://www.indiantelevision.com/headlines/y2k3/sep/sep12.htm, accessed April 22, 2019.

Indiantelevision.com team, "Many issues covered, little by way of solutions at CETMA seminar on CAS," indiantelevsion.com, http://www.indiantelevision.com/headlines/y2k2/july/july60.htm, accessed April 29, 2019.

Indiantelevision.com team, "No CAS in Mumbai --- asserts Sena supremo Thackeray," indiantelevision.com, August 27, 2003. http://www.indiantelevision.com/headlines/y2k3/aug/aug215.htm, accessed April 27, 2019.

Indiantelevision.com team, "Pressure may build up within BJP on CAS," indiantelevision.com, May 20, 2003. http://www.indiantelevision.com/headlines/y2k3/may/may147.htm, accessed April 28, 2019.

Indiantelevision.com team, "Subscription is biggest contributor to TV industry's revenues: TRAI," indiantelevision.com, April 2, 2015. http://www.indiantelevision.com/regulators/trai/subscription-is-biggest-contributor-to-tv-industry-revenues-trai-150402, accessed June 14, 2019.

Indiantelevision.com team, "Cable TV DAS and the headend factor," indiantelevision.com, November 5, 2013. http://www.indiantelevision.com/digital/y2k13/nov/novdig06.php, accessed June 14, 2019.

Indiantelevision.com team, "TV industry gives mixed reaction to MIB's DAS III & IV extension," December 26, 2016. http://www.indiantelevision.com/regulators/ib-ministry/tv-industry-gives-mixed-reaction-to-mibs-das-iii-iv-extension-161226, accessed June 15, 2019.

Indiantelevision.com team, "DAS: Andhra seeks extension even as MIB warns," indiantelevision.com, March 31, 2017. http://www.indiantelevision.com/cable-tv/das/das-andhra-seeks-extension-even-as-mib-warns-170331, accessed June 15, 2019.

Indiantelevision.com team, "Including Arasu, total number of MSOs goes up to 1376, to ensure DAS implementation," indiantelevision.com, April 24, 2017. http://www.indiantelevision.com/cable-tv/multi-system-operators/including-arasu-total-number-of-msos-goes-up-to-1376-to-ensure-das-implementation-170424, accessed June 15, 2019.

Jackson, Steven J. "Rethinking repair." In *Media Technologies: Essays on Communication, Materiality and Society,* edited by Tarleton Gillespie, Pablo J. Boczkowski, and Kirsten A. Foot, p. 221-241. Cambridge, MA: MIT Press, 2014.

Jackson, Steven J, Syed Ishtiaque Ahmed and Md. Rashidujjaman Rifat, "Learning, Innovation, and Sustainability among Mobile Phone Repairers in Dhaka, Bangladesh," In *Proceedings of the 2014 Conference on Designing Interactive Systems (DIS '14).* New York, ACM: 904-14. DOI: 0.1145/2598510.2598576.

Jaisankar, C. "Private multi-system cable operators make a come back," *The Hindu*, October 27, 2017. https://www.thehindu.com/news/cities/chennai/private-multi-system-cable-operators-make-a-come-back/article19927655.ece, accessed June 15, 2019.

Jayakar, Krishna. "The Conditional Access System: The Dynamics of A La Carte Pricing for Cable Television in India," *International Journal of Communication* 5, p.1502-22. https://ijoc.org/index.php/ijoc/article/view/1127/625

Jebaraj, Priscilla. "What's in it for us, ask consumers," *The Hindu*, September 9, 2012. https://www.thehindu.com/news/national/whats-in-it-for-us-ask-consumers/article3875066.ece, accessed June 14, 2019.

Jeffrey, Robin. "Telugu: Ingredients of Growth and Failure," *Economic and Political Weekly* 32, no.5 (Feb 1-7, 1997): 192-95. http://www.jstor.org/stable/4405039.

