

# Of mouse and men: Computers and geeks as cinematic icons in the age of ICTD

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## ABSTRACT

Since the early 2000s, Information and Communications Technology for Development (ICTD) has rapidly gained attention as an emerging area of scholarship as information schools increasingly diversify their interests into issues of socio-technical systems and technology adoption issues in the developing world. Research in ICTD while vibrant, has been largely restricted to issues around the use of information technologies towards a range of activities including eGovernance, computer-based learning, agricultural information systems. In this article, we turn to the under-researched discourse of technology in the developing world to probing at the rather heretical questions of why people living in various forms of deprivation find hope for economic and social development in technology. Our starting point in this research is the outcomes of 196 interviews among rural Indians with no primary experience with technology, but a great deal of enthusiasm about using or training their children to use computers. We found that this enthusiasm about technology was primarily based on secondary sources of information, a large part of which was cinematic representation of computers and computer users in local movies. Investigating this in popular Indian film, we find a visible positive and highly aspirational discourse of technology both in the representation of technology users and the artifacts themselves, such as laptops or the internet, a trend particularly evident on comparison with western cinema. To discuss the issue of intentionality in this trend, we interview leading filmmakers in India and find that unconscious absorption of social aspiration into the scripting, and significant intent into the use of computers and computer users as symbols of modernity that filmmakers feel Indian audiences respond positively to. We propose that the use of India as a case for broader examination is important on two levels. First, regionally, India is a 'leader' in the ICTD movement both because of the symbolic value of its software sector despite the co-existing underdevelopment and also because it is home to a range of ICT-based initiatives aimed at bringing about developmental outcomes. Secondly, from the perspective of the future of ICTD within information studies, the role of media, especially popular film, in the construction of knowledge about technology is an important and under-researched area that this article seeks to take forth.

## Keywords

ICTD, India, Cinema

## 1. INTRODUCTION

Much recent scholarship has examined the optimistic discourse of technology as means of social inclusion throughout several parts of the developing world. Images of children in impoverished surroundings tapping away in front of flatscreen monitors or holding up spiffy laptops have adorned television screens, billboards, and academic journals alike, as a vast number of technology companies, international agencies, governments and non-profits have invested in products or programs meant to provide technology to play a role in easing communication, learning, capacity-building or administrative barriers to development. US-based information schools have played an important leadership role, both on the technology and social science scholarship around 'Information and Communications Technology and Development (ICTD).<sup>1</sup> The involvement of multiple stakeholders and rapid rate of increase in both programs and projects in this space has meant that scholarly focus on ICTD issues has mostly been restricted to issues of design, technology adoption, and project evaluation to understand impacts. In the process, there has been little assessment of the evolving discourse of technology in this regard, especially in light the relatively unimpressive record in achieving developmental goals, for many of the programs implemented in this space.

This work emerged as a by-product of work in four districts of rural south India, where researchers interviewed 196 residents to document ideas about technology among people with no experience using computers. Results showed a role played by secondary information sources such as mass media in helping build what had come to be a strong positive view of technology and its possibilities in discussions of the rural residents speaking of their own futures. Discussions revealed that the trusted institutional channels of information on technology were popular media and electoral speeches, both of which we thereafter found taking broadly optimistic positions on technology and its value in society.

In this study, we focus primarily the portrayal of computers and computer users in Indian movies. Building on past scholarship in technology and development, cinematic portrayals, and the role of icons in aspiration, we argue using films since the 2000s that popular cinema is an important reflection of the prevalent discourse of technology in India. There are three trends we outline – first the artifact of the computer itself and its portrayal as symbolizing power. Second, we record a high number of screen

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<sup>1</sup> Other acronyms including ICT4D, ITD etc.

protagonists playing technologists, and find that the portrayal of their occupation is generally very positive and aspirational. Finally, we find that this trend in popular cinema is much more concentrated in south India. We frame these findings through issues of gender, class, and geography within the recent history of the development discourse in India.

