

## INTRODUCTION

### *Cognitive Work, Cognitive Bodies*

In 2003, twenty-five-year-old Meenakshi P. worked in Berlin for a well-known software and business services firm. She was on a short-term visa for computer programmers called the German green card. At the end of each long day, she came home to the flat she shared with her friend Rajeshwari talking excitedly about her work. Most nights, she shared dinner and sometimes tea with other Indian programmers and students who gathered at their house. In the mornings, she brushed her short bob into submission, donned work slacks, a button-down shirt, and sensible shoes with a low heel, and bounded out the door. About an hour later, when sure her flatmate Rajeshwari was gone, Meenakshi circled back to the apartment. Or, she went to Bipin and Madhu's home one U-Bahn stop away, to which she had a key and where there was a desktop computer and a landline. From there she scanned job ads, made cold calls, and replied to e-mails, searching for positions in IT (information technology) management, software engineering, and business process development in Berlin and elsewhere in Germany.

Meenakshi had lost her previous job after the project she was working on was completed and her work contract expired. For three months she pretended to go to work every day but instead spent hours alone in her room or walking the streets of her neighborhood, wondering if any of the résumés she sent out would come through with an offer in time. After three more months of searching with no luck, she received a letter from

the Foreigners' Office threatening her with forced expulsion. Her right of residence had expired—IT workers on the German green card were given six months after their last day of employment to find another job. Meenakshi had used up all of her time. The same evening she received the letter, Meenakshi finally confided in Rajeshwari, and one week later, under cover of darkness and telling none of her other friends or colleagues, she slipped off to the airport, back to India and the anonymity of home.

*Encoding Race, Encoding Class* is about how knowledge work realigns and reimagines race and class and how these in turn give rise to alternatives within the neoliberal colonization of life by work. Meenakshi's secret story confounds the notion that Indian programmers are merely elite subjects of capitalism. Indian programmers are nonwhite migrant workers whose labor is cheapened through short-term employment *and* upwardly mobile, middle-class subjects. Meenakshi enjoyed her job and looked forward to going to the office every day; she relished her ability to fit in with her work team and was confident she would be successful in the IT industry, eventually moving up to a managerial position. Yet, she also was beholden to migration regimes that discounted the importance of that labor. While Meenakshi was very close to her group of friends, sharing apartment keys, meals, and workplace strategies, she was too worried about her reputation as an upwardly mobile programmer to confide in them about her precarious situation.

This book examines the alignments, realignments, and misalignments of race and class in transnational coding economies. Most often, scholars of capitalism treat the work that is done in global software and service offices as examples of *knowledge work*, *cognitive labor*, *immaterial labor*, or, more simply, *post-Fordist*, *postfactory production*.<sup>1</sup> These terms focus our attention on two factors: first, that intangible goods—including social relations and methods of communication—are the primary products of these economies and, second, that the personality, individual quirks, and mental capacities of workers are resources critical to producing such “immaterial” goods.

Although each of these terms—knowledge work, cognitive labor, and immaterial labor—has a specific valence, they are plagued by the same problem. They all—sometimes despite an explicit interest in embodiment—imagine the cognitive worker as a universal, unmarked subject. This theoretical foreshortening obscures the embodied realities of work, where much

cognitive labor is performed by Indian and other migrant coders on short-term contracts.<sup>2</sup> Comprehending how the contradiction between being a racialized migrant and a middle-class subject plays out in their lives necessitates shifting the analytic to consider how race and class constitute a global terrain for cognitive work, rather than imagining that corporate economies can unproblematically create workers according to their own needs.<sup>3</sup>

Meenakshi's experience as an Indian IT worker in Germany reveals the two antinomies that are at the heart of this book. First, as an Indian programmer in Germany, she was subject to tightly restricted migration policies and workplace hierarchies that impeded her movement through the firm at the same time that they created a specific kind of temporary coding labor for the transnational IT industry. The chapters in part I of this book, "Encoding Race," track Meenakshi's and other Indian IT workers' emplotment both within German migration debates and within IT offices. I demonstrate that the Indian IT worker is a figure through which relations between race, labor, and European and German identity are managed. Second, as an Indian diasporic programmer, Meenakshi is also part of an Indian middle class that relies on success abroad to shore up reputations and economic strategies at home. The chapters in part II of this book, "Encoding Class," address how Indian programmers abroad think of, remake, and respond to their positioning as vanguards in a "new Indian middle class." Meenakshi's attachment to the vision of success laid out in class terms is ultimately incompatible with the realities of the racialization of short-term knowledge work that I outline in part I. Her continued pursuance of this vision raises the important question of exactly how race and class operate across a terrain of transnational labor that values expertise yet differentially recognizes and rewards that expertise—in other words, the case of the Indian IT worker in Germany requires us to "put the whole together," as Adorno might write, in its moving contradictions.<sup>4</sup>

In the global IT economy, Indian programmers are racialized—scribed characteristics as workers that are laminated onto outward, embodied signs such as skin color, odor, dress, accent, and habit—in multiple ways.<sup>5</sup> As under industrial capitalism, they are bulked together as a group of workers who are able because of their cultural capacities to do long stints of repetitive coding labor. Within the German politics of migration, Indian programmers provide a constitutive "outside" to German identity, a foreign presence on German soil that can be both a comforting sign of

German cosmopolitanism and a worrying portent of the precarity of the welfare state's ability to care for its citizens. Yet, as a representative post-Fordist industry, global software and services also mobilize race in another way—as a container for future profitability.<sup>6</sup> Indian programmers are valued in this last way for their ability to provide new ideas for the expansion of business services, even while they are called on to provide explanations for evaluating future returns.

The Indian programmers who are my interlocutors here are themselves working through and reinventing ways of inhabiting a changed landscape of work and value, thus making them representatives of those patterns of work for other (European and American) populations.<sup>7</sup> *Encoding Race, Encoding Class* shares the concerns of earlier scholarship on Indian IT workers with the use of ethnicity and culture to hierarchically organize Indian and American workers in the Indian IT industry.<sup>8</sup> Yet, the argument in this book moves past a discussion of mimicry on the part of Indian workers of American and European culture to understand how racializations intersect with class aspiration. Crucially, my approach treats race as a concept that is itself in flux, since racialization as I use it does not imply an ultimate truth about race.