Jeffrey, Robin. "The Mahatma didn't like the movies and why it matters: Indian broadcasting policy, 1920s-1990s," *Global Media and Communication* 2, iss. 2 (2006): 204-224. DOI: 10.1177/1742766506066281

Jenkins, Henry. *Convergence Culture: Where Old and New Media Collide.* New York: NYU Press, 2006.

Jones, Nathalia. "CAS confounds Chennai," *The Hindu Business Line*, September 8, 2003, https://www.thehindubusinessline.com/life/2003/09/08/stories/2003090800070100.htm, accessed April 28, 2019.

Joseph, K.J. "Growth Performance of Indian Electronics under Liberalisation," *Economic and Political Weekly* 24, no.33 (August 19, 1988): 1915-920. https://www.jstor.org/stable/4395237.

Kapoor, Mudit, Antoinette Schoar, Preethi Rao and Sharon Buteau. "Chit Funds as an Innovative Access to Finance for Low-Income Households," *Review of Market Integration* 3, iss. 3 (2011): 287-333. DOI: 10.1177/097492921100300305.

Karanjia, B.K. "Editor's column," *Screen,* January 24, 1986.

Kellner, Douglas and Harry O' Hara. "Utopia and Marxism in Ernst Bloch," *New German Critique* no.9 (Autumn 1976): 11-34. https://www.jstor.org/stable/487686

Kohli, Atul. "Policies of Economic Growth in India, 1980-2005: Part 1, the 1980s," *Economic and Political Weekly* 41, no.13 (April 1-7, 2006): 1251-259. https://www.jstor.org/stable/4418028.

Kotian, Ashwin. "`Coda will become the single most powerful national association of cable operators in the country': Anil Parab, Cable Operators and Distributors Association president," indiantelevision.com, September 9, 2003, http://www.indiantelevision.com/interviews/y2k3/executive/anilparab.htm, accessed April 25, 2019.

Kraidy, Marwan M. *Hybridity, or the cultural logic of globalization.* Philadelphia: Temple University Press, 2005.

Kumar, Shanti. "Mapping Tollywood: The Cultural Geography of 'Ramoji Film City' in Hyderabad," *Quarterly Review of Film and Video* 23, iss. 2 (2006): 129-38. DOI: 10.1080/10509200590490628.

Kumar, Shanti. *Gandhi Meets Primetime: Globalization and Nationalism in Indian Television.* Urbana: University of Illinois Press, 2006.

Kumar, Shanti. "Know Your Audience: The Quest for Digitally-Addressable Systems in India," *FLOW*, August 14, 2012, http:www.flowjournal.org/2012/08/know-your-audience, accessed June 15, 2019.

Larkin, Brian. *Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria.* Durham: Duke University Press, 2008.

Lefebvre, Henri. *Critique of Everyday Life, Volume I: Introduction.* New York: Verso, 2008. New York: Verso, 1991. References are to the 2008 edition.

Levine, Amy. "The Transparent Case of Virtuality," *PoLAR: Political and Legal Anthropology Review* 27, no.1 (May 2004): 90-113. DOI: 10.1525/pol.2004.27.1.90

Lindtner, Silvia, and Seyram Avle. "Tinkering with Governance: Technopolitics and the Economization of Citizenship," *Proceedings of the ACM on Human-Computer Interaction* 1, iss. CSCW (November 2017): 70.1-70.18. DOI: 10.1145/3134705

Lutgendorf, Philip. "Ramayan: The Video," *TDR (1988-)* 34, no.2 (1990): 127-76. DOI: 10.2307/1146030.

M.S.M, "Industry in the doldrums," *Screen*, May 9, 1986.

Majumdar, Abhijit. "After Thackeray threat, CAS finds voice again," *Times of India*, June 11, 2003. https://timesofindia.indiatimes.com/city/mumbai/After-Thackeray-threat-CAS-finds-voice-again/articleshow/16410.cms, accessed April 21, 2019.

Mankekar, Purnima. *Screening Culture, Viewing Politics: An Ethnography of Television, Womanhood, and Nation in Postcolonial India.* Durham: Duke University Press, 1999.