Finally, while the centrality of popular cinema in building national discourses of aspiration is possibly unique in several aspects to nature of media consumption in India, we argue that conceptions of development both as defined by a society for oneself as well as for an “other” are deeply influenced by reflections of aspiration in popular media.

## 2. RELATED WORK

We are concerned in this article with the construction of the identity of computer users and of artifacts such as the computer and the internet in popular Indian cinema, and how this in turn is a reflection of aspiration in the information age. Identifying popular cinema as a mode of institutional information, we situate this work as contributing to recent work in film theory both broadly within the sphere of nationhood and aspiration [1-3]. In our discussion of technology and development, we are interested in issues of identity in transition, thus past work on identity on celluloid post-fascism and dictatorship in Germany [4], Spain [5], Latin America [6] as well as on issues of identity within a globalizing context, thus work on transnational Chinese identity [7] or value negotiation on issues of religion of “African-ness” in Ghanaian or Nigerian video films [8, 9]. We draw on a rich body of work on Indian popular cinema oriented both more broadly on issues of national identity [10] and more specifically on cultural change [11, 12].<sup>2</sup>

Issues of new media have been enthusiastically embraced in Information Studies, including those of representation and identity online [13, 14]. On issues of development, there has been work on the creation of online identities of Diaspora communities of Filipinos [15] Chinese [16] and Nigerians [17], for instance, or on issues of self-representation in Sub-Saharan Africa [18]. The negotiation and careful crafting of online identity and networks has also been studied with regard to groups such the Zapatistas [19] and West African online-scamsters [20]. However, an important exception of this work has been the lack of significant interest in the impact of the virtual identity on individual aspiration, an area we delve into in this paper. Interestingly, while iSchools have enthusiastically taken on the realm of identity and aspiration in an environment of greater connectedness within the new media space, there has been little attention to the construction of aspiration through existing popular media portrayals in the information age.

Finally, we draw from a growing literature on ICTD in information studies, engineering, and in development studies. ICTD is arguably rooted in work on the evolving nature of economic and social power relations based on networks [21, 22], and more broadly on an emergent ‘information society’ [23-25], all of which point to a reconfiguration of economic and social

relations across classes and between nation-states in this era. ICTD has been examined from the perspective of social inclusion [26], stakeholder theory [27] and the technology artifacts [28] themselves. Particularly relevant to the direction we seek has been literature in this space on identity formation and articulation [29-31], transnationalism [32, 33], and gender studies [34, 35].

## 3. METHODOLOGY

We reviewed 91 films, of which 47 films are specifically Indian films from the 1990s and 2000s which depict computer users or artifacts in some form. These films are largely in the Tamil and Telugu languages, for reasons we discuss later. A textual analysis of the films helps us make broad generalizations about underlying meaning of the films, but leave unanswered the question of intentionality in the narrative. To explore this, we spent time in the film industry discussing the ideas emergent in this article and interviewed 5 people from the Tamil and Telugu film industry whose work is discussed here, these include 4 directors and 1 distributor: Rajiv Menon, Suhasini Mani Ratnam, Siva Anantasubramanian, Siddharth, and Dr. Srinivasan from Abirami Films, the largest distribution house in South India. Each of the professionals interviewed in this sample are associated with what are referred to as A-list films, typically very large budget popular films. Given the difficulty of access to these filmmakers and the expense involved in identifying makers of these films and interviewing them, we were able to conduct only 5 interviews, which are primarily used to reflect on the central themes identified in the analysis of the films.