The Indian middle class fashions itself in part by carefully calibrating the demands of global tech industries with the narrative of Indian national success. Smitha Radhakrishnan, for instance, demonstrates how call center workers in India—especially women—negotiate the dual demands of being global and Indian at the same time.<sup>9</sup> Yet, while I share Radhakrishnan's concern with commensuration between worlds, the language of “appropriateness” can obscure more dynamic aspects of being middle class. I describe how middle-class authority is created and maintained through diasporic connections that both demand an authoritative position on cognitive work and allow middle classes to reinvent practices of leisure and consumption outside the tight imbrication of Indian exceptionalism and IT labor.

These theoretical insights emerge from some unexpected fieldwork findings. Intending to study the way that Indian IT workers unsettled existing tropes of German identity, conversations with Germans working in the IT industry suggested that the racialization of Indian IT workers was not only used to exclude nonwhite, non-German others from national identity. I found that race was also used as a tool to come to terms with ways of working that had become unmoored from traditional industry,

trade union control, and the German welfare state. Intending to track how Indian programmers inhabit their niche in global software work, I spent time with Indian programmers outside of work. I soon realized that these archetypes of corporate professionalism had an ambivalent, even agonistic relationship to their careers and devoted considerable time and energy to developing alternative ways of living explicitly pitched against the expansion of work into all areas of life. I began to think of how Indian programmers were both attached to work that disenchanting their life—what Lauren Berlant calls “cruel optimism”—and developed paths away from this attachment—what Kathi Weeks calls “imagining critical utopias.”<sup>10</sup>

Of course, workers of various kinds—from Asian women who were said to have “nimble fingers” working in electronics assembly to Irish dockworkers who were considered to be passionate and suited to hard labor—have been racialized to fit the demands of industrial capitalism and its divisions of labor. Equally, workers have always found the critical capacities outside of work to produce alternatives to these modes of labor organization.<sup>11</sup> Yet, the literature on both Indian IT workers and cognitive labor has largely ignored such findings.<sup>12</sup> *Encoding Race, Encoding Class* argues that cognitive labor both opposes manual labor and is embodied. Concomitantly, Indian programmers are elite, privileged workers in cognitive economies *and* racialized workers troubling such economies.

My argument both uses and extends autonomist Marxist analyses of neoliberal capitalism. Autonomist Marxism understands the cognitive worker as someone who devotes herself fully to the office. Her creative capacities, developed outside the office in leisure and free time, are a vital resource to be tapped (at any time) by a cognitive economy that relies on the circulation of ideas and symbols to produce value. At the same time, this creative capacity can sow seeds of solidarity among different sorts of workers who may recognize the shared inhumanity of their labor and the shared potential of creative activity undertaken in common and for the common good. This is the potential of slowing down time and refusing the expansion of work into life that Bifo Berardi, revisiting Herbert Marcuse’s work, terms *eros*.<sup>13</sup> According to Berardi’s analysis, we are incited to share and be open to multiple kinds of impulses; yet, these impulses are directed toward a particular idea of happiness rooted in accumulation. I find Berardi’s sense of *eros* useful for the way it opens up a discussion of other modes of happiness and life within cognitive economies.<sup>14</sup>

While Berardi locates eros outside realms of what he calls “info-work,” I found eros in the everyday activities of Indian coders. At work, they try to bend regimes of labor to their own needs, and after work, they spend time resisting making their emotional and cognitive capacities available for insertion into capitalist economies. When Indian programmers pursue eros, they are not just refusing work, as autonomist Marxist thinkers acknowledge. They are refusing their position in coding economies as limited grunt workers and their slot in European fantasies of migration that compare them with other black and brown bodies.<sup>15</sup>

Eros equally attaches to a politics of Indian middle-class pleasure that is contested and redefined in part in contrast to regimes of work. When pursuing pleasure directed against how their labor is organized in coding economies, Indian programmers are also redefining a relationship between work and pleasure that they can claim as elements of a good (middle-class) life. Crucially, traces of alternative ways of life are found not only outside but also within the domains of cognitive work. They are made visible by attending to the everyday practices of work and especially when following the fractures of work produced by and through racialized discourses. In other words, because *Encoding Race, Encoding Class* begins by positing a differentiated rather than unmarked cognitive worker, the “info-office” itself emerges as a fractured and contradictory space. Equally important, alternatives to the way immaterial economies organize labor do not exist only in radical, vanguardist environments outside corporate offices, as is often presumed in discussions of “free” and open source software.<sup>16</sup> They are instead present in what has been theorized from the outside as the paradigm of new economy work—corporate software—and for what has been often taken as a model of the new economy worker—the Indian software engineer. In these spaces, refusing the organization of work is also a practice of building a different relationship between pleasure and work. Resisting the demands that work makes on life also redirects cognitive work into the channels of Indian middle-class identity.<sup>17</sup> As such, eros describes both a politics of refusal and of deflection.

### **Kinder statt Inder: The German Green Card Debates**

Germany presents a particularly sharp and visible version of the global dynamics of race in software economies that at once engage with Indian programmers as unwanted job-takers and as wanted harbingers of tech-

nological modernity. Meenakshi's journey to Germany was made possible by a visa program begun by the German government in 2000. A five-year visa for IT professionals, the German green card program was announced by then chancellor Gerhard Schröder on February 23, 2000, at an annual communications and IT technology expo called CeBIT.<sup>18</sup> The German green card—officially called the Regulation on Work Permits for Highly Qualified Foreign Laborers in Information and Communication Technology (IT/ArGV)—was issued for up to three years and did not lead to permanent residency. The entire program could be stopped at any time if economic conditions changed and a large IT workforce was no longer needed.<sup>19</sup> Thus, while the former East Germany (the German Democratic Republic) progressively lost its young people to the West, factories shuttered their doors, and unemployment across Europe remained at a level 7.7 percent through the first half of the new decade, information technology industry associations such as Bitcom argued successfully that there was not enough engineering talent in Germany to fill immediate needs.