Marcuse, Herbert. "The reification of the proletariat," *Canadian Journal of Political and Social Theory* 3, no.1 (Winter 1979): 20-23. http://journals.uvic.ca/index.php/ctheory/article/viewFile/13785/4552, accessed June 20, 2019.

Maringanti, Anant. "Sovereign State and Mobile Subjects: Politics of the UIDAI," *Economic and Political Weekly* 44, no.46 (November 14-20, 2009), p. https://www.jstor.org/stable/25663788, accessed June 16, 2019.

Marx, Leo. *The Machine in the Garden: Technology and the Pastoral Ideal in America.* New York: Oxford University Press, 1964. Reprint, New York: Oxford University Press, 2000.

Mayer, Vicki. *Below the Line: Producers and Production Studies in the New Television Economy.* Durham: Duke University Press, 2011.

Mazzarella, William. "'Reality must improve': The perversity of expertise and the belatedness of Indian development television," *Global Media and Communication* 8, iss. 3 (2012): 215-241. DOI: 10.1177/1742766512459120

Mazzarella, William. "Beautiful balloon: The digital divide and the charisma of new media in India," *American Ethnologist* 37, no.4 (November 2010): 783-804. DOI: 10.1111/j.1548-1425.2010.01285.x

McCarthy, Anna. *Ambient Television: Visual Culture and Public Space.* Durham: Duke University Press, 2003.

McDowell, Stephen D. "Globalization and policy choice: television and audiovisual services polices in India," *Media, Culture and Society* 19, iss. 2 (197): 151-72. DOI: 10.1177/016344397019002002.

McMillin, Divya C. "Localizing the global: Television and hybrid programming in India," *International Journal of Cultural Studies* 4, no.1 (2001): 45-68. DOI: 10.1177/136787790100400103.

Mehta, Nalin. "Ravana's airforce: a report on the state of Indian television," *South Asian History and Culture* 3, iss. 4 (2012): 614-25. DOI: 10.1080/19472498.2012.720089.

Ministry of Electronics and Information Technology, "Vision Areas of Digital India," https://digitalindia.gov.in/content/vision-and-vision-areas#, accessed June 15, 2019.

Ministry of Information and Broadcasting, "Frequently Asked Questions on CAS," https://www.mib.gov.in/frequently-asked-questions-cas#bq1, accessed March 28, 2019.

Ministry of Information and Broadcasting, "Guidelines for Obtaining License for Providing Direct-to-Home (DTH) Broadcasting Service in India," March 15, 2001. http://mib.gov.in/sites/default/files/GuidelinesforDTHServiceDated15.3.2001.pdf, accessed May 17, 2019.

Ministry of Information and Broadcasting, *An Indian Personality for Television, Volume I, Report of the Working Group on Software for Doordarshan.* New Delhi: Publications Division, 1985.

Ministry of Information and Broadcasting, "Modification in Switchover Date to Digital Cable TV System," June 20.2012. https://cablequest.org/pdfs/das/modification_in_Switchover_DAS_20-06-12.pdf, accessed, June 14, 2019.

Mishra, Samina. "Dish is Life: Cable Operators and the Neighborhood." In *Image Journeys: Audio-Visual Media and Cultural Change in India*, edited by Christiane Brosius and Melissa Butcher. New Delhi: Sage Publications, 1999, p. 261-278.

Mitchell, Timothy. *Rule of Experts: Egypt, Techno-politics, Modernity.* Berkeley: University of California Press, 2002.

Morley, David. *Family Television: Cultural Power and Domestic Leisure.* New York: Comedia, 1986.

Morrison, Kathleen D. "Dharmic projects, imperial reservoirs, and new temples of India: An historical perspective on dams in India," *Conservation and Society* 8, iss.3 (2010): 182-195.

Mrázek, Rudolf. "Bypasses and flyovers: approaching the metropolitan history of Indonesia," *Social History* 29, no.4 (2004): 425-443. DOI:10.1080/030710204200029893.