## 4. DISCUSSION

Ideas of technology and society have dated back over a century to the fanciful silent short film *Trip to the Moon* [36], and the representation of technology in cinema has straddled the line between science fiction, and what may be, and technology and social readjustment. The latter, especially the idea of technology as transformative, came to centerstage in the 1920s and 30s, around the period and often theme of rapid industrialization. Scholars have been interested in two important and fairly consistent themes along technology and society in cinema – the first, the dystopian ideas of technology and urban living – either in the present or future as seen in Fritz Lang’s futuristic epic *Metropolis* set in a fractured 21<sup>st</sup> century or Charles Chaplin’s *Modern Times* [37], set in a dehumanized 20<sup>th</sup> century factory floor. These ideas of technology as mystical, all pervasive, and potentially at odds with humanity have been a consistent theme of cinema and literature throughout the decades of vast technological change around the world [38, 39]. A second early theme had a more proactive view of technology, primarily industrial production, and bears its origins in the early Soviet cinema highlighting technology as a nationalist enterprise. This theme, often attributed to Lenin’s view of cinema as a means of social and economic propaganda [40] was later emulated several other nationalist cinematic traditions around the world, where cinema has been seen as both a symbol of and a simultaneous propagandist tool of modernity [41]. Broadly under this umbrella have been the two related themes – the first was that of a struggle between traditionalism and modernism, one seen several ‘third world’ cinemas [42, 43], and second was of the use of technology (especially big industry) in nation-building, which India in

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<sup>2</sup> An area of recent growth has been in activist cinema, which appeals to widespread audience, such as Abderrahmane Sissako’s *Bamako* (2006), in addition to copious documentary cinema on the subject.

particular, saw a fair share of in the post-colonial years [44].

The first films to feature computers were science newsreels in the immediate postwar period [45]. The rising popularity of television in the US spurred the appearance of computers on the small screen, starting with the 1962 sci-fi show *The Jetsons* [46], in scattered episodes of the spy caper serial *The Avengers* [47], and finally in 1966 with the hugely popular sci-fi series *Star Trek* [48]. The transposition of the Martian-equivalent unknown to the fantastic machine was an automatic next theme in the dystopian imagination of computers guided by the popular conceptions of artificial intelligence – as typified by the man v/s machine face-off in *2001: A Space Odyssey* [49]. Computers in general remained restricted to the mad-scientist or spy caper space, thus reducing their meaning in the “everyday” context [50, 51]. The idea of a typical workplace scenario invaded by computers remained a relatively low-impact area, with the rare exception of films like the ‘library sciences classic’ *Desk Set* [52] in which Katherine Hepburn plays a librarian who risks being rendered jobless by a computer. The individual human intermediary of computers on screen remained by and large the socially-awkward scientist. It wasn’t until the late 1970s and early 1980s, when the use of computers in schools increased significantly, and media introduced us to the young geek, who would come to typify the computer user in films such as *Hide and Seek* [53], *War Games* [54]. The ubiquitization of computers on screen, where the computer moved out of being a scientific spotlight to being an everyday item started around the late 80s with films focusing on industries where computers had become fairly commonplace, such as banking in *Wall Street* [55], and by the 1990s, there was a huge spike in technology-related blockbuster cinema made for popular consumption in Hollywood, around the time of the Silicon Valley economic boom, [56] and especially the widespread permeation of the Internet.<sup>3</sup>

The imagery of progress has been a central theme of Indian cinema in portrayal of the tension between tradition and development through most of its post-colonial history. A rich body of work has examined the representation of modernity in cinema [57-59], and more recently on television in the post-liberalization India [60]. In looking at the way computers have been represented on film, we find many of these themes repeated including man-machine dystopia [61, 62], the mad-genius scientist or supervillain with electronic den [63, 64], or the science-fiction fantasy [65-68]. However, two factors stand out as unique in the Indian case. First, simplistically expressed ideas of computers as fantastic machines have virtually disappeared from western cinema, though this remains a common theme in many Indian films. Second, the computer engineer as an aspirational hero seems like an outlandish lead character in western cinema, whereas a programmer protagonist is an extremely common theme in many of the new south Indian films.

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<sup>3</sup> This is somewhat comparable to the appearance of computers and computer users in India, which became much more common a decade later when home computers achieved reasonable (though far from ubiquitous) permeation in urban India.

## 4.1 Regional Calibration

Our analysis here is largely restricted to films of South India. The commonly used term ‘Bollywood’ typically refers to the Bombay industry that makes Hindi film, the derivatives ‘Tollywood’ and ‘Kollywood’ refer to the Telugu and Tamil<sup>4</sup> cinema. The emphasis on Tamil and Telugu language films are in part due to the foundational data from respondents in the earlier study on information sources about computers, but more critically because a comparatively greater trend in the unique depiction of computers in aspirational terms on screen in these films than in Hindi cinema.