Despite the severe limitations on residency and duration, the announcement of the green card program set off a storm of protest, bringing to the surface long-simmering tensions about the outcome of the *Gastarbeiter* [guest worker] program, the declining German birthrate, and the legacy of German strength in science and engineering. As in the United States and Australia, in Europe the figure of the Indian software engineer became a specter haunting the stability of white-collar careers in Europe, threatening the loss of technical skill and engineering know-how to the “third world.”<sup>20</sup>

The most infamous and succinct expression of the anti-green card sentiment in Germany was the election slogan *Kinder statt Inder* (Children instead of Indians). Jürgen Rüttgers, candidate for the right-centrist party the Christian Democratic Union (CDU), used the slogan as an anti-immigration rallying cry, calling for Germans to have more children instead of allowing Indians into the country. Although he was ultimately unsuccessful in his bid for a seat in parliament, the slogan captured a way of seeing the Indian programmer as an immigrant threat to German job security.

The green card renewed fears of unwanted migration in a Germany that claims to *have* migrants but not be a country *of* migrants. In public debates, the green card was tied closely to the question of the integration of Turkish immigrants who entered Germany as guest workers (*Gastarbeiter*) from

the 1950s to the 1970s and subsequently took up permanent residency, now accounting for about 1.7 million of Germany's 81.9 million people.<sup>21</sup>

Of the 14,876 programmers who came to Germany on the visa, one quarter—the largest share—were from India. In the end, less than half of the allowable number of green card visas were issued. Experts remain undecided about the low number of visa takers: some attribute it to Germany's anti-immigrant reputation, others to its inability to compete with the United States and England, and still others to the ill-timed nature of the initiative. The need for IT workers, according to those partial to this last analysis, plummeted just as the green card program was launched, since the program was initiated as the market for IT services began to slump, first in Silicon Valley, then everywhere else.<sup>22</sup> Thus, although the green card allowed for 20,000 visas, there were not enough jobs in IT and related services to match these needs.

Despite the low number of visa takers, the German green card was hotly debated and everywhere accompanied by discussions of the *IT Inder* (IT Indians). Even though the visa program was not targeted at India, it quickly became laminated onto these debates as if they had always been a part of them. In Germany, a postwar politics of guest working that makes distinctions rooted in law and national identity between Germans and “foreigners” jostles against the country's—and especially Berlin's—reputation as a forward-looking, new economy metropole. The Indian IT worker is singled out, often in contrast to other migrants, to represent that economy.

The German green card was a compromise with native worker protectionist sentiments because it limited the number and duration of such IT visas. It solidified India's association with global technology labor even while it underlined divides between European and migrant workers. The unintended effects produced by the German green card program suggest that neoliberalism is best understood as a compromise with preexisting modes of governance tasked with caring for populations.<sup>23</sup> In particular, I use the lens of race and class to understand how German and Indian coders, managers, and other business professionals take up, remake, and materialize paradigms of difference in work and working bodies, both inside the office and beyond its glass façades and open floor plans.

### **Limited Entrée to the Office, Loads of Life after Work**

Participant observation allows a researcher to move analytically between what subjects do and what they say. Sometimes, though, when fieldwork



is “written up,” the peculiarities of access across a field site disappear. In fieldwork with these Indian IT workers, I was included in free time activities more completely, while the office was available to observation from time to time. Often, my access in corporate spaces was limited to a single interview, a single day shadowing a manager, or a few weeks of team observation.<sup>24</sup> Following this uneven access revealed to me the specific contours of the corporate office, where time should not be wasted, workers should not be distracted, and knowledge is a potentially valuable commodity. It also revealed the rich and complex life that coders have outside the office.

I conducted fieldwork over eighteen months between 2002 and 2004, with a three-month follow-up visit to Berlin in 2006. I shadowed Indian IT workers in their office setting while also interviewing their German (and occasionally British, Australian, and American) managers and colleagues. Most Indian programmers I met in Berlin were upper caste and Hindu. Of the fifty-plus programmers I eventually interviewed, four were Muslim. Approximately two-thirds of these programmers were from the South Indian state of Andhra Pradesh; the rest were from North and West India. Twenty-two were women. In addition to these Indian programmers, I interviewed thirty-two German, American, Australian, and Indian managers and programmers I met in offices, through mutual contacts, and at trade fairs.

The arguments in this book emerge from following a core group of about twenty programmers before, after, and during work. I shadowed six of this group in the firms where they passed their days, evenings, and occasionally nights. The rest of this core group I interacted with in their free time. These programmers are distinctive for the short-term nature of their work (one to two years) and for the fact that they took jobs in Germany, which most saw as a stepping-stone to either a permanent position in the country or a better position in the United States, Canada, or India. They were thus faced with a particularly sharp version of the paradox of contingent software work: demonstrating the skill set necessary to the job at hand yet proving while working their capacity to move into management.

Over the course of fieldwork, I came to understand the ways in which work did and did not govern their lives. My focus shifted, as I noticed the richness found in the contrast between work spaces—characterized by an ethic of time-driven work projects—and those of nonwork spaces, with their conviviality, alternative ethics of pleasure and enjoyment, and

practiced de-emphasis on managing time efficiently.<sup>25</sup> By following a cohort, I was able to understand their processes of forging a middle-class Indian identity even while working through the antimonies of their work contracts.

Of the five firms I observed over extended periods, two produced software for other businesses to help these firms manage their data and processes; another made and maintained original pieces of software that were specializations to existing software packages made by large firms; the fourth was a start-up trying to market new products directly to consumers; and the fifth was a vendor that ran a small part of a client-oriented business for another firm, which was a mobile phone company. These offices were chosen for variety of size and industry focus, while at the same time I was restricted to those firms where I could gain access. My fieldwork in offices ranged from periodic office visits to monthlong observation and interviews with follow-up visits. Access to firms was mostly facilitated through networks of management professionals I cultivated in early days of fieldwork by attending regional and national technology fairs and conferences. Sometimes, Indian short-term programmers I met were able to introduce me to their managers; much more often, however, they worried that bringing me into the office might jeopardize their reputation with their bosses. I therefore worked within the time limits of observation with which my interlocutors felt comfortable, which varied according to personal disposition and evaluation of job security.