Mrázek, Rudolf. *Engineers of Happy Land: Technology and Nationalism in a Colony.* Princeton: Princeton University Press, 2002.

Nagpal, B. "Political, bureaucratic wrangles likely roadblocks for the new I&B secretary," indiantelevision.com, May 2, 2016. http://www.indiantelevision.com/regulators/i-and-b-ministry/political-bureaucratic-wrangles-likely-road-blocks-for-the-new-ib-secretary-160502, accessed June 15, 2019.

Narayanan, Bhargavi. "Piratical Encounters: The Pirate and Mass Mobilization in the Popular Tamil Imagination," *SubVersions: A Journal of Emerging Research in Media and Cultural Studies* 4, iss. 1 (2016): 1-14. http://subversions.tiss.edu/wp-content/uploads/2018/05/SubVersions_Vol4_Issue1_2016.pdf#page=4, accessed June 21, 2019.

Naregal, Veena. "Cable communications in Mumbai: Integrating corporate interests with local and media networks," *Contemporary South Asia* 9, no.3: 289-314. DOI: 10.1080/713658750.

Naregal, Veena. "Media reform and regulation since liberalization," *Economic and Political Weekly*, May 27, 2000, p.1817-20. https://www.jstor.org/stable/4409321.

Nazki, Bilal. Judgment in "Ushakiran Movies vs State of Andhra Pradesh," Andhra High Court, June 30, 2006. https://indiankanoon.org/doc/108224/, accessed April 30, 2019.

Neves, Joshua and Bhaskar Sarkar. "Introduction." In *Asian Video Cultures: In the Penumbra of the Global*, edited by Joshua Neves and Bhaskar Sarkar, p. 1-32. Durham: Duke University Press, 2017.

Ninan, Sevanti. "History of Indian Broadcasting Reform," *Cardozo Journal of International and Comparative Law* 5, no.2 (Fall 1997): 341-64.

Ninan, Sevanti. *Through the Magic Window: Television and Change in India.* New Delhi: Penguin Books, 1995.

Nye, David E. *American Technological Sublime.* Cambridge: MIT Press, 1994.

Oremus, Will. "Who Controls Your Facebook Feed," *Slate.com*, January 3, 2016, http://www.slate.com/articles/technology/cover_story/2016/01/how_facebook_s_news_feed_algorithm_works.html, accessed April 5, 2019.

Orr, Julian E. *Talking About Machines: An Ethnography of a Modern Job.* Ithaca: ILR Press, 1996.

Packard, Vance. *The Waste Makers.* Reprinted with introduction by Bill McKibben. New York: Ig Publishing, 2011. New York: David McKay Company, 1960. References are to the 1960 edition.

Pant, Manoj. "CAS: A needless controversy," *Economic Times*, January 23, 2004. https://economictimes.indiatimes.com/cas-a-needless-controversy/articleshow/439977.htm, accessed April 2, 2019.

Parks, Lisa. "'Stuff You can Kick': Toward a Theory of Media Infrastructures." In *Between Humanities and the Digital,* edited by Patrik Svensson and David Theo Goldberg. Cambridge: MIT Press, 2015, p.355-373.

Parks, Lisa. "Cracking Open the Set: Television Repair and Tinkering with Gender 1949-1955,'' *Television and New Media* 1, no.3 (August 2000): 257-278.

Parry, Jonathan P. "Nehru's Dream and the Village 'Waiting Room': Long-distance labour migrants to a central Indian steel town," *Contributions to Indian Sociology* 37, iss. 1-2 (2003): 217-249. DOI: 10.1177/006996670303700110.

Parthasarathi, Vibodh, Alam Srinivas, Archna Shukla et al., "Mapping Digital Media, India," New York: Open Society Foundations, December 15, 2012. https://www.opensocietyfoundations.org/publications/mapping-digital-media-india, accessed May 17, 2019.