*“We think about every smallest detail in the characterization. It is essential for the common viewer to digest the protagonist’s profession. It may be different for other parts of the country, but if you present a software engineer as a hero, even a villager in Andhra Pradesh will immediately pick it up. It will not be considered elitist.”*

Sivakumar, Director (Telugu)

One of the first major south Indian films to feature a computer-centric theme was the 1986 bond-esque action flick starring Kamal Haasan, Vikram [69]. The film, written by popular science-fiction author Sujatha had a caper plot, and the casting of Kamal as the star was important at the time since the actor was himself emerging as an urbane star, from the shadows of several decades of rural-themed filmmaking. In subsequent years, there would be an occasional film with a protagonist using computers [70], but this was typically not central to the theme of the film until Tamil director Mani Ratnam’s 1992 blockbuster hit, *Roja* [71], in which the protagonist is a cryptographer. In many ways, *Roja* was a landmark film within this genre for several reasons – first, the protagonist was a south Indian, living among north Indians, second, the desirability of a computer-engineer groom was central to the theme of the film, and third, the protagonist was not an omnipotent macho man, but rather a soft-spoken, romantic, righteous hero.

*Roja* was a rare film that did well both in its native language, Tamil, and in north Indian Hindi-speaking markets, bringing with it a new stereotype of a south Indian software engineer. While the theme of computer engineers was not entirely absent in Hindi films, we argue that these followed a narrative description fairly comparable to western cinema in that the character used technology if needed, but it never quite became a desirable quality in a man. In subsequent years, the Hindi film engineer characters typically came across as ‘cool youngster’ hacker characters, usually teen idols, [72-75], very comparable to the Hollywood depictions of computer teenager users from the 1980s and 1990s whereas computer-users in South Indian films, as we discuss in subsequent sections, tended much more to be aspirational heroes. We attribute this distinction to two factors. First, this finding supports existing work in film theory that has discussed a ‘westernizing trend’ of Hindi cinema [59], with a greater upper class urbane narrative, and marketed to urban elites, thus films

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<sup>4</sup> Kollywood because of the studios’ location in the Kodambakam neighborhood in Chennai, the capital of Tamil Nadu.

distanced aimed at an audience that switches between Hollywood and Bollywood with equal ease.

The second, and more compelling reason is the sheer composition of the technology industry, which has had a far greater south Indian component. Furthermore, south Indians in software industry were not just residents of metropolitan cities like Chennai, Hyderabad or Bangalore, but rather came from smaller towns and villages, thus consumers of regional language films rather than the metropolitan tastes which are relatively more Hindi-language oriented. From the films sampled, the greatest concentration of software-engineer characters is in Telugu cinema, which is explained from the fact that smaller cities in Andhra Pradesh such as Vijaywada and Visakhapatnam were among the biggest contributors of young engineers to the software boom in India.

Related to this second reason is the architectural transformation of the South Indian city and its relevance to cinema. In older films, it would be common in films to explore the urban-rural divide through images of village folk coming to cities and marveling at 10-storey buildings or flyovers. Following the 1990s and the plethora of new construction in these cities, the exploration of the same themes of inequity or social change was conveniently done through the frame of the technology industry. As opposed to the past when films about the small town migrant to the city would be spiced with disaster, the reality of increasing labor market flexibility in the South for educated workers would increasingly be reflected on screen.

## 4.2 Aspiration

*“If we want to show a modern scene for the audience, we can either rent a Mercedes car, or show a café with some young people and a few laptops. This is cheaper from the art direction perspective, and shows youth, modernization, technology – all in one.”*

Siddharth, Director and head of a film marketing company

Take for instance the following plot from Mani Ratnam’s subsequent urban Tamil superhit, *Alai Payuthey* [76]. In this, the protagonist Karthik is an engineering student in love with Sakhti a medical student. The class-crossed couple meets on the commute to college; the two fall hopelessly in love, decide to marry, to which the arranged-marriage inclined parents throw both out of their respective homes.

