

- O'Malley, M. (1992b). Time, work and task orientation: A critique of American historiography. *Time and Society*, 1, 241–358.
- Orlikowski, W. J. (1992). The duality of technology: Rethinking the concept of technology in organizations. *Organization Science*, 3, 398–427.
- Orlikowski, W. J., & Yates, J. (1994). Genre repertoire: The structuring of communicative practices in organizations. *Administrative Science Quarterly*, 39, 541–574.
- Orlikowski, W. J., & Yates, J. (2002). It's about time: Temporal structuring in organizations. *Organization Science*, 13, 684–700.
- Pearce, D.W., & Shaw, R. (Eds). (1992). *The MIT dictionary of modern economics* (4th ed.). Cambridge, MA: MIT Press.
- Perlow, L. A. (1999). The time famine: Toward a sociology of work time. *Administrative Science Quarterly*, 44, 57–81.
- Poyatos, F. (1976). *Man beyond words: Theory and methodology of nonverbal communication*. Oswego, NY: New York State English Council.
- Rapoport, R., Bailyn, L., Fletcher, J. K., & Pruitt, B. H. (2002). *Beyond work-family balance: Advancing gender equity and workplace performance*. San Francisco, CA: Jossey Bass.
- Raybeck, D. (1992). The coconut-shell clock: Time and cultural identity. *Time and Society*, 1, 323–340.
- Sabelis, I. H. J. (2002). *Manager's times: A study of times in the work and life of top managers*. Amsterdam: Bec's Books.
- Schor, J. B. (1991). *The overworked American: The unexpected decline of leisure*. New York: Basic Books.
- Smith, M. M. (1994). Counting clocks, owning time: Detailing and interpreting clock and watch ownership in the American South, 1739–1865. *Time and Society*, 3, 321–339.
- Sorokin, P., & Merton, R. (1990). Social time: A methodological and functional analysis. In: J. Hassard (Ed.). *The sociology of time* (pp. 56–66). New York: St. Martin's Press.
- Spangler, M. (1981). Time proverbs and social change in Belgrade, Yugoslavia. In: J. T. Fraser, N. Lawrence & D. Park, (Eds), *The study of time II* (pp. 223–233). New York: Springer-Verlag.
- Thompson, E. P. (1967a). Time, work-discipline and industrial capitalism. *Past and Present*, 38, 56–97.
- Thompson, J. D. (1967b). *Organizations in action*. New York: McGraw-Hill.
- Thrift, N. (1990). The making of a capitalist time consciousness. In: J. Hassard (Ed.). *The sociology of time* (pp. 105–129). New York: St. Martin's Press.
- Waller, M. J., Zellmer-Bruhn, M. E., & Giambatista, R. C. (2002). Watching the clock: Group pacing behavior under dynamic deadlines. *Academy of Management Journal*, 45, 1046–1055.
- Weber, M. (1996). *The protestant ethic and the spirit of capitalism* (T. Parsons, Trans.). Los Angeles: Roxbury. (Original work published 1904)
- Zaheer, S., Albert, S., & Zaheer, A. (1999). Time scales and organizational theory. *Academy of Management Review*, 24, 725–741.
- Zellmer-Bruhn, M., Waller, M. J., & Ancona, D. (2004). The effect of temporal entrainment on the ability of teams to change their routines. In: S. Blount (Ed.), *Time in groups: Vol. 6. Research on managing groups and teams* (pp. 135–158). Boston, MA: Elsevier.
- Zerubavel, E. (1981). *Hidden rhythms: Schedules and calendars in social life*. Chicago: University of Chicago Press.

SAYING 'GOOD MORNING' IN THE NIGHT: THE REVERSAL OF WORK TIME IN GLOBAL ICT SERVICE WORK

Winifred Rebecca Poster

ABSTRACT

Workplace temporalities are being reshaped under globalization. Some scholars argue that work time is becoming more flexible, de-territorializing, and even disappearing. I provide an alternative picture of what is happening to work time by focusing on the customer service call center industry in India. Through case studies of three firms, and interviews with 80 employees, managers, and officials, I show how this industry involves a "reversal" of work time in which organizations and their employees shift their schedules entirely to the night. Rather than liberation from time, workers experience a hyper-management, rigidification, and re-territorialization of temporalities. This temporal order pervades both the physical and virtual tasks of the job, and has consequences for workers' health, families, future careers, and the wider community of New Delhi. I argue that this trend is prompted by capital mobility within the information economy, expansion of the service sector, and global inequalities of time, and is reflective of an emerging stratification of employment temporalities across lines of the Global North and South.

Workplace Temporalities
 Research in the Sociology of Work, Volume 17, 55–112
 © 2007 Published by Elsevier Ltd.
 ISSN: 0277-2833/doi:10.1016/S0277-2833(07)17003-5

INTRODUCTION

Workplace temporalities are being reshaped under globalization. Some scholars argue that work time is becoming more flexible, de-territorializing, and even disappearing. These trends offer new benefits for employees, according to the optimistic accounts. Even if work is “speeding up” with the increasing connectedness of people across borders, work is also being freed from traditional temporal controls established in the Taylorist era of scientific management – controls of schedule, geography, and managerial authority.

I provide an alternative picture of what is happening to work time in the contemporary era of globalization. By focusing on the growing transnational information and communication technology (ICT) industry – and the customer service call center industry, in particular – I show how workers in India are experiencing a *reversal* of work time. Call centers are organizations that provide customer service agents for a wide variety of organizations (from book sellers, to credit card companies, to hospitals, government offices, etc.). The work involves answering phone calls from, or making calls to, customers. Indian call centers take a transnationally intermediate role in this scenario: they handle the calls by U.S. customers, for U.S., firms via satellite.

In these settings, the work day is shifted entirely to the night in order to be accessible to consumers in various countries of the Global North,¹ who are 12 hours behind. This reversal of work time has a literal meaning, in that employees are flipping their schedules to work at night and sleep during the day. This term has a broader symbolic meaning as well, however, in signifying how trends of labor temporality in the Global South are moving in an opposite direction to those in the North. Rather than a disappearance of work time, call center workers are experiencing a *hyper-management* of time on the job. Rather than experiencing a flexibility of shifts and schedules, call center workers face a *rigidification and standardization* of time at work. And rather than a de-territorialization of time and a freedom from place through their global connections, call center workers experience a *re-territorialization* of temporalities, in which keeping track of multiple, varying “times” – as well as the social meanings attached to them – is one of the most important features of the job.

The reversal of time generates a variety of tensions for Indian workers including: a heightened level of surveillance of their work activities, both locally and transnationally; a compression and confusion of time in their “virtual” work on the phone; a plethora of health ailments from the shifted

biorhythms; an experience of being cut off from families, services for the household, and future careers; and temporally stratified urban communities that are divided by night and day.

I argue this trend is reflective of an emerging global stratification of employment temporalities. In the ICT industry especially, this trend is prompted by capital mobility within the information economy, expansion of the service sector, and global inequalities of time. Thus, while workers in upper tier jobs (like highly skilled technical and managerial positions) may be experiencing new forms of flexibility of time, those in middle and lower tiers (like information service workers) in the Global South are subject to increasing control, with more serious consequences for their lives and the wider societies. Call center workers represent a middle tier of this ICT hierarchy. They experience privileges from being plugged in to the global information economy, yet at the same time, they are subject to greater temporal complexities and contradictions due to the interactive service nature of the work.

LITERATURE REVIEW

Accounts of what globalization is doing to work time vary quite a bit in the literature. Here I present some of the more well-cited or provocative theories, followed by my own perspective of reversed temporalities. My discussion is focused on dynamics of the ICT industry, and jobs that use, process, or generate ICT.

Globalization and the Unhinging of Work Time

Some scholars argue that globalization is unhinging work time from its traditional moorings and constraints. At least since the industrial period, if not further back, time has been the focal point of managerial control (Taylor, 1911). As championed and articulated by Frederick Taylor in his model of scientific management, the goal of capital has been to extract as much labor time as possible within the production process. By measuring and surveilling the minute actions of workers on the assembly line, managers would be able to eliminate and substitute “fast for slow and inefficient motions,” and achieve an “enormous saving of time.”

Yet global transformations are making this system inefficient and obsolete. One is the historic and progressing driving force of capitalism itself – to speed

up production time, produce more goods, and make more profits (Harvey, 2001). This drive for “acceleration” has reached a point where the infrastructure has outpaced the models of production. The advancement of information and communication technologies, in the form of satellite, internet, and telephone systems, has enabled a new level of global connection and traffic in information and goods. These ICTs have also permitted real time interactions. Thus, capitalism in its search for such speed has now achieved the instantaneous, in which old regimes of time are no longer applicable.

More profound, however, is a second development – the emergence of an “informational society” (Castells, 2000). It is “a specific form of social organization in which information generation, processing, and transmission become the fundamental sources of productivity and power because of new technological conditions emerging in this historical period” (p. 21). Information has not only transformed the infrastructure of our society, but it has reorganized economic and social activities. The basis of social hierarchies changes, as knowledge itself becomes the commodity of value for exchange. The basis of production changes, as the manufacture of information replaces that of material goods. These transformations have important implications for workers, whose labor can no longer be measured in terms of output of physical objects. Ultimately, the informational society has a different need for time than the industrial society.

Accompanying the information economy is a third element of globalization – a network organization of businesses. For Castells, the mark of the new global capitalism is not only that it is knowledge-centered, but that it is linked transnationally as organizations form ties to one another. Development of the network society means that production is organized not within individual firms, but according to horizontal relations with supplies, vendors, etc. Thus, as businesses are more dependent on these external relations, their timetables are less influenced by their own schedules. Managerial strategies for employee work time are restructured as well.

The consequence of these developments is that workplace temporalities are fundamentally altered, especially in the ICT industry. One of the most provocative arguments is that work time under globalization is *disappearing*. Authors have various labels for this process. Harvey calls this the “annihilation” of space with time, citing Marx (1973). Castells (2000, p. 494) calls this “timeless time.” The basic idea is that globalization is removing the “sequences” of temporality. Time is no longer differentiated, and so it becomes instantaneous or eternal. Under the network structure of the economy, “Time is managed as a resource, not under the linear, chronological manner of mass production, but as a differential factor with reference to the

temporality of other firms, networks, processes and production” (p. 468). Corporate strategy is now based on immediate decisions made “just-in-time,” in order to shorten “time per operation” and speed up “turnover of resources.” Employees too are freed from classic time: “in the informational economy, this time compression does not primarily rely on extracting more time from labor or more labor from time under the clock imperative” (p. 467). While this notion of “timeless time” is not all-encompassing across groups or places for Castells, it is still the “dominant” form of time, and one which “affects the entire planet” (p. 465).

A related idea is that temporality under globalization is being removed from its place or spatial location (Harvey, 2001; Sassen, 2001, 2006b), which one could call *de-territorialization* (Appadurai, 1996; Peterson, 2003). This idea has been discussed in a variety of ways. Harvey developed the term “time-space compression” to indicate the way globalization is weakening the relevance of geography as a reference point for social relations. Physical locations and the distances between them are less tangible given the quickness of the connections we make using ICTs. In essence, space is becoming smaller, and people feel closer together. For Sassen, de-territorialization of time is particularly important for the state: “the national state as a historic institution, a master temporality often thought of as historic time – is a deteriorating spatiotemporality. The global is a spatiotemporal (dis)order is in the making.” She notes how an emerging “grid of global cities” enables circuits to cross borders, especially those of North and South (2001, p. 271). This grid, in turn, is “excavating the temporality of the national” (2006b, p. 395). Our landscape is now governed by multiple temporal orders, one global and one local – the former of which is faster and more powerful. In contrast to the “velocity” of foreign corporations, public state bureaucracies have a temporality of “sloth.” Ultimately then, national time is being overtaken by global time. By extension, one could argue that the time of the “local” – broadly conceived to include civil society and private sector firms – is also being unhinged from its temporality, and replaced or intersected by a temporality of the global.