Parthasarathi, Vibodh. "Between Strategic Intent and Considered Silence: Regulatory Contours of the TV Business." In *The Indian Media Economy, Volume I: Industrial Dynamics and Cultural Adaptation,* edited by Adrian Athique, Vibodh Parthasarathi and S.V. Srinivas. New Delhi: Oxford University Press, 2018, p.144-165.

Parthsarathi, Vibodh, and Alam Srinivas. "Problematic Ownership Patterns: The Evolution of the Television Distribution Networks in India," *Economic and Political Weekly* 54, no.12 (March 23, 2019), https://www.epw.in/engage/article/television-networks-political-ownership-patterns, accessed June 15, 2019.

Patnaik, Santosh. "Fiber Grid will lead to digital empowerment, says Naidu," *The Hindu,* March 18, 2016. https://www.thehindu.com/news/national/telangana/fiber-grid-will-lead-to-digital-empowerment-says-naidu/article8368289.ece, accessed May 4, 2019.

Pendakur, Manjunath. "A Political Economy of Television: State, Class, and Corporate Confluence in India." In *Transnational Communications: Wiring the Third World*, edited by Gerald Sussman and John A. Lent, 234-263. Newbury Park: SAGE Publications, 1991.

Peters, John Durham. *The marvelous clouds: toward a philosophy of elemental media.* Chicago: University of Chicago Press, 2015.

Porter, Theodore M. *Trust in numbers: The pursuit of objectivity in science and public life.* Princeton: Princeton University Press, 1995.

PTI, "Telecom ministry grants ISP license to Tamil Nadu," *The Economic Times*, October 2, 2015. https://economictimes.indiatimes.com/industry/telecom/telecom-ministry-grants-isp-license-to-tamil-nadu/articleshow/49194037.cms, accessed June 15, 2019.

Press Information Bureau, "I & B Ministry revises timeline for Phase III & Phase IV of Cable TV Digitization," December 23, 2016. http://pib.nic.in/newsite/PrintRelease.aspx?relid=155768, accessed June 15, 2019.

Press Trust of India, "AP CM launches Fiber Grid project for net connectivity," *Business Standard*, March 18, 2019. https://www.business-standard.com/article/pti-stories/ap-cm-launches-fiber-grid-project-for-net-connectivity-116031800028_1.html, accessed June 16, 2019.

Punathambekar, Aswin and Pavitra Sundar. "The Time of Television: Broadcasting, Daily Life, and the New Indian Middle Class," *Communication, Culture and Critique* 10, iss. 3 (Sept. 2017): 401-421. DOI: 10.1111/cccr.12164

Punathambekar, Aswin. "Ameen Sayani and Radio Ceylon: Notes toward a History of Broadcasting and Bombay Cinema," *BioScope: South Asian Screen Studies* 1, iss. 2 (2010): 189-97. DOI: 10.1177/097492761000100208

Punathambekar, Aswin. *From Bombay to Bollywood: The Making of a Global Media Industry.* New York: NYU Press, 2013.

Radhakrishnan, Ratheesh. "The `Worlds' of the Region," *positions: east asia cultures critique* 24, no.3 (August 2016): 693-719. DOI: 10.1215/10679847-3618240.

Radhakrishnan, Smitha. *Appropriately Indian: Gender and Culture in a New Transnational Class.* Durham: Duke University Press, 2011.

Radjou, Navi, Jaideep Prabhu and Simone Ahuja. *Jugaad Innovation: Think Frugal, Be Flexible, Generate Breakthrough Growth.* New York: Jossey-Bass, 2012.

Rajagopal, Arvind. *Politics after Television: Hindu Nationalism and the Reshaping of the Public in India.* New York: Cambridge University Press, 2001.

Ranganathan, Maya. "Television Politics: Evolution of Sun TV in the South." In *Indian New Media: From Observer to Participant,* edited by Usha M. Rodrigues and Maya Ranganathan, p. 34-64.

Rao, B.S.S. and B.V. Sharma, "INSAT Experiences: Candid Scenes from Andhra Pradesh." In *SITE to INSAT: Challenges of Production and Research for Women and Children,* edited by Binod C. Agrawal and Arbind K. Sinha.