Indian programmers on short-term visas often were reluctant to bring a “participant-observer” into the workroom. Many expressed anxiety that the management would not like someone watching how work was executed. Others were worried that their reputations would be compromised if a potentially critical monitor went with them to work. One programmer quipped, “Our jobs are only as long as the project, then we have to get hired onto another one,” to support his sense of vulnerability. Many programmers believed that managers would think they were wasting time talking to someone about work rather than doing it, a fear that particularly attached to low-level coding and testing work outside the conversation-dependent “creative” jobs such as project development. These reasons point to the ways racialization worked to thicken the association between Indian programmers and long work hours as part of their jobs and as part of their (assumed) cultural makeup, an association to which Indian migrant

coders were particularly susceptible because of the job insecurity of project-based work contracts.

Then, there was the issue of workplace secrets. In certain meetings, managers were concerned that an anthropologist would have access to software applications that were still in development and were considered trade secrets. At the same time, some managers were interested in finding out more about how to better manage an “intercultural team,” as work teams with programmers from Germany, Australia, India, and, to a lesser extent, Russia, Brazil, and China were called. These managers would often want to talk to me in private, outside the workplace when possible, to probe how their teams were doing. I opted to allow the demands of programmers and their bosses to act as bars to total access, from which I learned that while transparency and expertise is overtly valued, all forms of knowledge may be used to decide on the future direction of a project or firm, making knowledge a potentially valuable and well-guarded commodity.

In this milieu, no participant, including this anthropologist, is a privileged observer. This method makes explicit that ethnography does not represent a neutral reality but instead follows the realities of the life of its protagonists.<sup>26</sup> What is more, part of the realities this ethnography represents is made up of closed doors, indirectly accessible estimations, and calculations about the future strategy. In the few cases where I spoke with both programmers and their managers separately, I chose to keep confidential what workers told me outside the office about their managers. Workers rarely asked me about my conversations with managers, preferring to form their own opinions through shared anecdotes and daily observations. They were their own careful ethnographers of the office, trying to discern an office culture, adapt to it, and evaluate it collectively.

While I believe ethnographers should work to gain entrée to the “hidden abode of production” behind the sign reading “no admittance except on business,”<sup>27</sup> should learn programming languages, and especially should foreground their attempts to do so as part of an anthropological engagement with the conditions of knowledge production, restricting the ethnography of coding cultures to office life and the study of coding practices tells only a partial story. A worldly anthropology should also be attuned to *techné* that draw on and yet unsettle standard narratives and modes of representation more widely.<sup>28</sup> I devoted considerable time to life outside work, where, in trying to make different expertise line up, Indian programmers innovated

ways of being in the world that are often antithetical to the demands of neoliberal labor. Junaid Rana writes, “Transnational labor migration is fraught with all sorts of possibilities, desires, and unexpected outcomes that transcend reductive structural explanations.”<sup>29</sup> One unexpected outcome revealed by following corporate coders after work is that Indian programmers were often critical of and actively resisted the way time was managed in the office, insisting that personal and community time should not always be sacrificed to work time.<sup>30</sup>

Because the programmers from whom I learned worked in corporate offices rather than as volunteers, in universities, or in not-for-profit settings, the nature of my research is quite different from earlier ethnographic projects with free software developers, open source coders, and hackers, such as Chris Kelty’s *Two Bits*, Yuri Takhteyev’s *Coding Places*, and Gabriella Coleman’s *Coding Freedom*. My research is more concerned with what happens at the boundary between the office and the world outside the office—with moments of encounter and translation that define the particular standpoint of the Indian middle-class coder. Among my interlocutors, the main concern was finding a way to understand their experiences in the office within a larger field of engagement that variously defined them as Indian elites, global experts, and representatives of their families, sometimes their religion, their regional groups, and the Indian nation.<sup>31</sup>

The names given to some of the principal actors in this book—Mihir and Meenakshi, Rajeshwari, Madhu and Bipin, Srinu, Mayur, Adi and Maya—are first names in keeping with both the informality of office culture and the closeness of friendship. The names bleed across the boundaries of work and afterwork and indicate how the channels through which technocapital flows are hewn from the hard rock of the workplace and tilled in the rich fields of play. Over the course of eighteen months, I interviewed, shadowed, ate and drank with, and generally hung around this group of friends and colleagues, all programmers on the German green card, all recent arrivals in Berlin. They met one another through work, at the Indian embassy, and through contacts in India. In many ways, they understood me to be in a similar position as they were, having come to Germany for a short but necessary interval in the making of a scientifically oriented career.

I first met some of them on a U-Bahn platform at Gesundbrunnen Station, a medium-size subway station in the north-central part of the city. The

rest of the cohort I met over months as they visited one another's houses and went on outings throughout the city, with me tagging along. Relating this encounter on the subway platform as I do below demonstrates the shape of this fieldwork, where work and leisure time took on equal significance for me, as I tried to understand how programmers knit together the divergent visions of the "how" of life that circulated in these worlds.

On a hot August day, my interlocutors and I would discover that we were all practically neighbors, living in the working-class neighborhood of Wedding. I was on my way to the Indian embassy for an Independence Day celebration, where I hoped to meet with local officials and business professionals. Mihir, Rajeshwari, Adi, and Maya were on their way there too—embassy events were an occasion for them to meet up with other programmers in the city. Sometimes, the embassy televised cricket matches that were always extremely well attended. This day's activities would include saluting the flag and singing *Jana Gana Mana*, the Indian national anthem, outside the newly built embassy, then heading inside for a recitation of President Kalam's speech, covering the history of the independence movement and its freedom fighters, the problems of Jammu and Kashmir, and outlining a vision of a developed India. His speech was preceded by remarks by the current ambassador and followed by sweets and snacks.

As I waited on the U-Bahn platform, this group of four hailed me. They had mistaken me at this distance for Meenakshi, who would join us a few minutes later. I soon fell in with them as we realized we were all going to the same place, and talking with Mihir on the way to the embassy, we began comparing notes on the quality of life for Indian migrants in the United States, Germany, and Canada. A "baptismal" act in the course of fieldwork, this moment of misrecognition on the train platform named me as both one of them and a curiosity—an Indian American who sometimes dressed in a sari, who was studying and striving like they were, but who was also studying them.<sup>32</sup> In retrospect, this moment and others like it made me particularly attuned to both the dilemmas of massing and the realities of separation; to the commonalities of life stage, background, and even racialization that joined us together; and to the differences in visa restriction, ability to move at will, and life course that held us apart. Indeed, as a graduate student in the social sciences from the United States studying with newly minted computer programmers from India, my chances for economic security in the future were both more and less precarious than

theirs. The relationships I formed with my interlocutors arose in this crucible where the lines between class and other backgrounds are never clearly drawn.