A third transformation of work time under globalization is *flexibility*. According to some accounts, workers within the information economy (especially the knowledge-producers) are gaining more autonomy over their employment conditions, including time and scheduling (Massey, Quintas, & Wield, 1992). Castells (2000, pp. 467–8) explains:

Because the value-making potential of labor and organizations is highly dependent on the autonomy of informed labor to make decisions in real time, the traditional disciplinary management of labor does not fit the new production system. Instead,

skilled labor is required to manage its own time in a flexible manner, sometimes adding more work time, at other times adjusting to flexible schedules, in some instances reducing working hours, and thus pay.

Studies of engineers, for instance, show how technical work is increasingly organized around project cycles, deadlines, crunch time, and reputational relations with clients, rather than clock time (Evans, Kunda, & Barley, 2004; Meiksins & Whalley, 2001; Ó Riain, 2000; Shih, 2004). Of course, these studies also reveal how the new temporal arrangements can be equally if not more disempowering for workers. For my purposes, the significance of this trend is the more basic de-standardization of work scheduling. Rather than a possible retrenchment to previous forms, work time in these jobs often moves in the direction of self-management. Manufacturing workers are even experiencing this flexibility. Some factory managers have also adopted participative strategies, where employees make autonomous decisions in real time instead of working under units of clock time. Just-in-time inventory management (as mentioned above) is transformed into just-in-time labor (Lash & Urry, 1994).

This work flexibility is more than just an outgrowth of production – it is a human resource strategy as well. Indeed, a variety of “flexible work arrangements” – part-time or reduced work, job sharing, compressed work weeks, sliding arrival and departure, and telecommuting – reflect an emerging human resource management strategy in the last few decades. Even state governments of many industrialized societies (aside from the U.S.) have adopted elements of these programs in their labor policies. Moreover, within the private sector, it is the high-tech firms like IBM, HP, Cisco, etc., that have often pioneered these policies (Galinsky, Friedman, & Hernandez, 1991). Employees who work in high-tech firms (especially women) are more likely than those in non-high-tech firms to be using flex-time and telecommuting, according to a study of 1,684 business school graduates (Catalyst, 2000). Ultimately, the source of these policies in high-tech firms is wide-ranging – from altruistic management trends championing “corporate social responsibility” for their employees; to transformations in business structure aimed at labor contingency; to a deliberate “time movement” by workers, unions, and human resource professionals; to organized activism and legal actions by women’s groups. The point is that many global high-tech firms – as the symbols of Castells’ network society – are at the forefront of temporal flexibility in employment.

The bottom line is that globalization is unhinging time from traditional types of managerial controls. More favorable versions of this approach offer a hint of optimism – that somehow the work of the future will be less

bound by the constraints of time, place, schedule, etc. Yet I will ask for whom? Might it be that these stories above are more representative of a specific sector of the new information economy – the global managers, professionals, and skilled technical workers?

Transnational Hierarchies and Tiering of the ICT Workforce

By focusing on another set of dynamics (that are often underplayed or ignored in the accounts above), I would like to present an alternate trajectory of work temporality in the ICT industry under globalization. Dynamics of outsourcing, service sectors, and time hierarchies are stratifying the ICT workforce. In turn, the middle and lower tiers of the information economy are marked by temporal regimes which are moving in an opposite direction to those of the elite workers above, involving increasing temporal control and sometimes temporal chaos.

Offshoring and Outsourcing of Global Capital

The first trend is a transnational stratification of the information economy itself. Although some see globalization leading to a “flat world” (Friedman, 2005) in which the economics of various countries are developing in an equal or at least parallel manner, this is not the case with the ICT industry. Consider the uneven scales of these industries across the Global North and South. In 2000, India spent the equivalent of 20.8 million dollars on IT research and development, comprising 0.85 percent of the gross domestic product, while the U.S. spent 261.9 million dollars, comprising 2.7 percent of its gross domestic product (UNESCO, 2005).

Another important feature of the ICT industry is its global mobility. It moves transnationally across borders rather than remaining stable or static within countries. This movement happens in two key ways. “Offshoring” is the flow of *firms* from countries like the U.S. to India. Between 1988 and 1993, the number of transnational firms in Bangalore (the Silicon Valley of India) alone rose from 23 to 103. A parallel process is “outsourcing,” a flow of *jobs* from countries like the U.S. to India through subcontracted firms. By 2003, over half of all Fortune 500 companies moved jobs to India, and some industry research groups predict that 3.3 million U.S. jobs will go overseas by 2015. Offshoring and outsourcing are major reasons why the call center industry is growing at a faster rate in the Global South than the North. European countries originally received the largest share of the international contracts for this work – especially Ireland and the UK. Asian countries

(especially India and the Philippines), however, now have the most rapidly expanding number of call centers (NASSCOM, 2003). So, while Europe exceeds Asia in spending on IT-related services like call centers (22 percent versus 15 percent, respectively), the growth rates are higher in Asia than Europe (15 percent versus 12 percent), both of which are higher than the U.S. (10 percent).

There are roughly 500 call centers in India at this point, many of which employ thousands of workers each. By 2008, the number of information technology enabled jobs in India is projected to rise to 1 million, with revenues of \$17 billion (NASSCOM, 2001). Most of this work is done for companies in the U.S. and UK Off-shored (foreign-owned) call centers like General Electric, Dell, and American Express exclusively serve their own consumers back in the U.S. They are large and hire up to 12,000 workers. Outsourced call centers (locally owned) often service many different consumer bases at once, for a variety of clients. They are generally smaller, hiring 200 or less workers, but are much more prevalent and thus comprise the bulk of the organizational field in the industry. Yet, whether these firms are foreign- or locally owned, they are financed entirely by client firms in the UK or U.S. (through subcontracting arrangements, for instance). This point is critical because it means that these workers in the Global South are doing work *for* firms in the Global North. In addition, the managers and owners who run the call centers firms in India are accountable to those clients regarding production and labor conditions – including work time.

In this way, the structure of the ICT industry is a crucial element in the globalization of work temporalities. The industries are stratified across countries like India and the U.S. in their scale and resources, and moreover, the firms and production processes are highly mobile transnationally between these two sites. Because global IT industries are unequal in their foundations then, it follows that their work temporalities also vary.

The Service Society

A second major development under globalization affecting temporalities is the rise of the service society. While scholars like Castells hold the informational society as the forerunner and “core” of the new economy, a more grounded approach also recognizes its counterpart – the service society. The service sector of the economy is not only much larger, but has unique dynamics of labor and managerial control. In turn, the coexistence of these dual economies has profound implications for the quality of jobs emerging around the world, and subsequently, their temporalities.

Most new jobs within the formal sector around the world are in services.² These jobs involve doing something for people rather than making things. A service can be conceptualized broadly in a number of ways: (1) according to its non-material outcomes, given that it does not directly produce, grow, or extract things (ILO, 2001); or (2) according to its relational characteristics, given that it may provide front line assistance to customers or the public (MacDonald & Sirianni, 1996). Services are also identified by their roles in particular industrial sectors, like “social” services of health, education, and government work, “distributive” services of transportation, and “personal” services of retail, restaurants, janitorial work, childcare, etc. An increasing proportion of these jobs, however, are in “producer” services which “provide information and support for the productivity and efficiency of firms” (ILO, 2001, p. 109).

As shown in Table 1, the share of employment in services has grown dramatically over the last half of the 20th century. The world average rose approximately 20 to 50 percent from the early 1960s to the late 1990s. While manufacturing jobs have been declining in numbers, service jobs expanded by 15 percent in Sub-Saharan Africa, and by as much as 45 percent in Latin America. These service jobs, moreover, are outpacing the information jobs. In the U.S. for instance, the share of information handling jobs rose from 39 to 48 percent over the period of 1970 and 1991, whereas the share of employment in services rose from 66 to 75 percent. Thus, while the information economy has provided many employment opportunities, most new jobs are not knowledge-producing or knowledge-related. Instead, they are far less glamorous conditions, with lower skills and wages.

Indeed, there is a relation between these economies within the class structure. Information jobs are often clustered in the upper tier of the

Table 1. Growth of Services as a Percent of Total Employment, by World Region.

	Early 1960s	1980	Late 1990s	Net Change
World Average	20	41	50	30
Sub-Saharan Africa	14	23	29	15
Asia and the Pacific	13	34	45	32
Transition Countries	10	38	46	36
Middle East and North Africa	19	44	50	31
Industrialized Countries	36	53	64	28
Latin America & the Caribbean	20	52	65	45

Source: ILO (2001, p. 112). Figures are approximated from original.

occupational hierarchy, while service jobs (especially personal and distributive functions) dominate the lower tier. As each sector expands horizontally, so does the distance between them vertically. The reason is that they are fundamentally linked: support jobs at the working class level are needed to uphold the knowledge and managerial jobs at the middle and upper class levels. Many scholars observe this process geographically, noting the wide range of service jobs that develop surrounding the high-tech parks and centers of global cities, as well as the recruitment of masses of women, ethnic minorities, and immigrants to fill them (Benner, 2002; Matthews, 2003; Pellow & Park, 2002). We will see the dynamics of this trend in the regions around New Delhi later on in the paper. Indeed, given that service jobs are growing at such a faster rate than information jobs, one might argue that the informational economy may be fueling the service economy as a means to sustain itself.

The service society is also significant for its intersection with the informational society. The infusion of technology into the occupational spectrum is widening the gap within service jobs themselves (Sassen, Forthcoming):

Among the major system tendencies in the organization of the service sector contributing to polarization is the disproportionate grouping of service industries at either end of the technology spectrum. Service industries that can be described as information and knowledge intensive have generated a significant share of all new jobs created over the last fifteen years in developed economies while most of the other jobs created in the service sector fall at the other extreme. For instance, the two broad occupational categories projected by the US Bureau of Labor Statistics to increase are professional specialty occupations and service occupations. The Bureau's data and projections show that the incomes in these occupations in the 1990s and into the 21st century are on opposite ends of the earnings spectrum, with earnings for service workers about 40 percent below the average for all occupational groups. [p. 21]

Based on measures like income, the lower-skilled service jobs seem to be sinking down the class structure, while at the same time, the highly skilled technological jobs are infiltrating professional and producer services, and widening this stratum at the top.

My interest is the midpoint where the two economies crossover and converge (i.e., jobs with both information and with service content). This point is where call center jobs lie. A useful way of conceptualizing the complex distinctions within this stratum is the network relation of the jobs, or how they are connected to the information economy. Individuals who work and interact within the ICT network (like internet, satellite phones, etc.) have different capacities "to link up with other workers in real time" (Castells, 2000, p. 260). Castells groups these individuals on a continuum, from "the

networkers, who set up connections on their initiative ... and navigate the routes of the network enterprise; the *networked*, workers who are on-line but without deciding when, how, why, or with whom; the *switched off* workers, tied to their own specific tasks, defined by non-interactive, one-way instructions." I would argue that this "network" relation can be mapped onto a service relation as well, and call center workers illustrate the contradictory relations between them.

Indian call center workers represent the middle "networked" position in this hierarchy, which I would argue is a contradictory class location between the other two. Like the "networkers" for instance, call center workers have access to the global economy – and particularly the Global North – through their work on the phone and on the internet with ICT technology. Yet, these features alone are not potent enough to elevate them into the upper "networker" echelon in India. Consider the differences in status and pay between the engineers and the call center workers (Table 2). Local industries refer to these groups with separate labels: the "ITES" or information technology enabled service employees use ICTs as part of their jobs, like call center work; the "IT" or information technology employees, are engineers who produce technical knowledge through research and development. Salaries of the IT firms are double those of the ITES firms, almost all the way up the job hierarchy from entry level to managerial jobs. In the entry

Table 2. Median Annual Wages in Indian IT versus ITES Sectors, 2004.