This kind of face-off between youthful love and parental opposition to marriage is a time-tested theme of Indian cinema. Back in the old days, Karthik would probably have been reduced to begging office to office for a desk job wearing a tie, finding in his useless paper degrees a metaphorical foil for the oppressive market economy [77] and thereafter turn to a life of dubious ethical distinction [78, 79]. Sakhti meanwhile would probably sit home sacrificing square meals and running a bare-bones household with a sanctimonious smile [80]. A number of themes, including the dependence of the man on the system to earn an honest living, the helplessness of the woman outside of the home domain, and the importance of parental consent and wisdom would typically be highlighted in the couple’s struggle.

Instead, in *Alai Payuthey*, the couple turns to a new direction for its salvation – technology. Karthik starts a computer software company with his friends, eventually winning an outsourced contract from the US that fixes for good their financial troubles, rubbing in the process a few parental noses in the dirt on the gold-paved streets of south Indian cities. Karthik fails most stereotypes of cinematic occupational characterization. He is no idealistic teacher, nor upstanding cop, nor charismatic businessman. He is at best a lovable nerd, traveling on a scooter to work daily with a laptop strapped to his back instead of a holster. In effect, he is the archetype of exactly what he isn’t in the movie – an educated gentile -- the perfect candidate for an arranged marriage.

*“It has become a compulsion to plug computers into the movies. Most of the people who wrote films in the past had biases against educated heroes, as the profile of those who make and those who watch films has changed, so have the characters.”*

Sivakumar, Director

Following the early lead of Roja’s cryptographer groom, two broad strands of software engineer-related marriage scenarios have emerged – the first in which the engineer is the middle-class hero [81-83] and the second is the counterpoint – in which parents are shown hankering after a groom who is a software engineer or NRI, and the hero in this case is usually a son-of-the-soil type [84-86], and while the endgame of these films is often an ode to the anti-hero, the focus on the software engineer as essential to middle class aspiration is nonetheless highlighted. In the blockbuster Telugu hit *AMAV - Adavari Matalaku Ardhalu Verulu* [87], the protagonist is a good for nothing who cannot speak English and can’t get a job, much to the chagrin of his father. Eventually, he turns his life around by taking a job in a software company, becomes a star programmer, learns English, wins a woman of his choice, but yet remains traditional in his values by dutifully handing over his paycheck to his proud father each month. The film was so successful that it was remade in every other south Indian language by a local star of that state.



**Figure 1: An exotic location, swimwear, and an urbane superstar, with a MacBook on the publicity poster for *Kandasamy*(2009)**

In some films, the less than desirable character turns to computers as a means of social acceptability and in others [88, 89], the drive is primarily economic, often explicitly as a means of getting jobs in the US [90, 91]. The relationship with immigration is also an interesting theme within aspiration, stemming from the fact that a fairly significant number of educated engineers from southern states had opportunities to work or study abroad, especially in the

US. The 2008 Telugu hit film Chintakayala Ravi [92] entirely revolves around a village-migrant protagonist who is a bartender in the US, but whose family believes he has a job as a software engineer and proudly proclaim the same to all and sundry through the movie. The film turns into a class tension study as a marriage proposal becomes the plot turning point when the highly desirable software engineer groom turns out to be a “lowly” alcohol server.

### 4.3 Iconization

*“Computer can save us. When neighbouring country is attacking, this is known to our scientists by tracking it on the computers.”*

Udhaykumar, 5<sup>th</sup> grader, Coimbatore, Tamil Nadu

The quote from Shivraj at the start of this was not an isolated one. We were surprised at how often in our interviews in rural India, the same answer was repeated to us over and over “Computers can do anything” sometimes ranging from children’s fantasies to adults with no direct experience with computers allocating human attributes to the machines, “Computers can teach us English” in clear seriousness (in the film AMAV discussed above, this is virtually true) It is far-fetched to ascribe such notions specifically to films, but it’s worth looking briefly at some of the omnipotent deeds of computers. In the previous section, the movies we describe are perhaps a degree of sophistication above a second strand of films in south India – the mass films, which rely heavily and very successfully on an iconic cult of personality. Such films are written and marketed around a actor rather than the plot.