### Neither Cybercoolie nor Cyberstar, but Still Racialized

Speichern—sicher zu errahnen—  
Tastendruck nur auf “BRAHMANEN.”  
Gibt’s Probleme—“MANTRA” wählen.  
Und dann das Problem erzählen.  
Unverzüglich kommt hervor  
“BUDDHA aus dem MONITOR.”

Save—easy to guess—  
Simply press “BRAHMIN.”  
Are there problems?—choose “MANTRA.”  
And then relate the problem.  
Instantaneously there appears,  
“BUDDHA on the MONITOR.”  
—Jürgen Frühling, “Inder Nett”<sup>33</sup>

Some may critique this project for speaking of race when other terms such as *ethnicity* or *culture* might do. While ethnicity and culture can capture the way capitalism exacerbates and sediments differences among groups, thinking through race centers the multiple ways capital is embodied by drawing attention to how individual workers’ inner characteristics are interpreted through their skin color, dress, language, smell, accent, hairstyle, way of walking, facial expressions, and behavior.<sup>34</sup> I argue that in coding economies racialization happens when the question is raised: is being good at programming fixed in certain kinds of bodies? I use the terms *race* and *racialization* here to describe how work ethics, the capacity to labor in particular ways, and cultural knowledge are “epidermalized,” as Fanon writes—mapped onto the skin, clothing, smell, and mannerisms of living bodies.<sup>35</sup> With this starting definition of race and racialization, I follow rather than predefine how race operates across transnational terrains. In this book, race moves across several fields of expression. Race helps divide native and “foreign” populations, old and new styles of working, and stable identities and flexible ones. In Germany, the long history of interest in India meets the comparatively shallow history of the guest worker program. These his-

tories help establish a hierarchy of wanted and unwanted working brown bodies that set Indian migrants apart from Turkish migrants. Thinking through race in the current moment also draws immigrant bodies into a postracial, postgenomic uncertainty about the fixity of race itself. The idea, supported by the genomic sciences, that racial characteristics are to be understood as tendencies makes race seem both unimportant and newly interesting as a source of knowledge about different populations.<sup>36</sup> I investigate how racialization opens up a variety of ways of imagining the relationship of work and worker subjectivity. Rather than simply adding an analysis of race to the story of corporate coding, I seek to investigate how race itself is a multivalent sign that works in three main ways. First, it helps write convincing scripts for reforming the work habits of European populations by holding up the tech-savvy foreign worker for comparison. Second, it justifies unequal conditions of labor for European and migrant workers. And, third, race enhances the potential productivity of firms that hire Indian workers by promising that such workers will generate monetizable ideas.

Like elsewhere in postgenomic, postracial deployments of race, in the discourses that circulate around Indian IT workers in Germany, racism is posited as having been overcome at the same time that race as a marker of probable characteristics is validated. Following the multiple meanings of race as related to worker quality, as I do in this book, demands thinking of race in its specifically postgenomic guise, where race is no longer considered a fixed trait but instead describes population traits in flux. This new racial imaginary, according to analysts of genomic sciences, creates new markets around these genetically coded population traits.<sup>37</sup> What I explore in this book is how a postgenomic understanding of race that is uncertain about whether or not racial traits are fixed in populations is used to comment on and understand flexible economies and flexible workers.<sup>38</sup> I am interested in how the race of the Indian IT worker is used to generalize about emerging economies by providing a frame through which to speculate on the kinds of traits that make a good cognitive worker and to further imagine what populations might possess such traits. Likewise, I track how the idea that racial traits are probabilities rather than certainties allows the figure of the Indian IT worker to be held up as a mirror through which European populations can be reformed; that is, it taught through example how to be good cognitive workers.<sup>39</sup>

The argument presented in the 2010 book *Deutschland schafft sich ab* illustrates how a “folk genomics” moves into the domain of assessing migrant groups in Germany. The author of this best-selling hardcover nonfiction text, Thilo Sarrazin, is a prominent German politician, who was previously on the board of *die Deutsche Bundesbank* (the German Federal Bank). In its pages, he argues that Muslims in Germany will not assimilate and that they are not as intelligent as other (including Jewish) populations. Throughout the book, he uses examples from human genetics to ground his arguments about the cultural differences of Turkish and Arab people. In addition to claiming that all Jews share a gene, the author also claims that the intelligence of the general population of Germany is diminishing because of the immigration of people from Africa and the Middle East. Sarrazin’s mixing of gene theory (of a folk kind) with an assessment of the effects of migration, education, and religion is an example of one way that the genomic sciences are taken up within political discourse. Sarrazin’s was an extreme—though very popular when judged in terms of book sales—admixture of race and culture. In everyday interactions inside and outside the workplace, such mixing of genomics and cultural traits can move in many different directions, from shoring up ideas of workplace hierarchy to critiquing the failings of European working classes.<sup>40</sup>

Often, within this general use of folk genomics to prove cultural arguments, Indian programmers were subject to a particular kind of scrutiny. Rather than being judged in terms of their assimilative potential (as were Turks and Muslims), they were understood as embodying corporate technical skills, such as the ability to work hard for extended periods, knowledge of math and science, and an innate understanding of how computer technologies work. One question I ask is what happens when the Indian IT worker as a figure who embodies neoliberalism is sutured to anxieties about where Euro-American populations will land in an economy that values these particular skills?