"Information Technology" Engineering Work			"Information Technology Enabled Services" Call Center Work		
Job Title	Rupees, in Thousands	Dollars*	Job Title	Rupees, in Thousands	Dollars*
Software Engineer	290	6,444	Customer Care Executive	143	3,178
Senior Software Engineer	439	9,756	Senior Customer Care Executive	205	4,556
Team Leader	655	14,556	Team Leader	320	7,111
Project Leader	935	20,778	Assistant Manager	443	9,844
Project Manager	1,362	30,267	Manager	762	16,934
Program Manager	1,884	41,867	Assistant Vice President	1,596	35,467

Source: NASSCOM (2006a, 2006b).

*Wages converted at a rate of 45 rupees per dollar for the year of 2004.

level positions, for instance, software engineers earn a median annual salary of 290,000 Rupees (or \$6,444), whereas customer care executives earn a median salary of 143,000 Rupees per month (or \$3,178) (NASSCOM, 2006b).

On the other hand, call center employees share some commonalities with the “switched off” workers at the other end of the network spectrum as well – namely, service functions in the information economy. In both cases, the employee is neither producing the information, nor the intended user. Rather, s/he is the mediator of the information, who manipulates or transforms it for transfer between parties. Switched off workers, for instance, are typically connected to the information economy through one-way interactions like data inputting and processing (Freeman, 2000). Freeman illuminates this process in a path-breaking ethnographic study of informatics workers in Barbados. In documenting the experiences of employees who “enter data from consumer coupons, airline tickets and insurance claims” (p. 171) for multinational firms from the U.S. and Canada, Freeman shows how the new global factory is proletarianized (and feminized), even while it is digitized.

What slightly elevates call center jobs above these switched off workers are the two-way communication in the digital world they experience through the work of ICTs. This *interactive service* relation (Leidner, 1993, 1996) is unique because it involves direct contact between the employee and the customer, in this case over the phone. This task requires some skill in terms of negotiating the dialogue and relationship, and following a “script.” While this job can be highly routinized (like at MacDonalds), it can also involve a certain degree of improvisation (to sell a cell phone plan) and/or higher technical knowledge (explaining how to fix a computer) – both of which are more complex than merely entering health insurance claims onto a screen (data entry work).

The drawbacks of interactive service work in call centers are unique managerial controls. One is the requirement for emotional labor (Hochschild, 2003). This process occurs when supervisors ask workers to display pleasant attitudes, feelings, and words in order to please the customer. Another constraint of interactive service is that employees are temporally bound to consumers in an immediate way. Because the communication is done in real time, employees must organize their schedules directly around that of the customers – something that the networkers and switched off employees do not experience at all, or to the same extent. So for instance, while Freeman’s informatics workers experience confusions of time (i.e., not being able to distinguish day and night while in the office), call center

workers experience a complete temporal disjuncture. For all these reasons, one might consider call center workers as the middle tier of the hierarchy – plugged in to the global information network, but without discretion and authority over the conditions of their jobs.

My point, at a basic level, is that the informational society does not exist in isolation but in fact shares the new global economy with a service society. These two economies are parallel, and also intersecting. Subsequently, all “technology” jobs may not look the same, especially across North/South lines. The dual economies generate a variety of class and occupational hierarchies, some which are broadly polarizing into information and service classes, and some which are more subtle and fine-tuned like the spectrum of networker, networked, and switched off employees. As I will show, experiences of time and temporal orders are fundamental markers across these tiers.

Global Politics of Time

A third element of globalization affecting work is the issue of time itself, and how it is embedded within transnational hierarchies. While we often presume an inevitableness of calendar and clock time, some scholars urge us to recognize a “time politics of globalization” (Adam, 2002). In this view, time is socially constructed, and moreover, it is experienced variably across different geographic locations. According to Barbara Adam, “colonialism by temporal means” or “colonization with time” is a characteristic feature of these time politics. Temporality itself, just like other realms of social life (i.e., economy, government, medicine, etc.), can become sites for authority by the Global North over the South.

For instance, especially around the end of the 19th century, colonization with time occurred through the imposition of industrial time around the world in the form of standardized clocks, time zones, etc. This process happened both coercively and hegemonically. As an example of the former, Britain established Greenwich Mean Time during the colonial era, which became the central axis for the international clock and which we all still use today (Castells, 2000). Examples of the latter come from countries like Russia and Japan. While originally hesitant to join in, these nations eventually proceeded to “westernize their social relations of time” when “political leaders of these societies realized there is a heavy economic and political price to be paid for any deviance from the industrial temporal norm” (Adam, 2002, p. 17). Time itself can be part of the contemporary political economy.

South Asian scholars broaden this account with additional insights of global hierarchies of time (Chatterjee, 2004; Nigam, 2004). Nigam points out how the authority of global time has uneven patterns within nations of the Global South. Hierarchies of time *between* nations are mapped out on class relations *within* India: there is a “disjunction of temporal experience” that “has to do fundamentally with access to wealth and power The time of the global belongs, in a sense, to the powerful” (Nigam, 2004, p. 3). Indeed, it is the urban, affluent elite who have access to this “global” time, while the rural (and urban) poor are living on “local” time.

Chatterjee has more profound critique of time under globalization. He argues that the version of time constructed by the Global North (e.g., “industrial” time, discussed above) is in fact fallacious. This “homogenous” time, as he labels it, is not experienced by everyday people. He provides an alternate descriptor of temporality in the Global South:

Empty homogeneous time is the utopian time of capital. It linearly connects past, present, and future, creating the possibility for all of those historicist imaginings of identity, nationhood, progress, and so on ... But empty homogeneous time is not located anywhere in real space – it is utopian. The real space of modern life consists of heterotopia ... Time here is heterogeneous, unevenly dense. Here, even industrial workers do not internalize the work-discipline of capitalism, and curiously, even if they do, they do not do it in the same way. [p. 7]

He follows with examples of Indian managers and workers who infuse their factory work with localized rituals and religious meanings (as I have witnessed myself in multinational, high-tech settings). The relevance of this notion for Indian call centers is articulating how the lived experience of time may be multiple and conflicted. The time of global capital may be itself being heterogeneous, and moreover, re-interpreted and resisted by people at the local level like employees.

From this perspective then, the information economy may be resting on hierarchical structures of time. It suggests that global politics of time also have a role in the tiering process of employment temporalities, independent of the factors above. Indeed, the capability to construct and manipulate time by firms in the Global North may be one of markers of authority in call centers of the Global South.

Reversed Temporalities of Work

I will argue that because of these three factors – mobility and inequality of firms within the informational economy, expansion of the service sector, and

global temporal hierarchies – time is *not* being unhinged from traditional controls for the workers in my study, and perhaps for other workers in the global ICT industry. Complications and inconveniences of time and space by firms in the Global North are being transferred to workers in the Global South in the form of a reversal of work temporalities. The basic principle is an inversion of the 9 am to 5 pm shift to center hour around the midpoint of midnight rather than noon. Unlike call center workers in the U.S., or even those in domestic call centers in India (i.e., those making calls to customers in India), these workers are shifting their entire lives to the nighttime. It is not a partial shift in work schedules that would enable a window of overlap with their regular lives. It is a complete reversal of awake life. It is a distinct temporal order, not one that merely alters existing or traditional work temporalities. Furthermore, reversed work time has a broader meaning beyond the practical issue of scheduling labor time. It has implications that are virtual as well physical, with distinct temporalities on the phone from those on the shopfloor.

Scholars have offered varying portrayals of what reversed work time means for workers and the broader society of India. Critical theorists like Shome (2006, p. 117) see call centers as a neocolonial regime of temporality:

In earlier dispensations of colonialism, at least the body’s time was not invaded. The colonizer and the colonized inhabited the same physical time. In this case, however, the reversal of day and night brought about by the collision of time results in a biopolitical violence towards the health of the third world body that parallels, with differences to be sure, other ways in which the global economy today invades the third world body through toxic dumping, pharmaceutical distribution, reduced funding for AIDS, forced contraception, and more.

Managerial authority over work temporality by Northern firms – through their control of the worker’s “body” – is connected to other kinds of environmental and health degradation in the Global South. In this view, international call centers foretell a transformation of capitalist domination into new forms.

The opposite view, steadfastly euphoric, is presented by journalist Thomas Friedman (2005, pp. 2, 25, 28–29):

These call center jobs are low-wage, low-prestige jobs in America, but when shifted to India they become high-wage, high-prestige jobs. ... Although a great majority of the calls are rather routine and dull, competition for these jobs is fierce – not only because they pay well, but because you can work at night and go to school during part of the day, so they are stepping-stones toward a higher standard of living. ... [Quoting a CEO:] “You work in the day, and then the night, and then the next morning.” But the working environment, he insisted, “is not the tension of alienation. It is the tension of success.” ... The relatively high standard of living that [a call center operator] can now enjoy – enough for a small

apartment and car in Bangalore – is good for America as well. ... India's growing economy is creating a demand for many more American goods and services.

Call centers will not only uplift Indian workers into the middle class, but they will enhance the economies of the Global North as well. The expanded purchasing power of Indian consumers will project economic growth back to the U.S.

Negotiating between these varying accounts is one of my aims. I follow in the steps of scholars recently who have critiqued the time politics of Indian call centers through media analysis and empirical study (Aneesh, 2006; Mirchandani, 2004; Patel, 2006; Shome, 2006; Taylor & Bain, 2005). My particular aim is to illustrate how temporalities of work in three Indian call centers are, in fact, displaying alternate trends of work time under globalization to the patterns outlined earlier. First, work time does not disappear or become timeless for these employees. Instead, time becomes even more integral and necessary within the labor process, both in terms of regulating workers' physical bodies in the workplace, and in terms of the content and scripts they use to interact with customers. Second, work time does not become more flexible. To serve the conveniences of Northern consumers in multiple time zones, and to coordinate the complex schedules of the labor force, managers hyper-standardize and hyper-surveil worker time. Finally, work time is not unhooked from place or geography, or de-territorialized. Rather, time is re-territorialized in the virtual experience of call centers, as workers handle calls from multiple global sites, and as employers require phone agents to know localized meanings of time for consumers in each country. During this process, nonetheless, Indian call center workers receive a number of benefits from their networked status, making their experience, at very least, a complicated one. First I discuss my cases and methodology.

METHODOLOGY

The analysis is based on ethnographic field work in Indian call centers from late 2002 to early 2004. Field work was done in the northern region of India near New Delhi, in the neighboring cities of Noida (state of Uttar Pradesh) and Gurgaon (state of Haryana). Gurgaon is where the call center industry began, and still has the largest concentration of organizations. Three call centers were the focus of the fieldwork. They were selected through several informants – one through personal connections, another recommended by an industry association, and the third recommended by a government

official. The firms represent variations within this industry in terms of size, ownership, and global positioning (Table 1): BigCo, as a multinational firm, with about 3,000 employees; MediumCo, as a joint venture firm with a U.S. company, and about 200 employees; and SmallCo as an Indian-owned firm, with 40 employees.³

My entree into these firms was fairly smooth once I had my connections and references. I met first with the directors or CEOs, stating my purpose as exploring the social impacts of call center work for Indian employees, and for U.S.-Indian relations. The CEOs were very welcoming and expressed little suspicion. While they did express concern about the privacy of information garnered from the clients, they were relatively candid about their labor practices, which they considered to be fair, if not above standard. Their openness may also be related to their eagerness for exposure. All three firms entertain outside visitors regularly, including local and foreign journalists, political officials, and their client firms. BigCo has designated staff just for the purpose of giving tours. A U.S. TV crew had been there the week before.