Rao, G.V.R Subba, "State to provide internet, phone and TV at just Rs. 150," *The Hindu*, March 15, 2016. https://www.thehindu.com/news/cities/Vijayawada/state-plans-to-provide-internet phone-and-tv-at-just-rs-150/article8353879.ece, accessed May 4, 2019.

Rao, Relangi Narasimha, dir. *Police bharya.* 1990: Hyderabad, Sri Anupama Productions. https://youtu.be/4nQr5AKKNow, accessed June 21, 2019.

Rao, Y.V. Lakshmana. *Communication and Development: A Study of Two Indian Villages.* Minneapolis: University of Minnesota Press, 1966.

Roohi, Sanam. "Transnational citizens as `development partners' in Coastal Andhra." In *Provincial Globalization in India: Transregional Mobilities and Development Politics*, edited by Carol Upadhya, Mario Rutten and Leah Koskimaki. New York: Routledge, 2018.

Roy, Abhijit. "Bringing up TV: Popular culture and the developmental modern in India," *South Asian Popular Culture* 6, no.1 (2008): 29-43.

Roy, Abhijit. "The Apparatus and its Constituencies: On India's Encounters with Television," *Journal of the Moving Image* 4 (2005). http://www.jmionline.org/articles/2005/the_apparatus_and_its_constituencies_on_indias_encounter_with_television.pdf, accessed June 21, 2019.

Roy, Sandip. "Mamata's cable war: Protecting *aam aadmi* or encouraging theft?" *Firstpost*, October 31, 2012. https://www.firstpost.com/politics/mamatas-cable-war-protecting-aam-aadmi-or-encouraging-theft-509344.html, accessed June 14, 2019.

Sameeran, M.R. "Video parlours rampant in AP, TN," *Screen* November 11, 1983.

Sarkar, Bhaskar. "Plasticity and the Global," *Framework: The Journal of Cinema and Media* 56, no.2 (Fall 2015): 451-71. DOI: 10.13110/framework.56.2.0451.

Sathe, Gopal. "How Andhra Pradesh Built India's First Police State Using Aadhaar and a Census," *HuffPost India*, July 23, 2018. https://www.huffingtonpost.in/2018/07/23/how-andhra-pradesh-built-indias-first-police-state-using-aadhaar-and-a-census_a_23487838/, accessed June 16, 2019.

Scannell, Paddy. "For-anyone-as-someone structures." *Media, Culture and Society* 22, vol. 1 (2000): 5-24.

Scannell, Paddy. *Television and the meaning of 'live': an enquiry into the human situation.* Malden, MA: Polity Press, 2014.

Screen, August 19, 1983.

Screen, August 3, 1984.

Screen, October 3, 1987.

Sheikh, Amina, and S. Bridget Leena. "TV blackout for those who failed to make the switch in Delhi, Mumbai," *Livemint,* November 2, 2012. https://www.livemint.com/Politics/nMLjRX4dVX2YbDkS3QPMM/TV-blackout-for-those-who-failed-to-make-the-switch-in-Delh.html, accessed June 14, 2019.

Silverstone, Roger. *Television And Everyday Life*. London: Routledge, 1994.

Simone, AbdouMaliq. "People as Infrastructure: Intersecting Fragments in Johannesburg," *Public Culture* 16, no.3 (Fall 2004): 407-29. https://muse.jhu.edu/article/173743.

Singhal, Arvind, and Everett M. Rogers. *India's Information Revolution.* Newbury Park: SAGE Publications, 1989.

Singhal, Arvind, J.K. Doshi, Everett M. Rogers and S. Adnan Rahman. "The Diffusion of Television in India," *Media Asia* 15, iss. 4 (1988): 222-29. DOI: 10.1080/01296612.1988.11726293.

Sinha, Nikhil. "Doordarshan, Public Service Broadcasting, and the Impact of Globalization: A Short History," *Cardozo Journal of International and Comparative Law* 5, no.2 (Fall 1997): 365-387.