### **Neoliberal Ways of Working**

My interpretation of contemporary shifts in capitalism is informed by the work of Bifo Berardi, Gilles Deleuze, Paolo Virno, and others who investigate a kind of capitalism that extracts surplus value from the circulation of signs (rather than from the production of wares). Each of these authors describes a recent shift in capitalism that incorporates the human potential



for communication into the labor process. Value comes from developing and then placing bets on this human ability to innovate. This economy, often glossed as “late capitalist,” is driven by probabilities, wagers on uncertainty, and speculation without end as a supplement to the circulation of tangible wares.<sup>41</sup> According to these theorists, this shift from Fordist to post-Fordist production transformed the labor demanded of workers, from primarily producing commodity-objects to also performing continuously their potential for future productivity. In the end, “activity without end . . . becomes the prototype of all wage labor.”<sup>42</sup>

Importantly, human subjectivity remains the central creative element of a late capitalist economy of signs because of the generative capacity of the subject to produce fresh ideas and new forms of communication. Berardi writes of knowledge workers, whom he calls the “cognitariat”: “They prepare their nervous system as an active receiving terminal for as much time as possible. The entire lived day becomes subject to a semiotic activation which becomes directly productive only when necessary.”<sup>43</sup> Though the language is abstruse, Berardi points out how cognitariats are constantly producing ideas and impulses that may be called on later for further elaboration by capital. “In this way,” he writes, “workers offer their entire day to capital and are paid only for the moments when their time is made cellular.” As cognitive laborers, Indian IT workers are Berardi’s cognitariat. They are a class of workers who offer up their creative, analytic, and communicative labor power to capital. Yet, they are also affected by an economy that uses and remakes race such that being *Indian* programmers becomes synonymous with accepting precarious work contracts and visas, extending the working day, and performing cultural knowledge as a part of work. Berardi underlines the corporeal aspects of communicative work by describing the cognitariat as “the social corporeality of cognitive labor.”<sup>44</sup> I read this as an invitation to think about knowledge work as embedded in the desires and dreams, thoughts and tremblings of working bodies.<sup>45</sup> The cognitive worker also has a body that, to paraphrase Berardi, is affected, effects, and has needs.

In this book, therefore, I extend the autonomist analysis of capitalism put forward by such theorists as Virno and Berardi to encompass race and class. It is not that they ignore how embodiments of race and class imbricate with creative and communicative work. Virno is quick to point out that there are manual workers (those who produce on factory assembly

lines), although the nature and direction of their work has changed. But the question of race and class is approached indirectly in their theorization of cognitive labor because they begin from the position of an unmarked knowledge worker and then take the characteristics of this worker as the norm. This leaves the worker's body as a remainder and an aberration.<sup>46</sup> In Berardi's telling, mental labor makes physical demands on the body, but one cognitive worker is very much like the next. Instead, I provide a fine-grained analysis of how the lived experience of the body both works against and supports the formation of the cognitariat in the way Berardi describes.

To understand how neoliberal regimes of work—that is, those that in corporate offices emphasize worker flexibility, the investment of the personality of the worker in the workplace, and the production value through the exchange of ideas and structures of communication—compromise with other arrangements of life and work, I argue for bringing materiality and the body back into an analysis of knowledge work. But, it is not enough to bring these in from the outside, when almost all is said and done, like a god from the machine. Rather, I show how race and class are integral both to producing differently valued bodies at work and to producing the communicative content of so-called immaterial goods.

As I argue in this book, the ambivalence around Indian IT workers in Germany is attributable to their double location, as both an unwanted migrant and a model of neoliberal work practice that requires a worker to be always at the ready, always able to respond to quickly changing demands. At the same time, Indian tech diasporas continue the project of Indian national development through technocratic expertise that began in the Nehruvian era. The disjuncture between Indian class politics and the politics of race in knowledge work globally is not between race and class as opposing categories of belonging but between racialization as a means of dividing up workers and also a sign of value and the establishment of the Indian IT worker as authoritative voice within the Indian middle classes.

### **Making the Indian Middle Class Abroad**

In Europe and the United States, the Indian programmer is a source of cheap labor; in India, the very same figure is a member of a burgeoning middle class increasingly able to flex its consumption-based muscle. This

contradiction makes Indian programmers at once laboring migrants and desiring citizen-consumers, both spectral figures threatening European and American jobs and emblems of India's global success.

Scholars of India's "new" middle class investigate the increasing authority and assertiveness that now accrue to these classes in India.<sup>47</sup> In previous decades, the middle class was an influential but limited group of government officials, small businessmen, professionals such as doctors and lawyers, and medium-scale farmers. This class was able to take advantage of economic opportunities that developed in the private sphere as the economy liberalized. Soon, the sons and daughters of doctors and civil servants turned their attention to private economies and especially the software industry as the focus of their education and careers. Such jobs garnered higher paychecks than earlier avenues of employment. Coupled with these privatized careers was the arrival on the Indian scene of more material goods after the end of import substitution (domestic market protection through restrictions on imports) in 1991.

The new Indian middle class increasingly defines itself through consumption. Leela Fernandes, among the first to study the new Indian middle class, defines the newness of the contemporary middle classes as a "cultural characteristic" associated with "lifestyles and consumption practices" realized through "commodities made available in India's liberalizing economy."<sup>48</sup> The primacy given to the middle class in India today, according to Fernandes, is rooted in its ability to symbolize a powerful and globalizing India through conspicuous consumption. Fernandes usefully locates the symbolic power of India's middle class in its ability to produce through consumption a modern Indian citizen subject that is prosperous, of the world, and also belongs to the nation. Yet, such an analysis may assume too quickly the homogeneity (and thus hegemony) of this class.<sup>50</sup> In this work, I investigate how middle-class authority is built—and contested—from within diasporic spaces.

I focus on how Indian programmers both form and contest their inclusion in an authoritative Indian middle class. This approach, which treats class as a process rather than a thing, shows how programmers both assert a collective class identity and an individual expert identity. I explore the process of establishing middle-class authority in chapter 5, where I argue that middle-class authority emerges through the comparison of work and leisure rather than through an unabashed celebration of work as a means

to consumption, as generalized theories of Indian middle-class culture would suggest. Instead, Indian programmers debate the boundaries and limits of the extension of work into free time. Their authority stems from their ability to question what a proper relationship between work and leisure should be; that is, they set parameters that reinsert work and the purchasing power of their jobs into a moral and ethical framework of family, friendship, and enjoyment, or *eros*.

Diaspora is not a category of belonging that comes ready-made. It must be stitched together across geography through what Brent Edwards calls *décalage*, the removing of an artificial prop that reestablishes “a changing core of difference.”<sup>49</sup> This basic fact required of producing diaspora entails that it includes conflict and contradiction. For the Indian programmers in this story, the “artificial prop” of identity through consumption is revisited time and again to produce a more nuanced understanding of their relationship to work, the demands of capital, and an Indian national imaginary of the consumer-citizen, a dynamic I unpack in chapter 6. I likewise explore the dialectic between collective class identity and individual identity in the conclusion, where Meenakshi’s story (which opened this introduction) plays out for her peers as evidence of personal failing rather than of a failed strategy.