Client firms in the Global North who contract services from these call centers represent many industries: cell phone companies, utilities firms, computer firms, mortgage firms, cable television firms, etc. Agents handle two types of calls. Inbound processes are when the customer calls the agent, usually for assistance with a product or service (like technical support). Outbound processes are when the agent calls the customer, for instance to sell a product (i.e., telemarketing) or to ask for payment on their bills (i.e., collections). Agents handle 30 to 300 calls in a night depending on the process.

My methods involved interviews and observations. At these three firms, I conducted 50 formal (semi-structured) interviews with calling agents. This includes about 15 from each firm (with a handful of interviews from a few additional firms for more breadth of comparison). Interviews were conducted in English and lasted about an hour. Sample selection was based on employee lists provided by the human resource department. Respondents were chosen randomly, although samples were balanced according to gender and occupational level. (Codes in the quotations below indicate interview numbers.) Most of the population is young, highly educated, and urban. My sample was also mostly male, at about 60–70 percent, which is illustrative of the national distribution (NASSCOM, 2006a).

I talked to other types of informants as well, through more informal, unstructured interviews. This included 20 interviews with HR managers, quality control personnel, recruiters, trainers, nurses, etc. I also conducted

another 15 interviews outside these firms with experts and professionals from the community, such as representatives of industry associations, government officials, and non-governmental associations that organize or support employees in ICT jobs.

Finally, I used ethnographic methods of observation to get a feel for the experience of call center work. I observed the “production floor,” attended training seminars, joined agents for dinner in the cafeteria, etc. I also listened in on the calls (referred to as “barging in”) by plugging a second headset into the phone. I did this both at the quality control station, where I could hear the calls and see the workers’ computer screens, and at workers’ stations, where I could see their facial reactions. This allowed me exposure to the customers as well.

The rest of this paper will explore the reversal of work time in call centers in several parts. First, I outline the sources of reversal of work time in global, national, and local institutions, and how it is constructed at the point of the labor process by managers in the call centers. Next, I discuss the employee experience of reversed work time, both in the virtual world when agents are on the phone with customers, and in their lives outside the call centers. The final section considers how reversed work time extends beyond the call centers into the community, in the form of a nighttime city.

WHY NIGHT BECOMES DAY FOR INDIAN CALL CENTER WORKERS

There are many sources of reversed work time, and they operate at global, national, and local levels. These sources involve a variety of actors – state governments, ICT industries, and consumers – although at different points of the process and in different capacities.

Capitalizing on global time is one reason why *Northern firms* are so interested in outsourcing to India in the first place. According to Indian IT officials like the government’s Director of Software Technology Parks of India (hereafter “STPI”):

The whole thing [industry] started around the concept of global servicing, or what you call remote computing. *Time to deliver* is a major gain for those clients. Our companies could tell American counterparts that a round-the-clock operation is possible. Whenever you are sleeping, we are at work. Any problem which could not be resolved at the end of the day in the U.S. can be passed on to the crack team in India, who will work for them as if they are working overnight and solve whatever problem is there. The next morning

when they [Americans] come in to the office, the issues are already resolved. [OI-4, emphasis added]

“Global remote computing” is the answer to capitalism’s temporal quandary in the post-industrial (i.e., service) age: how to accelerate production and overcome the limitations of local time. By splitting operations geographically and running them consecutively, firms can achieve round-the-clock operations. India serves the U.S. as well in this regard because it is exactly 12 hours ahead of the U.S., (varying slightly by region and daylight savings). Indian firms can start up as soon as U.S. firms shut down, enabling functions like customer phone service to operate 24 hours a day. This process of speeding up and compressing work time – which increases the amount of labor extractable from a single work day – makes outsourcing a desirable strategy for U.S. firms.

Of course, there are additional benefits for Northern firms, such as cost and control. The STPI Director continues:

The cost to produce such a service was at the Indian rate, so you are taking advantage of the cost of living. The second aspect: because of better communication infrastructure, it was as if this was being done next door. You can log into a main frame in the US, just like a terminal here, and *those American companies still have responsibility or the authority of the databases*, or whatever is happening in those systems. And it really did not matter whether the development is taking place the next room or it is happening thousands of kilometers away. [OI-4, emphasis added]

Historically, cheap labor has been a motivation for corporate offshoring, and Indian call center wages are merely 1/10 of those at home. More recent is the technology and communication infrastructure that allows these firms to oversee the production process transnationally and digitally. As the STPI Director notes, Northern firms have full authority over the “databases,” which are crucial now that information about sales, consumers, etc., is a core component of the production process.

There is another set of constituents in the North that participate in, or at least influence, the dynamics of reversed work time – the *Northern consumer base*. After all, it is *their time* that conditions the core production process of phoning. Because the purpose of call center work is to reach the customers when they are at home, Indian agents need to be awake when the American consumers are awake. Accordingly, the time when consumers are at home – in the evenings and on weekends – determines the work schedule of call centers. Nikil at MiddleCo explains:

Today is my day off, but still I’m working here just because there is a holiday in the United Kingdom today, and we get a lot of contacts on Saturdays. We work all these days because of many reasons – because of the client’s requirements, because of the

company rules, and because of the campaign requirements – a lot of things are there. It's company policy. [MF-14]

In this way, the leisure time of consumers in the North plays a role in dictating schedules in the South.

In a related way, one could also say that *Northern states* participate in this reversal of work time in India as well. Labor laws that limit work hours and days of employees in the North prompt (however unwittingly) an expansion of work hours abroad. Nikil explains this point as he continues: "There are certain company rules in the U.S., as well as U.K., that people only work for 5 days and 2 days are off. But we never get any [weekend] off." Indeed, one of the reasons why Indian employees are working at night and on weekends is that British and American employees are legally forbidden to do so. Northern labor laws provide the foundation for this disjuncture: they do not apply to the foreign employees of those same U.S. firms when they contract or locate abroad (Poster, 2001). Multinational firms and industries sometimes take advantage of this freedom from labor controls to use Southern workforces for filling in or expanding upon the shifts of their workforces in the North. Ironically then, the same legal protections on work time which were the impetus and central rallying point for the labor movement in the U.S., and in fact, the core of the first labor regulations, have been used by U.S. firms as a way to legitimate the exploitation of workers abroad.

Within India, there are sources of reversed work time as well. The *Indian state* has done much to make the reversed work day possible and even attractive for Northern firms. Since independence, Indian leaders from the across the political spectrum have touted the IT industry as the path to national development – from Jawaharlal Nehru's mechanical and steel "temples of the future," to Rajiv Gandhi's political entourage of "computer boys" and "computer missionaries," to Vajpayee's "Shining India" – each using the imagery of the science, technology, and/or computers in their political rhetoric and discourse (Chakravartty, 2001; Nigam, 2004). Through the National IT Action Plan of 1998, the national government set up STPI in five regions around the country, including Delhi, Bangalore, and Hyderabad, and offered 100 percent tax exemptions for export-oriented services. The STPI was also set up as a government branch – for ICT firms – to bypass regular bureaucratic channels regarding access to communications, broadband, and satellite infrastructure. Furthermore, the Indian state has subsidized the IT and service industries financially, with 10-year holidays on income tax from their profits (Aneesh, 2006), and exemptions on sales and excise taxes for equipment purchases. Many state governments,

like that of Haryana where the city Gurgaon of is located, put up their own monetary and infrastructure incentives. It has offered: preferential treatment for land allotment; a three-year break on charges for land use for three years; continuous and uninterrupted power supply (including exemptions from scheduled power cuts); priority advantage in loans from state financial institutions; exemption from the Pollution Control Act; and much more – including special incentive packages for large revenue firms with "mega projects" (Government of Haryana, 2000). In many ways then, the Indian government has funded and facilitated the nighttime city.

The Indian state may not have bothered to touch its historic, socialist-influenced labor laws if it was not for the last group – Indian entrepreneurs and by extension, their industry associations. Leading them is the National Association of Software and Service Companies (NASSCOM, 2006a). NASSCOM has over 950 member firms (150 of which are international, such as from the U.S., UK, EU, Japan, and China) representing 95 percent of the revenues for the industry. Undoing state labor laws regarding time has been one of their chief interests and activities:

We recently had a conference of NASSCOM in Bombay on BPO [business process outsourcing] and call centers, which we normally call "IT enabled-services," and the general consensus of various operators and leaders in this segment is that we have a big opportunity on this – only if we are able to unleash some of our policies and other labor related issues which quite often gets into the focus in certain local areas. [OI-4]

Ironically, one of the main obstacles to night work is access for *women*. Since 1954 for instance, the Delhi Shops and Establishments Act has prohibited employers from assigning female employees to night shifts. IT business associations in Delhi were successful in amending this Act in 2002, however, to exempt their industry.

Furthermore, business associations have been organizing on this issue all across India. State governments from north to south have also passed similar amendments: Himachal Pradesh, Punjab, Maharashtra, Bengal, Karnataka, Andhra Pradesh, and Tamil Nadu. The Director of the Northern Region Business Association (hereafter NRBA)³ explains how his group "got it done" in one state: "We represented to government, we talked to the Chief Minister, we explained to him that Himachal Pradesh is a good area where a lot of IT, software, and related things can take place. It has good weather. So to attract investment, they agreed to our conditions." The promise of economic growth and foreign cash is a powerful incentive for local governments to abandon their nighttime labor laws. It is a continuing struggle, however. The Government of Haryana, for one, has

been resistant to the idea. In 2005, it was still sending notices to Gurgaon call centers for violating the no-night-work-for-women provisions (Anand, 2005). NASSCOM found creative ways to bypass the Punjab Shops and Commercial Establishment Act from which the law was taken – by declaring the ICT industry as a “public utility service” which is exempted. Even as recent as 2005–06, their on-going agenda includes securing these rights in Haryana (NASSCOM, 2006a).

Aside from lobbying for night work, IT associations have been pushing the state for more work days in the calendar year. They have been seeking immunity from rules prohibiting work on weekends and Indian national holidays:

[The law says] you cannot work on National holidays – the 15th of August [Independence Day], or the 26th of January [Republic Day]. But the usual functioning of this thing, you know, individuals are being asked to work beyond eight hours or ten hours, or whatever is stipulated. They [employers] were wanting that this should be working in round the clock fashion: twenty-four hours a day, three sixty five days in a year. Whereas the labour laws permit weekly offs and certain other things. So quite a few of these state governments – because it is a matter of the state [rather than federal] governments – they have modified their rules appropriately. [OI-4]

In the interests of the 24 (hours a day) -7 (days a week) -365 (days a year) business model, the call center industry is trying to remove as many barriers to work schedules as it can. Until the associations can overturn the full range of Indian labor laws though, many firms encourage employees informally to work on weekends and holidays. Ironically, this means that agents are working more days per week than people in local jobs – like their own parents. Nikil explains: “In India, weekends are always off. Both my parents are in government jobs, and they always get two days leave, that is Saturday and Sunday. But we have to work.” Needless to say, call center employees also work on U.S. holidays, which upsets agents like Uma at BigCo: “We work double the normal load. The U.S. client would load more policies on December 24th, so we would not get Christmas off. We should not have to work both U.S. and Indian holidays” [BF-3]. Through their political activities then, the Indian IT associations have been laying the groundwork for reversed work time.

It should be noted that, for all of these groups mentioned, reversed work time may not be a matter of conscious design. The implicit message of their actions, nonetheless, is that daytime work hours for employees in the Global South are expendable as byproducts of their other interests. Scheduling shifts according to American daylight, and sacrificing that of Indian workers

is a valid and acceptable solution to the temporal dilemmas in global service industries. This is where we see the origins of globally stratified work time.