There are two elements to the iconization that are relevant in such cinema – the user and the computer as an iconic artifact itself. While much work has focused on the protagonists and their characterizations as elements of modernity [93-95], little has focused on the actual artifacts themselves. The computer as an iconic device, often portrayed as something magical may seem to be a simplistic description, appealing to the naïveté of the audience, especially when juxtaposed against the discourse of fanciful enthusiasm about computers as we see from the youth above. What we refer here to as simplistic views of computers could on one hand include exaggerated descriptions of an off-the-shelf computer’s abilities, such as unusually advanced voice recognition in *Sivaji - the Boss*<sup>5</sup> [96], computer programs can estimate with remarkable accuracy what a child will look like when they grow, auto-adjusting for sartorial grace and facial pounds in *Dharmapuri* or *Vaitheeshwaran* [97, 98].

The point with these films is not so much that the audience is expected to swallow the magic of the machine, but more so that the machine is part of the iconic male hero that commands it. Thus, the real question here is how well the machine fits in as an accessory to an omnipotent star.

*“There is no star with a bigger draw than Rajnikant. For his fans, he is perfect, he is their leader. If there is a latest technology, Rajnikant should be able to use, it in the eyes of the viewers.”*

Suhasini Mani Ratnam, Director

The iconization of the screen actor is an important element of the image politics of south Indian cinema, and several of the major film stars are state legislators or political bosses. Such actors typically tend to play larger-than-life characters in what is referred to as ‘mass’ cinema in trade circles, films that have widespread appeal among the rural and urban poor [93]. Most elements of narrative around the star in such film has a closely controlled populism, bordering on propaganda, and can probably be traced back to the cinema of M.G.Ramachandran, who never drank or smoked on screen, committed no acts of questionable morality with a screen image closest to the righteous Lord Rama of Hindu mythology. Like MGR, several of his populist actor successors go by honorifics such as “Dear Leader” “Ultimate Star” “The Captain” and “Young General.” In each of the four south Indian states of Karnataka, Tamil Nadu, Andhra Pradesh, and Kerala, there are at least a couple of very successful movie stars that fit the category of such larger-than-life stars with frenzied fans.



Figure 2: Actor Vijaykanth in a political poster disguised as various national heroes

Thus as opposed to the truer-to life depictions of aspirational heroes in some of the films described in the previous section, such ‘mass stars’ do not stray from their typical characterizations, since scriptwriters are constrained by maintaining the image of the star. Thus a typical mass star plays roles that bring him closer in identification to the proletariat, as opposed to something that could be construed as elitist such as, and their use of the computer is more strategic as if to indicate that despite identifying with the people on class terms, the character can master and use technology as needed.

*“If we write a film for urban audiences, we avoid even the slightest error – for instance, we had a film with a US-returned engineer character, and at a wedding proposal, he mentions the name of his college and the department he was in. It turned out, we had the department name wrong, and the director chastised the staff for this. For the kind of film that is oriented around a big star with a mass rural following, the scriptwriter would not pay this kind of attention. In the shot, the star would use the computer, and that is enough explanation.”*

Sivakumar, Director

<sup>5</sup> ‘BOSS’ in the film stands for Bachelor of Social Science

Thus in a range of films featuring such mass appeal stars, the use of the computer is subsumed within the screen character's role, typically fighting evil in society. One of the most popular such uses of a computer has been in maintaining databases of villains, that the hero will proceed to eliminate with very emphatic strikethroughs on a monitor or some such visual confirmation, as used by megastars Vijaykanth [99], Chiranjeevi [100], and Ajithkumar [101, 102]. A variant of this has been films featuring online websites maintained by the hero to solicit citizen complaints against corrupt government of anti-social elements that the star thereafter uses to swiftly provide justice to the wronged [103, 104].