I trace in this book how Indian programmers reframe the incommensurabilities between the way they are positioned as raced cognitive workers and as members of the new Indian middle class. While the demands of working hard, in short-term labor contracts, and in often-repetitive work clearly support economically middle-class aspirations, Indian programmers also think of themselves as refusing neoliberalism’s most stringent demands. This self-conception arises precisely from the different and not always commensurable ways they are positioned as both cheap labor and as a rising elite.

Coding can be a site for working through the contradiction between labor and a middle-class imaginary of a good life. In the sections of volume 1 of *Capital* that concern machines, Marx emphasized technology’s dual nature in a way that remains convincing today. “Machinery,” he writes, “is misused,” transforming the worker into a cog in a machine instead of freeing the worker from the exigencies of labor.<sup>51</sup> “The most powerful instrument for rescuing labor-time suffers a dialectical inversion and becomes the most unfailing means for turning the whole lifetime of the worker and his

family into labor-time at capital's disposal for its own valorization."<sup>52</sup> The logic of capital, pace Marx, had commanded the machines' abilities just as it had hijacked labor power and thwarted the "many-sided play of muscles" (including the minds) of workers.

Indian programmers voiced a similar critique when they pointed out what code, in their opinion, ought to do: to solve common problems and erase political boundaries, especially the ones that restrict their own abilities to migrate. They often were frustrated by what corporate coding culture as it is currently organized has made it do, in their opinion: answer client demands, however unreasonable. When Indian IT workers talk about code, they talk about it in ways that echo how Marx talked about the machine, as a technology that ought to free them to pursue their many-sidedness but has instead been harnessed to a business strategy that sees them mostly as expendable, cheap labor.

Coding can be a tool to extend and think through human possibilities.<sup>53</sup> As I trace out in chapter 3, the critique of working life that programmers elaborate through their understanding of code yields strategies of bending the code, their time in the office, and their free time toward the full development of themselves. I use the idea of "proprietary freedom" to suggest that their main strategy is one based on a relation of carving out spaces and times in the office to pursue their own coding projects that allow them temporary ownership over their work. In this way, they innovate ways of being a part-time knowledge worker who is less than entirely enthralled by the discourse of hard work as an end in itself.

It is not just the Indian IT worker who sees a gap between what is and what ought to be when it comes to working life, personal freedom, and the freedom of code. Increasingly, many scholars and activists see the capabilities of code to lay down pathways of access as being corralled and blocked. Activist groups such as the Electronic Frontier Foundation have tried to unblock these impulses by organizing around issues such as net neutrality and the right to privacy. Such organizations argue for continued access to and use of digital media technologies as a nonhierarchical means of address and organization. The ideological suppositions of these movements generally pit free access against corporate and government control. But freedom is a historically and contextually situated rather than an unqualified and universal good. The impulse to unblock information and to foster free movement does not a priori lead to freedom. It can also render an

intensification of entrepreneurial individualism and a renewal of, as Jason Smith writes in the introduction to Berardi's *The Soul at Work*, "the entry of the soul into the production process."<sup>54</sup> I begin instead with Indian programmers' practices of carving out limited freedoms that concomitantly are part of and resist the logic of the free traffic in commodities and ideas that is a cornerstone of corporate philosophy. Freedom, in this approach, emerges in a historically mediated context where it can become the focus of social practice precisely because of the way it is defined—as freedom from constraint—in neoliberal worlds. Indian programmers take up this idea of freedom and turn it toward a critique of the office, on the one hand, and toward an elaboration of what it might mean for middle-class Indians to live a good and fulfilling life, on the other.

### The Chapters

By now there is a significant literature tracking the Indian programming phenomenon in the Silicon Valley and in Bangalore, in Australia and in Europe. Indian programming illustrates well two of the tenets of globalization theory: technological spread and the spread of migration. Accordingly, studies of Indian programming—such as A. Aneesh's *Virtual Migration*, Xiang Biao's *Global Bodyshopping*, Reena Patel's *Working the Night Shift*, Shezad Nadeem's *Dead Ringers*, and Smitha Radhakrishnan's *Appropriately Indian*—thus far have sketched out the topography of technology and culture to show how IT worlds connect across transnational space, how call center cultures are reshaping gender, and how such technologies as providing software and support services and maintaining, creating, and testing code create capital flows that consolidate wealth around the Indian middle class.<sup>55</sup>

In this book, I offer a more uncertain and fragile view of things in comparison with the well-established worlds of Silicon Valley and Bangalore. This transnational, tenuous world is more in keeping with what most cognitive workers experience today. That is, for most programmers in India and abroad, conditions of work are uncertain. It is only the select few who reach levels of success that could make them "cyberstars." Yet, the image of a technosavvy Indian programmer continues to resonate in an extraeconomic sense. In tracking both these realities—the day-to-day conditions of work and the figurative meanings of the Indian programmer—I show how the idea of the Indian programmer is just as

much a part of the reality of cognitive labor as is Indian programmers' contract-based employment.

*Encoding Race, Encoding Class* is divided into two parts. Part I, "Encoding Race," is made up of three chapters. Chapter 1, "Imagining the Indian IT Body," uses political cartoons and ethnographic interviews to document racialized depictions of Indian IT workers. I use these images to show the multifaceted nature of the discussion of race in public. I situate Indian programmers as ambivalent subjects between Turkish guest workers and Afro-German migrants in German national debate around immigration and assimilation. Comparing these images and their narratives with the production of difference in the office, I show how office culture uses liberal, tolerant notions of race even while it sediments office hierarchies through folk theories of cultural difference. I use this chapter to argue that post-genomic uncertainty over whether race is a fixed or malleable property of human populations makes race "good to think with" about the equally uncertain futures that neoliberal capitalism promises.

Chapter 2, "The Postracial Office," uses ethnographic observation in corporate offices and interviews with programmers and managers from India, Germany, Australia, and the United States to show how race is refracted and reimagined through evaluations of worker quality. I explore the ways that race is deployed around cognitive work, arguing that it is a means of dividing office work into skilled "front room" and grunt "back room" coding. Firms pay attention to race as a source of information on foreign populations of potential customers and also as a rubric to evaluate the desired traits of cognitive workers. In a postracial office, race is denied as a salient factor in decision making through an emphasis on worker quality, even while worker quality is attributed to race. This chapter explores the multiple ways that race is made meaningful in such an environment.