The people who construct reversed work time at the point of the labor process are the local managers. Their participation in this process will be discussed next.

MANAGERIAL AUTHORITY UNDER REVERSED WORK TIME

The first marker of reversed work temporality is how authority is carried out – through a hyper-management of time. Time does not “disappear” in these call centers, like in other global work contexts. Quite the contrary, it is the focal point for managerial authority, and it is enforced through super-technological apparatuses that are both local and transnational. This happens in ways that are reminiscent of the Taylorist era – albeit updated for the digital and global age.

It starts with the scheduling of shifts. Standardizing time is the key agenda for managers. Precision of this 8 hours work day, coordinated into shifts, is the imperative. The work day is not reconstructed, broken down into “project time,” made flexible, or alleviated in any capacity. It is traditional office time, directly reversed: 8 pm to 4 am (for example). The Vice President of Human Resources for BigCo explains:

The amount of professionalism that goes into the running of these businesses is huge. We run something like thirty-nine shifts, overlapping shifts, and a whole bunch of people work at this to try and drive perfection into it. [He shows me on paper numerous overlapping graphs of peaks and valleys.] This is the call arrival pattern here. That means that, at this time, the volumes are at this level; at this time, the volumes are at this level; and at this time the volumes are at this level. My staffing of people must meet these volumes at these times. There are many irate customers who are at the other end who have called up, and if there's nobody picking up the phone, the average waiting time goes up.

For example, this is the start of the shift, and there are people who must come and man the shift. And over here, there's a second shift which starts with ninety people; here you get another twenty; here perhaps you will get another forty; and here you get another fifty or whatever. So, each one of these there's a separate shift. Nine hour shift, or eight hour shift. And that's not easy to manage. It costs millions of dollars in staffing and scheduling software that is designed specifically to meet these requirements. [BI-3]

Controlling the shifts is a primary means of maintaining the “production” of customer service – so that the workers get to the phones at the right time.

The software used for scheduling shifts provides a glimpse into how technology is integral to time management.

Other temporal aspects of call center work are managed as well. For instance, supervisors monitor employee time within each call. They do it through the computer terminals employees work on. Special programs record the details of the calls, including start time, length, outcomes, etc. The CEO at MiddleCo explains:

Every minute, every hour needs to be monitored, because it's purely people dependent. We don't have machinery which is churning it out commodity by press of the button, or something like that. It is pure people management. We have various levels of staff and everybody who's got experience in various fields, and there are systems and processes in place to check on at every level. For instance, every call can be recorded. They [quality control staff] monitor calls at random, and they have to listen into live calls. Live – I'm not talking about recording – live calls, they assess a fixed number for every person in the organization over a period time.

And the technology is in place wherein you can get up-to-the-minute detail of how a particular call was disposed of – whatever question you ask, was it resolved or not resolved, or a sale was made or not made – everything is captured in the technology. That's a key part of the software. It is system driven, it's not human driven. And they [employees] don't know if someone is listening to that particular call or not. If they have not disposed it off correctly, then that's a non-compliance. Did he deviate from that? Did he misquote? Did he misrepresent? They could be reprimanded for it. [MI-1]

Some firms use the internet to post the summary data of each workers' call records on their corporate websites. Certainly, "local" call centers use this technology to monitor employees through computers (Perin, 1991; Zuboff, 1988). What is different here is that it is done transnationally. The minutia of employee call activity is directly observable by client firms in the U.S. They can view computer screens of each agent in real time, or ask the quality control department in the Indian call center to patch them through to a particular agent and listen in on the current call.

Controlling work time also involves controlling the work space and movement of workers. Most call centers lock their internal doors, and workers wear passkeys around their necks to scan their entry as they go around the building. One firm I visited equipped all of the entrances, hallways, shopfloors, break rooms, etc., with surveillance cameras. They built a separate control room, and hired a security officer to monitor the videos continuously (See Photo 1). At MiddleCo, workers are locked inside the periphery of the call center campus. Deepa explains: "They don't let us go out of the gate. The gate is always closed, and you can't go out of the gate, as if you are in a school. You have to take permission for everything. I know it's for our safety, but sometimes it's awful. They should open the

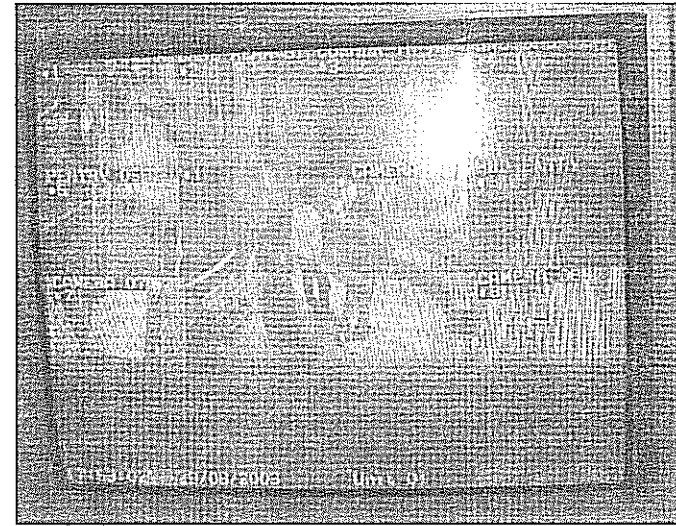


Photo 1. Hallway Video Surveillance in the Call Centers. Source: Author's Fieldwork, 2003.

gate" [MF-4]. Controlling movements inside the buildings in these ways helps to ensure (among other things) that workers are close to their posts at all times, and that shift schedules are maintained.

Employee time is controlled *outside* of the workplace too – before and after they get to the call center. Managers use a combination of sponsored housing and transportation shuttles to extend their authority over employee time. Many of the biggest firms, like General Electric, provide hostels exclusively for their workers on their huge campuses. BigCo rents out apartments near its massive buildings in an area of Noida called "Call Center Street." The Vice President of HR explains: "We have housing, but not for everyone. As we speak, we have about a 120 apartments. We provide shared accommodation. We subsidize that. It's not free, but it's subsidized." Indeed, housing can be a key managerial strategy of labor control, especially in globalized work contexts. "Dormitory labor regimes" in the export manufacturing sectors of China are used to monitor employees both in their leisure time and work time (Smith, 2003; Smith & Pun, Forthcoming). Indian call center firms are benefitting from the housing system too, albeit in a less dramatic way. By concentrating the labor pool in a central location in their homes, managers ensure timely transportation schedules for prompt arrival at work, which leads to my next point.

Door to door shuttles are another major strategy of controlling worker time (Photo 2). Residents of Gurgaon note how the local highways have become flooded with a sea of call center vans. For call center managers, coordinating these shuttles “is a logistical nightmare.” The CEO at BigCo describes how he has an elaborate system to organize the arrival and departure of employees. This is coordinated with the time zones around the world are calling. The Vice President for Human Resources explains:

We run a hundred and twenty cabs everyday, and we go about twenty thousand kilometers of cab travel everyday. You’re picking up people from a radius of something like thirty-five miles, and *you have to bring them in for thirty-nine shift start-ups at ninety-nine percent accuracy – accuracy of time I mean.* If the shift is supposed to start at 12:30, and people get in there at one o’clock, half an hour’s volume is lost. And the transport has to know these ninety people by name, and make sure that not just anybody you pick up are here at 12:30. [BI-3, emphasis added]

This complicated task of managing shifts within 99 percent accuracy requires a personal dimension as well. Drivers of the shuttles have to know the name of each person who enters the van, even while managers using sophisticated computer software to schedule the shifts and shuttles (as this manager mentioned earlier). At smaller companies like SmallCo, the

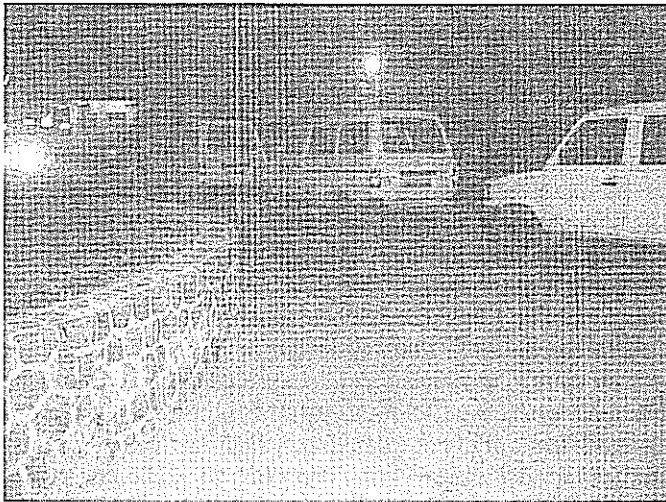


Photo 2. Transportation Shuttles at MiddleCo. Source: Author’s Fieldwork, 2003.

personalization of time management is done even more directly by the CEO. When I arrived to do my fieldwork one evening, the CEO was standing outside the front door. He was waiting for the shuttles to arrive, and “making a mental note” of everyone who was late. He was also seeing to it that workers go directly inside the building from the vans, rather than milling around outside and talking.

Unlike other accounts of transformations in high-tech work under globalization then, nothing about this scenario involves dismantling traditional industrial notions of work time. In Indian call centers, work time is rigidified, standardized, and surveilled. It is carried out through video equipment, electronic monitoring, passkey scanners, managerial eyes, transportation shuttles, and corporate housing. It is done inside the firm and without – in the halls, on their computer terminals, over the internet, in the parking lot, on the roads, etc. Furthermore, control over time is globalized. It is carried out transnationally from the Global North within the client firm, as well as on site in the Global South.

WORKING IN VIRTUAL TIME

The virtual work of Indian call centers represents another unique construction of time. Phone agents are continuously hooked into the internet on their computer screens, as client firms in the U.S. provide them with real time information about the customers they are calling. The office environment mimics and sustains the virtual experience as well, through its decor and architecture which help agents believe and act that they are somewhere else. Indeed, this feature of call centers represents a distinct privilege for these workers relative to their own citizenries in the Global South. As members of the “networked” strata, these Indian employees have achieved connectivity to ICTs when only 5 percent of the total population has access to the internet (UNDP, 2005).

In the process, however, while interacting with customers on the phone, these workers are also propelled into a new temporal order. Under reversed work time, agents disconnect mentally from the material, nighttime world of the Delhi suburbs, and enter the digital, daylight world of the global. What they find is that the temporality of this world is uncertain, fluid, and chaotic, especially in contrast to the highly standard and predictable features of work time in the “real” context of call centers above. Virtual work in Indian call centers involves three complications and transformations of time in particular.

Compression

The first complication is one of temporal multiplicity and heterogeneity. In the virtual world, agents enter other peoples' time – the customers' time. Moreover, agents are working in *many* times at once. A single call center will take contracts from many clients around the world at one time. In turn, managers pass on multiple "campaigns" (i.e., a particular service for a client) to employees. Workers must therefore occupy several temporal zones simultaneously. At SmallCo for instance, employees were working on a house-painting service in Spain, a wireless connection campaign in the UK, and a mortgage campaign in the eastern and pacific U.S.

Time in call center work, therefore, is literally compacted and concentrated. This is reminiscent of Harvey's concept of "compression" (Harvey, 2001). Global forces are overcoming space to bring people closer in time. In call center work, however, time itself does not seem shorter or more simple, as Harvey describes. In fact, one could even say that the experience of time is enlarged or expanded. The number of temporal zones in which employees work is increased, and layered one on top of the other. It is a crowding of time, not a collapsing of time.