Although a great number of such portrayal may seem anywhere between comical and fantastic, the functional value of the overall association of political persona with technology clearly holds meaning within an environment of economic liberalization and the technology sector in particular finding a place in political populism in south India [105]. In the past decade there has been work on the association of technology in crafting and managing public images for politicians icons in south India, such as with Chandrababu Naidu [106] and SM Krishna [107], former chief ministers of Andhra Pradesh and Karnataka.

#### 4.4 Gender

In the hugely popular Tamil adaptation of *Sense and Sensibility*, *Kandukondain Kandukondain* [108], the female protagonist Sowmya, a Tamil Brahman version of Jane Austen's Elinor Dashwood takes on the responsibility of reversing her family's economic woes, and as a first step towards this, leaves the village with her family in tow. She moves from her village teaching job to the city and becomes a software engineer, excels at work, and eventually gets offered a position in California. The characterization of Sowmya contrasts with stereotypical female characters written for Tamil films in three important ways – economically, she takes on the role of a man, geographically, she opts for the city, and professionally, she drops a 'woman's job' of teaching and turns techie. We interviewed director Rajiv Menon to understand if there was intentionality in this description.

*"When the software movement started, it was emancipator – for example, Jane Austen wrote Sense and Sensibility before the Suffragist movement, so in my adaptation, the two protagonists stand for art and knowledge. The heroine moves from a rural to urban setting and out of poverty by becoming a software engineer. My protagonist was not to be an angelic face of rural ethic. I saw this as a meritocracy."*

Rajiv Menon, Director

Sowmya's character was by no means the first independent, driven female character in Tamil cinema (and that she quits her plans to work abroad in the last scene to marry the male lead is somewhat dampening). What is distinct about the character in contrast to strong female protagonists in the past is the lack of serious social opposition to the steps she takes. *Kandukondain* was in many ways perfectly emblematic of the growing openness to females in the workforce, including in villages where women moved out to cities, and this was clearly emphasized several times in our interviews. During our field research in rural Karnataka in

2005, we met a 21-year old female teacher at a village computer center. Both her parents were illiterate laborers.

*"I want to move out of the village. I am looking for a job with computers because my parents will let me move to Udupi or even Bangalore if the work is in computers. For any other job, they won't let me leave the village."*

Geetha, Computer Teacher, Udupi, Karnataka

About a year later, an interesting corollary to Geetha's statement came from a taxi driver interviewee, in Tamil Nadu, a father of two girls in their 20s.

*"Both my daughters work in Chennai in computers. In the early days, we would never let our (referring to the Thevar caste) women travel to the city to work, but if they work for computers that is good. There are good facilities with only ladies housing, and many other families from our village have sent their daughters to work in Chennai now."*

Selvaraghavan, Taxi Driver, Coimbatore District, Tamil Nadu

These anecdotes are from feeder towns where many of the female workers at call centers of Bangalore and Chennai originate. A body of work around Indian call centers that probes issues of gender and empowerment (or lack thereof) in the urban migration experience [109-111] has been growing rapidly. This phenomenon plays awkwardly into Indian cinema. If we think back to women on screen, "normal" women didn't have careers, or even jobs. And those that did, typically did so because of the failure of some critical male provider. Thus, the dead, drunk or incapacitated rural husband or father gives way to the woman who works the field, at the risk of lascivious attention of the agrarian landlords or plantation managers [112-114].

Which brings us to the second theme related to *Kandukondain* – migration. When a female character is required to give up the safety and virtuosity of the village for a city to seek employment, her typical fate would be a nasty exposure to the corruption of urban life. The theme of urban life as being threatening to an unprotected woman's sexuality is consistent across regional cinema in India [115, 116]. Typically, the lumpen exposure to urban workplace lechery came through the stereotypical wicked building contractor [117, 118].