Chapter 3, "Proprietary Freedoms in an IT Office," discusses the strategies Indian programmers use to be successful in short-term work contracts, including framing the work as a necessary, temporary step on the way to elite status and thinking of programming skills as a kind of wealth they control. They develop two sets of complementary practices: first, they criticize existing migration law that treats them as second-class citizens even while the code they write is so highly valued. Second, they try to extend their work projects beyond the length of their visas. I read this second practice as a claim for a kind of proprietary freedom, one that puts forth

a temporary ownership over work against the general ethic of workplace sharing and its corollary—mobile and replaceable labor. I use this idea of freedom-in-ownership to upend the usual way freedom in software is understood, highlighting that it is often the company and not its employees that is invested in the free exchange of information.

Part II, “Encoding Class,” investigates the relationship between the politics of work and the making of an Indian middle class. In chapter 4, “The Stroke of Midnight and the Spirit of Entrepreneurship: A History of the Computer in India,” I demonstrate that the long tradition linking technology, elite subjects, and nation building in India is currently reimagined through the lionization of private individual achievement. Indian coders are heirs to a technocratic discourse that puts them at the vanguard of national development. Viewed within this framing, short-term work contracts are stepping-stones to both individual and national self-determination. As such, the critique of migration regimes by diasporic Indian programmers is muted by the discourse of technoelite success through individual achievement to which they also subscribe.

In chapter 5, “Computers Are Very Stupid Cooks: Reinventing Leisure as a Politics of Pleasure,” I take readers into the homes of Indian programmers. The home is where their experiences on the street and in the office are parsed. I use the variety of activities they engage in at home—eating, gossip sessions, wide-ranging discussions that go deep into the night—to revisit scholarly understandings of the relationship between work and leisure under neoliberalism. By and large, Indian programmers do not allow work demands to intrude on leisure time; in fact, they actively resist doing so. I argue that leisure time is so preserved because it allows programmers to develop a politics of pleasure in the everyday (that I call *eros*), which helps define being middle class. I argue that alternatives to the colonization of leisure by work exist even within neoliberal regimes of work. These alternatives to immaterial labor flourish in the interstices between work as organized by firms and a middle-class imaginary of a good life.

In chapter 6, “The Traveling Diaper Bag: Gifts and Jokes as Materializing Immaterial Labor,” I analyze two ways that Indian programmers materialize cognitive work: telling jokes and giving gifts. Though much anthropological attention has focused recently on the gift as a site to think through contemporary capitalism and its alternatives, jokes have been given less attention. I put jokes and gifts together to suggest another reading of the



gift—not as an alternative to capitalist exchange but as a material instantiation of the problem of commensuration. Both jokes and gifts help commensurate the dictates of work and the demands of middle-class identity. I argue that jokes told about work, about Indian software engineers, and about outsourcing help ease the racial division of labor that Indian IT workers experience in the office by doing affective unwork. That is, they help loosen the investment in work. Gifts, on the other hand, do the affective work of reinforcing cognitive economies by extending care across distance through sentimental objects (such as diaper bags and clothing for children). I analyze these gifts as a mode of commensuration that makes the experience of coding as labor into a resource for securing a good life.

In the conclusion, “A Speculative Conclusion: Secrets and Lives,” I revisit Meenakshi’s experience to illustrate the nuance in these stories of Indian migrant programmers. I use the story of how she loses her job, hides this from her friends, and has to return to India as an opportunity to discuss the multiple trajectories that Indian programmers may take as they move through cognitive economies. I argue that Meenakshi’s story should be understood in its complexity rather than being reduced to evidence for the inherent risks involved in transnational labor. In particular, I consider her story as both an example demonstrating the “cruel optimism” of jobs that promise an entrée into the upper echelons of global software work, which they rarely deliver, and as an example of the “critical utopias” that allow Meenakshi to exit the scene of this labor, perhaps on her own terms. Finally, I argue that such nuanced readings of her story can only emerge by reconceptualizing cognitive work as a kind of labor that plays out both materially and symbolically across a terrain of race and difference.

*Encoding Race, Encoding Class* stitches together unlikely places and moves across social institutions in an acknowledgment of the ways that leisure and family, work and friendship are conjoined. As many scholars and popular commentators have noted, digital media has made much of this dispersion possible; the smartphone makes work portable and inserts work in sites formerly reserved for leisure. But technology is about more than making new worlds or disenchanting already existing ones. Because technological things extend the capacities of the human, they also initiate reflection on the human condition. I emphasize throughout the book the double-sided nature of technology, to make and to be a medium for reflection, to entail

behaviors it seems only to describe and in equal measure to be braided into the narrative of what should, could, and ought to be in life.

In 1997, technology theorist Langdon Winner worried about what the computer revolution had brought to the late twentieth century. “Will people beyond our immediate family, professional colleagues and circle of on-line friends,” he wondered, “be seen as connected to us in important, potentially fulfilling ways? Or will they be seen as mere annoyances, as unwanted human surplus that needs to be walled off, controlled, and ignored?”<sup>56</sup> Winner raised the question of difference, afraid for those who, excluded through technology, would be treated as “bare life.”<sup>57</sup> He had in mind the way that communications technology could set up divides between those with shared interests and assumptions and an undifferentiated mass of others.

Today, we need a more graduated conception of technological connection and disconnection. Much exists between the extremes of technology democratizing social relations, on the one hand, and solidifying power, on the other. There are proliferations of forms of life that exceed walling in and walling out. The stories of cognitive workers are important moments in the elaboration of technology and the self, work and difference.

The study of Indian programmers—so often lost in a cul-de-sac of economic debates about outsourcing—reveals a significant political-economic picture of the refashioning of work and subjectivity today. The story told here, of striving to make a life on the terrain of fluid capitalism, is at once specific to the class of Indian technoelites with whom I worked and generalizable as a fundamental condition of life in times of uncertainty. The precarity that is fundamental to their story is not only restrictive but generative of multiple kinds of ways of imagining and living in the world. These narratives will no doubt be taken up by ever new actors in hitherto unimagined ways.