Re-territorialization

Virtual aspects of call center work have further complications. Other peoples' *time* is also other peoples' *place*. In accordance, managers feel that agents should "know" the daytime life of the places they are calling and how to interact in those temporal settings. In order to endear themselves to the customers, agents learn a new set of meanings, languages, and patterns of time for different geographies. Time is connected to place in an important way in call centers, rather than the typical dynamic of globalization that unhinges one from the other.

Managers have several strategies and requirements for how do to this.⁴ First, employees have to know the consumer's time zone in a literal sense. They have to know what time it is for that person, and talk about that time as if they were there. Rows of clocks on the walls of the office represent various time zones around the world, so employees can refer to and answer questions about the time in the caller's area. Digital boards and monitors show details of weather and news for the day, so workers can make appropriate comments on how sunny or dreary it is [SF-3]. Second, they have to know the temporality of language. Agents have to speak in a way

that reflects the pace of socio-linguistics for that place. The MiddleCo Training Manager explains:

What we want is for people to have the right voice, right clarity, right modulation, right cadence, right articulation, right speed, right pausing, right stress. And this is what we want people to implement while they are calling. We want voice to be perfect. We [have] a few competency restrictions [to assess] as to whether this person can suit a U.S. or UK [campaign] – what kind of speech is he speaking, if that person in a natural manner speaks too fast [for the U.S.], or is into a lot of casualness which is required in America. [MI-2]

Call center agents are taught which pace of speech is associated with each nationality, in terms of things like "pausing, cadence, speed." Even *within* English, there are different velocities of language, for different geographical sites. As the training manager mentions, agents have to keep track of details, such as the way Americans are slower in their English than the British.

Third, agents have to know the meanings of time for the socio-cultural context, i.e., what role time plays in the daily lives of the consumers to whom they speak. In training sessions I observed at MiddleCo, instructors taught on powerpoint slides that "Americans are in motion. They are restless people. They are concerned about time management. They treat time preciously." (Learning the complexities of time within societies can be tricky, for instance, as Americans in this example "live fast" but "speak slowly").

For employees, this process can lead to many kinds of temporal confusions. This was summarized well in a dialogue between the directors of the government technology parks (STPI), and a private sector industry association (NRBA):

STPI: They [call center workers] are leading what is called a virtual life. When they are talking to their clients, let's say in the U.S. or U.K., they imitate that culture. Even though they must be very hot here, at forty five degrees [Celsius], they have to tell their customer: "It must have snowed in the U.S."

NRBA: They are saying "Good morning" in the night. Saying "Good morning" in the midnight must be a painful process.

STPI: We are building up a society that [will have] more psychological problems in the future. The normal life pattern changes in a way that these people have a different biological clock, sleep patterns will be different.

In this interpretation, call centers are creating a society of people who do not know what time it is in their material world, who live mostly in other peoples' cultures, and who are headed for peculiar troubles that are more deeply "psychological."

In these ways, time is not de-nationalized or de-territorialized here, as in other globalized settings. It is not disconnected from place (Sassen, 2001, 2006b). Rather, time is *re-territorialized* in call center work, in two ways. First, agents inhabit someone else's temporal order, not their own. They disengage from their own time zone in the real world, and re-situate themselves in the customer's time in the virtual world. Second, agents must then remain hyper-conscious of the geographical and national grounding of each time zone. Time and space are not de-coupled here, but strengthened and tightened in their connection.

Instability

Added to this experience is yet another complication: workers have to be able to switch between these zones rapidly. Sometimes this happens on a day by day basis, as workers are slotted into one campaign from another. MiddleCo Training Manager:

We shuffle people, as per the requirement, between various campaigns. So it's possible that somebody who's into a US campaign today, would be into a British campaign tomorrow. So, then we need to unlearn that complete accent, get into the complete learning of the British accent.

In other cases, this switching happens more quickly, as the same agent receives varying types of calls from different geographic zones. Some call centers use a router machine that automatically selects phone numbers and then dials them. Agents will not know which country is on the line until just seconds before the call is answered. Still, they must be prepared – in an instant – to don the accent for that location, and speak in a way that reflects the socio-linguistic temporality of that place. Indeed, the virtual world of call center work is unstable, and temporally chaotic.

This experience of temporal switching, and the speed with which it happens, creates its own kind of confusions for workers. Rishi at SmallCo has difficulty keeping track of the linguistic temporality of the customers: "It is very difficult to change the accent. You have to listen hard to customer" [SF-7]. Siddhant has problems in changing his own accent: "When I was shifted to a U.K. [campaign], I had this American accent which was very much prevalent. So initially when I was calling in the U.K., they [heard] the American accent and asked 'Are you an American?' And when they think I am an American, they will sometimes hang up. It is

something that I faced" [MF-8]. Gaurav complains about the pace of switching, which he finds harmful to his "mind" [SF-3]:

In call center working, the only thing I don't like is the changing of process at a fast scale. It is very hard to tackle the things if you are working for the U.S. and then you go to U.K. The language you are talking about, the module that you are talking about, changes. It might create problems because in the U.S., people are different than in the U.K.

It might be a problem of getting into the speech, and understanding what should I do, what should I not do. Because, if you are getting a sale, and you are not having an answer [to a caller's question], you have to say "Sorry, sir." And saying sorry for something is a bad thing in call center. In call centers, whatever you are doing is live. If you are saying something, it goes to the customer. If you are doing something, it is in front of the customer. I used to think that your mind is not yours in front of the customer. When you are in your mind, it is on your own – not in front of the customer.

In short, virtual work in call centers does not interject agents into a "timeless" zone where they are able to forget what time it is. When dealing with international customers on the phone, workers are hardly liberated from the constraints of time. Instead, time is an even more present and immediate part of the job. Workers have to know multiple times, the geographies associated with them, and be able to shuffle across them with little notice. This temporal compression, re-territorialization, and instability leads to a unique set of costs for the psyche and identity of the employees – confusions of time and place, virtual and material, global and local, etc.

CUT OFF FROM MY LIFE: IMPLICATIONS FOR WORKERS AND THEIR FAMILIES

Reversed work time has profound effects on employees' lives outside of the call centers. Some are positive, as workers find advantages at home from these jobs, both materially and symbolically. Still, I will argue that on the whole, night schedules have several traumatic consequences for employees' health, families, and future careers.

The Personal: Job Satisfaction and Health

It goes without saying that some workers do not mind working at night – a few even enjoy it. Many of the employees are college age, so it is not surprising that some like living at night. Gaurav at SmallCo proclaims: "I am

owl. I'm used to roaming at night" [SF-3]. Some also like living on "global time," and shuffling between temporal zones, like Siddhant:

The global standard time is good. Time is not limited to Indian Standard Time. Today I am working on a U.K. mortgage campaign, so I am working 6 pm to 2 am. My campaign will again be changed the next day, and I will be working for U.S. mortgage on some other shift. So that is something of a challenge I find for myself. I like the uncertainty of the shifts I am working on. [MF-8]

Moreover, employees talk about some tangible benefits of working in call centers, as Siddhant continues:

I am not that qualified in terms of education, but compared to my other peers, I am earning quite a bit. And the word "call center" in India still is a very luxurious industry to associate yourself with. You get care facilities, meal facilities, so it's something of a king's job. Maybe someone who is financially very sound may not like the job because of the night hours. But for someone who is actually interested in working here, would be proud to say working night jobs. When I started out in the industry, working night hours used to be something people were very proud of. [MF-8]

Wages in call centers are generally higher than in other working and middle jobs in India, like factory work, secretarial work, teaching, etc. This is especially true of foreign-owned call centers in my study. In Table 3, we see that BigCo (a multinational firm) offers higher wages than MiddleCo (a joint venture), which in turn offers higher wages than SmallCo (a local firm). Foreign ownership of course does not always correlate with greater benefits for workers in India, but these firms are typically larger and have more resources to pass on in the form of wages.

Factors like wages and benefits may at least partially explain why workers are relatively "satisfied" with their experience in the job. As shown in Table 4, the average employee satisfaction ratings for all the firms was about 5, on a scale of 1–7 with seven as the highest – just above midpoint. This indicates that these firms may be able to offset the discomforts of reversed work time with their material benefits.

Still, there are many hidden costs of reversed work time for employees' well-being – such as their health. Employees report that night work is associated with many illnesses – fever, colds, sore throats, nausea, dizziness, asthma, and rashes. The more severe conditions (even if less common) are kidney stones, ulcers, and tumors. At BigCo, the resident nurse said that in a typical day, an average of 50 employees come to her office. On the evening I interviewed her, 17 had already come to the clinic and two more arrived while I was there. Her assessment is that this arises from the disturbance of biorhythms. This was confirmed by outside doctors as well. Several workers had visited their personal physicians (like Manisha [BF-9]), who cited

Table 3. Profiles of Three Indian Call Centers and their Employees.

	SmallCo	MiddleCo	BigCo
<i>Firm Characteristics</i>			
Relationship to U.S. Clients	Subcontractor (100% Indian-owned)	Joint Venture (Co-ownership)	Transnational Firm (100% U.S.-owned)
Number of Employees (Rounded)	40	200	3,000
Year of Establishment	2003	2001	2000
<i>Employee Characteristics</i>			
Monthly Salary (Average)	\$378	\$423	\$587
Highest Educational Level (Predominant)	High School Graduate	College Graduate	Post-College Graduate
Length of Service (Average, in Months)	1.4	6.8	11.1
Age (Average)	22	22	26
Marital Status (Percent Single Versus Married, Divorced, or Engaged)	100%	73%	43%

Source: Author's Fieldwork, 2007.

nighttime work as a source for chronic illnesses. These health issues may be more severe than those in call centers in the Global North. Table 5 contrasts the ailments of my Indian nighttime workers to those of call center employees working predominantly in the daytime in the UK. In this study of 1,100 workers (Taylor, Baldry, Bain, & Ellis, 2003), the most frequently listed ailments were related to viruses (colds, runny nose, etc.) and ergonomic effects of sitting at computer screens for long periods (impaired vision, numb fingers, etc.). Indian call center employees, however, report symptoms that are more aggressive, chronic, and/or complex to treat.

Workers in my study describe many reasons why night work is so hard on their health. For one thing, it is hard to get enough rest. Many say they sleep 4–5 hours at best. Manisha feels the lack of sunlight deprives her body of needed vitamins. Night work also changes their appetites. Their bodies become confused about when and how much to eat, leading to skipped meals and gastric problems. Indeed, these schedules cut workers off from the

Table 4. Job Satisfaction, Work-Family Strain, and Future Prospects of Indian Call Center Workers.

	Total N = 50	SmallCo N = 15	MiddleCo N = 16	BigCo N = 15	MiscCo N = 4
Job Satisfaction					
Average on Scale: 1 as Least, 7 as Most Satisfied	5.03	5.68	4.56	4.73	6.35
Work-Family Tension?					
Yes (%)	60	53	69	60	50
No (%)	34	47	25	33	25
No Answer (%)	6		6	7	25
Change in W-F Balance Since Working in Call Center?					
Harder (%)	54	47	56	53	75
No Change (%)	32	53	19	33	
Easier (%)	4		6	7	
No Answer (%)	10		19	7	25
Orientation Towards Job in the Future					
Short-Term/Temporary (%)	48	47	56	40	50
Long-Term/Career (%)	52	53	44	60	50

Source: Author's Fieldwork, 2007.

Table 5. Most Frequently Reported Health Risks at Indian versus UK Call Centers.