Slade, Giles. *Made to Break: Technology and Obsolescence in America.* Cambridge, MA: Harvard University Press, 2006.

Spigel, Lynn. *Make room for TV: Television and the family ideal in postwar America*. Chicago: University of Chicago Press, 1992.

Special Correspondent, "Two lakh to get fiber grid connection by month-end," *The Hindu*, December 16, 2017. https://www.thehindu.com/news/cities/Visakhapatnam/fiber-grid-connection-naidu-households-channels/article21823866.ece, accessed June 15, 2019.

Sridharan, Eswaran. *The Political Economy of Industrial Promotion: Indian, Brazilian and Korean Electronics in Comparative Perspective 1969-1994.* Westport, CT: Praeger Publishers, 1996.

Srinivas, Lakshmi. *House Full: Indian Cinema and the Active Audience.* Chicago: University of Chicago Press, 2016.

Srinivas, S.V. "Gandhian Nationalism and Melodrama in the 30's Telugu Cinema," *Journal of the Moving Image* 1, iss. 1 (1999).

http://jmionline.org/articles/1999/gandhian_nationalism_and_melodrama_in_the_30s_telugu_cinema.pdf, accessed June 21, 2019.

Srinivas, S.V. "Hong Kong action film in the Indian B circuit," *Inter-Asia Cultural Studies* 4, iss. 1 (2003): 40-62. DOI: 10.1080/1464937032000060203.

Srinivas, S.V. "Making a Peasant Industry: Telugu Cinema in the 1930s-1950s," *BioScope: South Asian Screen Studies* 1, no.2 (2010): 169-188. DOI:

Srinivas, S.V. *Politics as Performance: A Social History of the Telugu Cinema.* New Delhi: Permanent Black, 2013.

Srinivasulu, K. "Caste, Class and Social Articulation in Andhra Pradesh: Mapping Differential Regional Trajectories," Working Paper 179, Overseas Development Institute, London, UK, September 2002. https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/2692.pdf, accessed June 21, 2019.

Star, Susan Leigh. "The Ethnography of Infrastructure," *American Behavioral Scientist* 43, iss. 3 (1999): 377-391. DOI: 10.1177/F00027649921955326

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

Subbarao, Buddhi Kota. "Set top boxes, pay channels and free channels," *The Hindu*, June 17, 2003 https://www.thehindu.com/thehindu/op/2003/06/17/stories/2003061700050200.htm, accessed April 30, 2019.

Telecom Regulatory Authority of India, "Consultation Paper No. 9/2004: Consultation paper on Issues relating to Broadcasting and Distribution of TV Channels," April 20, 2004. https://main.trai.gov.in/sites/default/files/Consultation%20Paper%20-20th%20april%202004.pdf.

Telecom Regulatory Authority of India, "Consultation Paper on Digitalisation of Cable Television," January 3, 2005, https://main.trai.gov.in/sites/default/files/consulpaper3jan05.pdf, accessed April 30, 2019.

Telecom Regulatory Authority of India, "Recommendations of Restructuring Cable TV Services," July 25, 2008, https://main.trai.gov.in/sites/default/files/recom25july08.pdf, accessed May 11, 2019.

Telecom Regulatory Authority of India, "Recommendations on Digitalisation of Cable Television," September 14, 2005, https://main.trai.gov.in/sites/default/files/Recom14sept05.pdf, accessed May 11, 2019.

Telecom Regulatory Authority of India, "Recommendations on Implementation of Digital Addressable Cable TV Systems in India," August 5, 2010, https://main.trai.gov.in/sites/default/files/finalreom5agust.pdf, accessed May 21, 2019.

Telecom Regulatory Authority of India, "Recommendations on Issues relating to entry of certain entities into Broadcasting and Distribution Services," November 12, 2008. https://main.trai.gov.in/sites/default/files/Recom12nov08.pdf, accessed June 15, 2019.

Thakurta, Paranjoy Guha. "CAS: The fading picture," *The Hindu Business Line*, January 6, 2004.