In general, a screen female was safest when she worked in "mother figure" such as nurses or doctors [119-121] or caring social workers or teachers [122-125], reasonably respectable jobs for women, and not macho enough for the male protagonists. The female character who spills over into the organized employment sector almost certainly does so out of need. The villainy of the rural landlord and the urban building contractor are now reprised in the lascivious white-collar bourgeois rogue harassing female co workers [126-128], with perhaps the only exceptions to the rule being the rare daring saleswoman [129-131] or a spoilt heiress boss [132, 133]. In most of these cases, a male character, usually the hero, offsets the perils of the woman's tryst with the man's domain of the economy either in the form of a benevolent boss or a kind co-worker. There is the occasional vengeance-themed film where the female protagonist must take on the role of Hindu

goddess Durga as a police woman [134, 135] or avenging angel [136, 137].

Other than these, the woman's screen job degenerates quickly in the caste hierarchy of professions from the mildly uncomfortable bar dancer or performer [138, 139], to the circumstantial prostitute [140-142], and finally to the campy gangster's moll [139, 143, 144]

The association of technology jobs as being desirable is a particularly unique trend, since this cinematic legitimization of women in technology is reflected in discussions with respondents in villages who spoke approvingly of female relatives or others in social contacts who lived in cities working in call centers with computers. While there had probably never been an Indian film with a female character playing an engineer save for the oddball automobile mechanic's daughter, the lack of physical contamination or visual masculinity in technology jobs allowed a convenient blend into the accepted image of womanhood in film and we see a burst of female software engineers on screen [145-151], including films with a reversal of roles – where the female lead plays an accomplished technologist of some form, and the male lead is portrayed as professionally subservient [152, 153].



Figure 3: Actress Nayantara wears a software company lanyard, as a headstrong engineer in *Yarodi Nee Mohini* (2008)

While a majority of the portrayals are within the safe zones of not ruffling expected depictions of female leads, the boundaries are occasionally pushed. In the Telugu film *Anand* [154], the protagonist Roopa takes Sowmya's position a step further by rejecting traditional marital expectations to support herself through a software job. Similarly, in *Swagatam* [155], the male protagonist is a demanding customer at an arranged marriage matchmaking bureau. The manager of this bureau (coincidentally the female lead) has an online candidate repository, and tells the male lead to use the computer to filter through his requirements. She kindly reminds the hero that a woman's greatest trauma is being rejected at the arranged marriage meeting, and that

technology should be used effectively to circumvent this problem, and thereby empower women. Given that marriage is practically an ever-present theme in Indian cinema, it is not surprising that several other films have used technology as a go-between for arranged or other marriages [151, 156].

## 5. CONCLUSION

*"Distributing a film is like gambling without looking at your cards. We do not see the film, do not even read the script, only go by the actor's star pull, the director, music, and the production values. So the publicity matters a lot, since the first week is make-or-break for us. If it is a Vijaykanth film, we have posters with a family theme because you are attracting the rural audience. For an urban audience film, like Kandasamy, we have Vikram on the poster with a laptop."*

Dr. Srinivasan, Abirami Film Distributors

The idea for this research emerged as after confounding outcomes in other research that indicated a mismatch between peoples' stated interest in technology and their actual use of state-provided computers in rural India. People were very excited about computers and the possibility of their own access to them, but unclear on how technology could be practically useful in their lives. Such ideas about technology were further seen to not just influence researchers' estimation of what the likely adoption for such projects may be, given the apparent enthusiasm about technology, but could also influence the populations' own propensities to invest in computer access projects, without a necessarily clear idea of the value of such technology. While there is no controlled intentionality in the use of images around technology for mass consumption, it was clear from discussions with filmmakers that they were deeply conscious of the importance of technology as an aspirational element in south Indian society.

Indeed many elements of the Indian cinema culture make it a unique case study drawing broader generalizations from it is consequently challenging.<sup>6</sup> However, it still stands true that the essential phenomenon discussed here, that of a mismatched enthusiasm about technology is prevalent in India just as much as in several other parts of the world. As subjects like community and social informatics spread their interest into the perception and consequent adoption of technology in developing regions, spreading our interests into analyses of media discourses is an inevitable direction of theoretical development.

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<sup>6</sup> Though Indian films are now consumed quite extensively throughout much of Latin America, Africa, and South East Asia.

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