Indian Call Centers (My Study)	UK Call Centers (Taylor et al., 2003)
Fever, colds	Fatigue (mental, physical, and stress)
Dizziness/headaches	Stiff neck and shoulders
Sore throat	Sore eyes/impaired vision
Asthma	Backache and headache
Nausea	Numbness in fingers
Rashes	Sore throat/cough
Kidney stones	Blocked nose/runny nose/sinus trouble
Ulcers	Ear ache
Tumors	Voice loss

Source: Author's Fieldwork, 2007.

healthier food and more stable routines of household meals. Adding insult to injury, cafeteria food in the call centers can exacerbate these health conditions. Workers in all three sites reported poor quality and nutrition in the food service, and experiencing stomach sickness from it. This is especially

ironic, since some of the employees reported taking call center jobs in the first place because of the free meals. Vinay at BigCo got severe food poisoning the first day of the job that lasted a month [BF-4]. After this experience, he resolved to eat only chips at mealtime, which was not much better on his digestive system. Vinay also reports that he often has to skip meals because of the "pressure cooker situation" created by large target volumes of sales and small breaks.

Family Life

Employees' family lives are intimately affected by night shifts as well. In a few instances, I found workers who appreciated reversed work time for their home lives. One female employee explained that the call center schedule put her in synch with her spouse's job, since he also worked at night in the airline industry. Call centers were also hailed for matchmaking and facilitating marriages. More than a few times, I encountered employees who had met their spouses or fiancées in the call centers. What really intrigued me were the inter-marriages across caste, class, and region. This was reported at all three of the call centers. At BigCo, for instance, I met Uma from the "Rajput" or warrior caste who had recently married a man from the lower "Bunya" or business caste [BF-3]. Govind at SmallCo was a Panjabi woman engaged to a fellow call center worker from Gujarat [SF-6]. These marriages are not always easy to maintain, especially when family members oppose them (e.g., Uma's father refused to speak to her). Nonetheless, some Indians believe that call centers are having a fortuitous impact on society through these marital unions. The SmallCo CEO is one:

There are inter-caste marriages which take place in the office, which was created by the office space. IT has certainly created a lot of opening up of this society by creating the platform for mixing with each other and getting to know each other. Otherwise there's no other platform. IT is the largest vehicle of this kind, the best creator of this intermingling of society. [S1-4]

Call centers are providing a *physical space* for groups that had been regionally and hierarchically segregated to come together and meet. In addition, they are providing an important *temporal space* that allows workers to distance themselves from sleeping families who might otherwise be more likely to find out about such alliances and thwart them. In a sense then, historical social patterns are put into flux by the ICT industry. By bringing people together from different backgrounds (often as a result of inter-state recruiting) and by weakening parental control, call centers

are destabilizing practices of in-group spousal selection and arranged marriage, which have been the foundation of caste maintenance and cohesion.

More often, however, workers describe less favorable effects of call centers on their family lives (Mirchandani, 2004; Ramesh, 2004; Singh & Pandey, 2005). Many employees feel that they are “cut off” from their personal lives, and have almost no contact with their family members. Manisha at BigCo is engaged to be married, and only sees her fiancée as a “breakfast partner” [BF-9]. Even if workers are home at the same time as their family members, they may not have the stamina to interact with them. Pradeep from MiddleCo explains:

We are just working against nature. God has made nights for sleeping and days for working, but what we are here doing here, we are working at nights. So it has completely changed the biological system of a person. Plus, we are on calls for nearly seven, seven and a half hours, and we come across hundreds of people every day, and it becomes really, really, very hectic because our job is just to convince the [customer]. And a person can only be here as long as his body and his senses helps him to continue that. When I come back to my home, if my mom or my dad comes in front of me, and they want to talk to me, I just make them like this [puts up his hand], and say, “I have been on calls for seven hours, and right now, I don’t have any stamina to talk to you.” [MF-14].

For workers like Pradeep, call center work has an effect on his body. The emotional toll of interactive service work, combined with the fatigue of night schedules, makes simple activities like talking to family difficult to do.

Sometimes the accumulated buildup of this temporal separation becomes so acute that workers are unable to recognize their own family members. Pradeep continues with an anecdote about trying to have phone conversation with his sister:

I’ll tell you one instance. It was I believe it was on a Wednesday, and it was my dinner break. India had a cricket match with England, so at that time, I called my home. My sister picked up the phone. Her name is Neela, and she’s five years younger to me.

[He recounts the conversation:]

Pradeep: “Madam who am I speaking with?”

Sis: “First you tell me who are you. Who wants you to talk to me? Why have you have called us? You are the person who has called us. You tell me who you want to talk to.”

Pradeep: “Is this Mr. Desai’s residence?” My surname is Desai.

Sis: “Yes.”

Pradeep: “May I know with whom I’m speaking with?”

Sis: “You tell me with whom you want to talk.”

Pradeep: I was again and again saying, “Who are you?”

And she hanged up. Can you imagine? Honestly I’m telling you. She completely hanged up.

Pradeep: Then I called again, I just simply shouted, “Ma’am, how dare you. How dare you hang up. Who are you?”

Sis: “Who are you? First you tell me.”

Pradeep: “My name is Pradeep, and I’m Mr. Desai son.”

Sis: “What has gone wrong with you? I’m Neela. What has gone wrong with you?”

I mean both of us, talking in such a manner, we can’t even say anything to each other, because the situation becomes so hectic. I don’t even have words to tell that situation. She does not recognize my voice, and I was not recognizing her voice – not because of my accent. *This is just a matter of time – because we don’t even get any time to interact.* I mean, we only meet only on Sundays. Because what is happening, she’s a teacher, and when she is going to the school, I am sleeping. I leave my place at 4 pm in the evening and reach home around five o’clock in the morning, and at that time, she is sleeping. We don’t even get any time to talk to each other, this is the basic problem. I have this heard this thing. One of my friends, he told me that he was experiencing the same thing. [MF-14, emphasis added]

Employees are also cut off from basic housework and chores. This includes routine cooking and cleaning, as well as caring for family members. A few workers, like Nikil at BigCo, are married and/or have children to look after. A much larger proportion of employees live with extended family, like elderly parents or in-laws, for whom they are responsible. Working at night also isolates call center workers from community services that are needed to sustain their families. Annu at BigCo has difficulty getting to the bank [BF-10]. Lokesh at SmallCo has problems paying bills (which often have to be done in person in India) and handling household emergencies [SF-2]:

The only thing is that suppose I have to do some housework, or I have to wait for a service person, for example, or suppose we have to pay the bill. It is a bit difficult to go because I am working at night, and in the morning I’m totally tired. So I cannot, and then I have to struggle and then go. Suppose there is some big emergency kind of thing – something very urgent. So again, there is a problem. We have to adjust.

Going to the doctor can be tricky. Amrita, who is an assistant manager of the production floor at BigCo, describes the strains for her employees when family members are sick:

One girl in my team has got a mother-in-law she is staying with, and she is the only one taking care of her at the moment. So she is like, “I have to take her to the doctor, and I won’t be able work, but I do want to take a chutti [holiday, or day off].” So I had to make a different shift. Although my team is doing a night shift, I had to tell her to stop her shift, whatever she was doing. I told her to do an evening shift, and then the next day she took her mother in law to the doctor. [BF-15]

Accessing services from the state is even harder. Nikil describes how he is unable to contact offices of water, gas, or electricity for repairs:

All these things which are used in your daily life, need to be controlled and tuned with our timings, with the way we do things. These basic things like the Mahanagar Telephone Nigam Limited [the state telephone company], like the Delhi Vidyut Board which is the electricity board, like the Municipal Corporation of New Delhi (NDMC). Because I can control myself, and my family can support me, but we cannot change the country and the scenario. I cannot tell the Mahanagar Telephone Nigam to make sure all your services – all your telephone workers and your mechanics – are working twenty-four hours. I cannot do that. Because my company, or any company for that matter, cannot control the basic economy of India. [BF-14]

Government services are not set up for people living at night. When the basic structure of the state and public sphere is run on daylight time, sustaining a household at night is very difficult.

This combination of factors then, both outside in the environment and within the home itself, reduces employees' abilities to take care of their families. Indeed, 60 percent of the employees in my sample said they experience tension in work-family relations, and 54 percent said this has become worse since working in the call center (Table 4).

Futures: Career, Education, Marriage

Reversed work time poses contradictory implications for workers' futures as well. Optimists like the President of NASSCOM believe these jobs will provide workers with valuable skills to springboard them into other careers:

Number one, it is part of the IT industry. Number two, it is part of the service industry – the "IT-enabled" industry, which is booming. This is a job working with customers, so later they can go into tourism, hotels, airline industry, or other service industries. It gives them opportunities – not like in Ireland, where the workers were college-dropouts, and in six months, they move on and they cannot get jobs. Not here. [I-8]

He sees multiple possibilities for call center workers, either in IT (read: engineering) or service industries, which are fields that are growing.

Ultimately though, many call center workers feel that the temporal isolation of this job puts their futures at stake. Siddhant talks about the hurdles to obtaining a college education: "Going to the university is not manageable. I plan my daytime accordingly, but if you work the night shifts, you don't have time during the daytime. When you get up, you get ready, and your cab is ready. That happens to everyone who starts working in this

industry" [MF-8]. Indeed, many call center workers have dropped out of college to take these jobs. Some call centers even have rules that employees are not allowed to attend a university – on their own time – while working there.

They also risk, or at least suspend, setting up their adult lives. Call centers have very limited internal mobility opportunities, of which workers are quite aware. Night work, however, prevents them from exploring other careers. Vinay at BigCo explains how he is physically unable to go to job interviews: "I don't find enough time for myself, which is pretty important if you want to think about opening up a career. It's only on the weekends that you can really think about it, and actually go about answering all the different interview calls" [BF-4]. He also feels that the job is constraining his chances for marriage and parenthood: "With the kind of situation that I am in right now, I'll definitely not have a family or get married. Having a family has its individual pressures. You need to manage home and office, and managing both needs considerable amount of time. It's the time pressures that matters, which is difficult."

Even if workers have the endurance to put up with these conditions, there are limitations to the structural longevity of the industry itself. Workers perceive that industry is in flux. Tarun at MiddleCo remarks: "I do consider this a temporary job for the time being because I don't think there is a scope, or there is a life in these call centers. I don't think so. Every month you see two or three call centers are opened, and two or three are closed. People think all the call centers are surviving, but it's not like that" [MF-9]. Moreover, workers are also aware that the call center industry is linked to – and indeed highly dependent upon – the economic cycles and political waves of the Global North. They are sensitive to the public backlash against outsourcing in the U.S., for instance, and its effects on the industry in India:

Nobody knows the types of education and protest that is going on in the U.S. I don't know if this industry can take it. The other day I was reading the Financial Times, the business newspaper in India. They said that because of news of global outsourcing, the stock market, we have Sensex here, has crashed this year. Of course because of problems with this industry I would actually be worried. [MF-8]

Finally, employees are cognizant of the footloose nature of the ICT industry, and fearful of the mobility of Northern firms around and within further regions of the Global South. Surjit at BigCo worries: "I feel the call center industry will not be here for long. It will move down to lower Third World countries – South Africa, Indonesia, etc. India has the infrastructure, but

South Africa can also get this. It has an English speaking workforce at lower rates. It is a way to stop backlash in the U.S. too" [BF-11].

Not surprisingly, call center work leads to burnout – fast. All three CEOs of the firms I visited lamented the short tenure of their employees. The CEO at BigCo notes how the call center industry

... is a very big difference from the IT industry [i.e., software, computer research and development, etc.] which doesn't work at night. It's very difficult. Try it. Do this day in and day out, and the biological cycle will demand something else, your social life demand something else. It's mind-boggling. The average life span of a person who gets into this business is anywhere from 18 months to 3 years – and 3 years is on very much the outside. [BI-1]

Indeed, the average length of service in my firms was under a year at the most, and a month at the least (Table 3). Granted, the industry as a whole was only about four years old when I did my research, so there was little opportunity yet for lengthy careers in any of my firms. Even in BigCo which was the oldest of the three, however, the average length of service was eleven months (Table 3) – which indicates that the first batch of recruits had left already.