TNN, "CAS will burden ordinary citizens, says Thackeray," *Times of India*, June 7, 2003. https://timesofindia.indiatimes.com/city/mumbai/CAS-will-burden-ordinary-citizens-says-Thackeray/articleshow/10222.cms, accessed April 21, 2019.

TNN, "Mamata threatens stir against digital cable switch," *Times of India,* October 30, 2012. https://timesofindia.indiatimes.com/india/Mamata-threatens-stir-against-digital-cable-switch/articleshow/17026628.cms, accessed June 14, 2019.

TNN News Service, "Arasu gets digital license," *The New Indian Express*, April 19, 2017. https://www.newindianexpress.com/states/tamil-nadu/2017/apr/19/arasu-gets-digital-license-1595267.html, accessed June 15, 2019.

TV & Video World 2, no.1 (December 1984). Bombay: Minhaz Merchant.

TV & Video World 2, no.12 (November 1985). Bombay: Minhaz Merchant.

TV & Video World, 3, no. 1 (December 1985). Bombay: Minhaz Merchant.

TV & Video World, 4, no.2 (January 1986). Bombay: Minhaz Merchant.

TVP Bureau, "Analogue signals still on in Hyderabad," televisionpost.com, February 20, 2017. https://www.televisionpost.com/analogue-signals-still-on-in-hyderabad/, accessed June 15, 2019.

Upadhya, Carol. "Amaravati and the New Andhra: Reterritorialization of a Region," *Journal of South Asian Development* 12, iss. 2 (2017): 177-202. DOI: 10.1177/0973174117712324.

Uricchio, William. "Television, film and the struggle for media identity," *Film History* 10, iss. 2 (1998): 118-27. http://www.jstor.org/stable/3815277.

van Wessel, Margit. "Talking about Consumption: How an Indian middle class disassociates from middle-class life," *Cultural Dynamics* 16, iss. 1 (2004): 93-116. DOI: 10.1177/0921374004042752

Venkatesan, V. "CAS is King. The Consumer Rules," *Outlook*, June 20, 2003, https://www.outlookindia.com/website/story/cas-is-king-the-consumer-rules/220473, accessed April 29, 2019.

Verma, V. "Regularise video shows: Exhibitors' plea," *Screen*, November 11, 1983.

Verma, V. "Theatrical earnings up in spite of video boom; industry's fears belied," *Screen* November 23, 1984.

von Schnitzler, Antina. *Democracy's Infrastructure: Techno-Politics and Protest after Apartheid.* Princeton: Princeton University, Press, 2017.

Wacjman, Judy. "Patriarchy, Technology, and Conceptions of Skill," *Work and Occupations* 18, no.1 (1991): 29-45. DOI: 10.1177/0730888491018001002

Waldman, Amy. "In Huge Upset, Gandhi's Party Wins Election in India," *The New York Times,* May 13, 2004. https://www.nytimes.com/2004/05/13/international/asia/in-huge-upset-gandhis-party-wins-election-in-india.html, accessed April 28, 2019.

Wasser, Frederick. *Veni, Vidi, Video: The Hollywood Empire and the VCR.* Austen: University of Texas Press, 2001.

Watkins, Evan. *Throwaways: Work Culture and Consumer Education.* Stanford, CA: Stanford University Press, 1993.

Williams, Raymond. *Television: Technology and Cultural Form.* London: Routledge Classics, 2002. First published 1975 by Schocken Books (New York).

Xiang, Biao. *Global "Body Shopping": An Indian Labor System in the Information Technology Industry.* Princeton: Princeton University Press, 2007.

Yanagisako, Sylvia Junko. *Producing Culture and Capital: Family Firms in Italy.* Princeton: Princeton University Press, 2002.

Zee News, "CAS Day 1: Chennai watches Chinese TV: The Pioneer," September, 8, 2003, https://zeenews.india.com/home/cas-day-1-chennai-watches-chinese-tv-the-pioneer_119374.html, accessed April 22, 2019.