This dynamic is where we see the tangible impact of temporality on call center employees – in their lack of perseverance. Despite the high levels of job satisfaction among these employees that I noted earlier, the reality is that most will quit after just a year and half. Many will hop to other call center firms, to take advantage of signing bonuses for experience. By three years, however, almost all of them will leave the industry altogether. As presented in Table 4, only half of the respondents considered call centers a permanent job or long-term career.

In sum, call center employees in India are experiencing work-life tensions that surpass typical scenarios in the Global North. While U.S. employees may face difficulty in managing "multiple temporal worlds" of work and family due to work speedup and increased overtime (Guravitch, 1990), call center workers may not even have this chance. The mutually exclusive division of work and home temporalities, forged by global industries, leaves little opportunity for employees to negotiate the domains into some coordinated pattern. Many call center workers experience a profound disjuncture from their home lives, as if they were cut off from their own families, the services in the community needed to sustain the household, and the social infrastructure for grounding their futures in terms of education, jobs, marriages, etc.

NIGHTTIME CITIES

The reversal of time in call centers extends out into the wider community as well. In fact, one could argue that a significant sub-population of New Delhi is living at night. This "nighttime city" is largely built in, on, and around the ICT industry. For its residents, the nighttime city has both social benefits as well as drawbacks. On one hand, it gives local workers – like those in call centers – access to global time and space. On the other hand, it is fundamentally structured around serving the Global North at the expense of the Global South.

Indeed, while New Delhi is connected to the global economy, it is not a 24-hour city like those in the North. This is a different kind of "global city" from what Sassen (2006a) describes in her seminal account of globalization in urban environments. It is a temporally divided city – by day and night, global and local. Here I discuss how call center workers are both indicative of and caught between these divisions.

Call Centers and Beyond: Expanding Employment in the Nighttime City

Call centers themselves have a cascading effect on the urban landscape in New Delhi. Revolving around the core function within call centers is a huge support staff – non-phone-calling employees who also work at night. The MiddleCo President says: "I would say that, to every executive, the ratio would be 1 in 6. That means for almost a hundred call center executives (people who are at the desks on the phones), they are supported by 60 people" [MI-1]. This group of administrators, human resource personnel, finance officers, etc., keep the same nocturnal shift so that they can communicate with the phone agents in the firm, and with the clients overseas. Even the President's own position is adapted and expanded to accommodate to the night schedule. His job is divided in two: with one "daytime" head of the firm, and another second "nighttime" head who, I was told, is "living on U.S. time."

Call centers, therefore, are generating a large set of peripheral jobs that are connected but also external to the firm. Much of the support staff is not even employed by the call centers directly – it is outsourced. Employees are subcontracted from an array of outside firms specializing in various corporate upkeep functions. At BigCo for instance, this staff includes the recruiters and trainers, the technicians and engineers, the catering and food

service staff, the shuttle drivers and security guards, the cleaning staff, the nurses and in-house travel agents, etc. These cases represent a growing segment of service industries in the nighttime city of New Delhi that exist to maintain the call centers and their day to day operations.

My informants were quick to point out additional service industries that operate at night in New Delhi, aside from the call centers and their ancillary firms. The STPI Director describes the airports, hotels, taxis, malls, restaurants, etc., that have sprung up to facilitate international plane traffic between Delhi and Europe and the U.S.:

Airports in Europe or in U.S., they are closed in nights. Their last flight would probably come in at 8 o'clock in the evening, and the first flight might be leaving [from there] at 6 o'clock [in the morning]. So no airport worker is working during night time. And the jets are not allowed to land at the night because they create so much sound that it will have a disturbance of their sleep patterns.

Whereas in our country, it is opposite – because we need to match with those timings. In our international airports, flights go only during the night.

[The NRBA Director interjects:] Every flight goes at night, everything comes at night.

Yes, so it is a problem with our hotel staff, airport staff, the pickup people, etc. Our people cannot say, "the jet will not land at night," or "it will not create that kind of noise." The problem is that our working time is their sleeping time. So they are totally out of synch consequently. [OI-4]

Just as in call centers, the nighttime service industry surrounding the airports is constructed around the conveniences of the Global North. Indians work at night so that European employees do not have to stay up late to unload incoming passengers from the South, or compromise their sleep patterns from the noise of South-departing planes. This example is just one glimpse into the range of jobs operating in the nighttime city.

Contradictions of the Nighttime City

The nighttime city has a number of contradictions for employees like call center employees. It offers privileged access into the time of the global. Night in the Global South is when the city connects to the daytime of the Global North. It is a time for those who live in the North, who interact with it, and who travel in it. The nighttime city of the Global South, however, is also subordinate to the Global North. Moreover, the nighttime city in New Delhi has authority over the daytime city (i.e., its local population).

For those who participate in it or live in it, therefore, the nighttime city is both empowering and marginalizing.

The nighttime city is the nexus of a number of intersections: between global and local, North and South, wealthy and poor. Call center workers lie at the heart of all these intersections. These workers represent a liminal stratum of New Delhites who, as workers, live in global time and have rare entree to it. As a case in point, many call center workers explained how their motivation for taking the job – with complete understanding of night shift requirements – was to gain personal entree to the U.S. or UK. They hoped to be formally escorted to these countries by their firms for trainings, promotions, etc., or else they hoped that their communications with Americans on the phone would garner contacts for jobs. In short, they were quite aware of the intricate ways that call centers – as key players in the nighttime city – could function as stepping stones to the Global North.

Call center workers do not have full access to the nighttime city, however, at least to the extent that the ICT elites do (the engineers, professionals, managers, etc.). More importantly, the operation of the nighttime city is not for their own use or benefit. In turn, these workers feel the contradiction of the nighttime city in a particularly immediate way. This leads to many disjunctures of urban life, as I argue next.

The first is how the nighttime city is disjointed from the daytime city. It does not "serve" its local population. Unlike global cities in the North, the nighttime city of New Delhi does not operate for the benefit of its citizens, occupants, or residents. Akshay at SmallCo says, "We are just working for the U.S., not for us" [SF-9]. With more political pointedness, the STPI Director says: "Whatever has happened for us, I'm saying it is from the imperialistic standpoint of view. These call centers are basically providing services so that systems *over there* keep kicking" [OI-4]. This political and economy strategy is a misplaced use of ICTs, in their view. Moreover, it has severe costs for Indian society. The NRBA Director continues:

There's another thing which I can share. [A] long [time] back, I almost verbally fought with a giant from Silicon Valley when he said: "This is what computerization can do, and this is what computer-enabled services can do – make a computer chip for the car." I said, "You are never going to leave your imperialistic thinking: Each and every Indian should work for a chip to be used in your car. Then you enjoy the car." The point is what computers can do for upgradation of the poor.

And now we have become cyber-coolies. This call center job is less than a menial job. I don't know how comparable it is even to cyber-coolies. We have wasted so much. If we had patented our research work or software, and if these many people were working *not* for answering *their* [U.S., UK, etc.] calls, probably we could be in a place of high strength as an economy. [I-5]

For local officials like these, call centers and the larger ICT industry represent new forms of empire and economic domination to serve the needs of Northern firms and their consumers. In turn, these industries have created cyber-coolies out of Indian workers, constrained national development and industrial growth, and distracted planners from social uses of ICTs for poverty alleviation.

A second contradiction of the nighttime city is the differential orientation of the state to various inhabitants. While the state has stepped forward to aid politically and financially the entrepreneurs who created the nighttime city (as outlined earlier), it has withdrawn from the citizens who work in it. As Nikil from BigCo points out:

The government is not changing fast, and they need to change fast to be at par with international standards. Timings have to change to make things better – if you have markets open twenty-four hours, if you have shopping open twenty-four hours, if you all these eating joints open twenty four hours, it will be easier and one step towards comfort. Then only our country as a country they will be able to grow. Because if my country has dreams that we should be the number two or number one country in the world, they will have to take steps to ensure that they are tuned and at par with the international companies. That is where the government of India really has to put in lot of effort to make things happen better. They need to attune themselves according to the basic and overall global requirement of every individual and the industry. [BF-14]

What the state has yet to address is a parallel infrastructure for employees in the nighttime city – a support system to help balance work and family life. As Nikil mentioned earlier, this includes shifting state services to the nighttime, such as utilities, telecommunications, health care, etc. Moreover, he suggests that the state can also play a role in pushing the rest of society in this direction as well, to provide basic services like grocery stores and restaurants at night. In short, if the state is going to promote round-the-clock operations in the city for the elite (the “globally mobile” businesses and professionals), it needs to do so for the citizens (the “locally immobile”) as well.

The third contradiction of the nighttime city is increasing social polarization, and a widening underclass (sometimes within the nighttime city itself). Indeed, some South Asian scholars have been quick to point out the class dimensions of global time – its association with the wealthy and the privileged. As Nigam (2004, p. 3) summarizes so brilliantly, the working class and the poor of many Indian cities are often left out of, and even over-run by, global time:

... an increasingly large number of urban middle classes ... now live the time of the global, if not entirely, at least imaginatively ... Big cities and metropolises are being

reconfigured, dislocated from their national location and inserted into the grid of the global economy. The relationship of these cities to their national location, which once made them hospitable sites for the poorer sections who came there in search of livelihoods has now been completely transformed ... As cities like Mumbai, Hyderabad, Delhi, Bangalore, Kolkata and Chennai rapidly move into this new network of the global economy, large sections of their middle classes begin to live in a present that is far, far removed from that of the mofussil and the countryside ... These cities are now moving on to the fast track. They cannot afford the 'slothful', 'slow' and meandering pace that marks the lives of poorer and subaltern sections of the populations. Roads in these metropolises are now completely colonised by fast running automobiles. Empty spaces are now used not for housing subaltern cities, there is no room for rickshaws, cycles or pedestrians on the roads ... We have yet to see serious studies of how this new colonisation of urban space is taking place, with the expanding middle classes, fired with the imagination of a global standard of living within these spaces, taking over every inch of land. [Some sentences repositioned]

As an extension of this thesis, I would argue that these privileged classes in India (middle, upper middle, and upper) are experiencing global time not only through transnational consumerism and pace of life, but through temporalities of day and night. The presence of the affluent in the nighttime city (especially for the ICT industry) has a class dimension of power which is exerted over the poor and marginalized, which I discuss next.

Class dimensions of the nighttime city are apparent, first of all, in its “face” – in the architecture, geography, and the physical space upon which it rests. As I commuted to the call centers in Gurgaon, I was struck by the new occupants and their ostentatious display of wealth and technology: the brand new towering, glass-lined, ICT skyscrapers, fashioned in the shape of ships and other marvels, illuminated for the night, Photo 3 (Wikipedia, 2006). They are truly “global” buildings, pieced together from international materials and knowhow. As an Indian architect recently observed, the construction of a major software firm used marble from Italy, technology from the U.S. and France, and supervision from South Korea (Bhatia, 2006). These “intelligent, e-buildings” are equipped with latest, most expensive technology to facilitate nighttime functioning, such as automatic lights illuminating entire floors at the landing of a human foot lands. The nighttime city also literally rests on suburban sprawl, catering to the affluent through consumerism, with massive new shopping malls in Gurgaon and Noida where the call centers are, with Time Square-style neon lights and night clubs, etc. Spaces of the city such as this are filled with the time of the global; with restaurants and clubs for nighttime international travelers waiting to board planes, and for nighttime call center workers before or after their shifts. This is illustrated well in news articles that scholar Raka Shome (2006) has collected. A headline in *India Today* describes the proliferation of

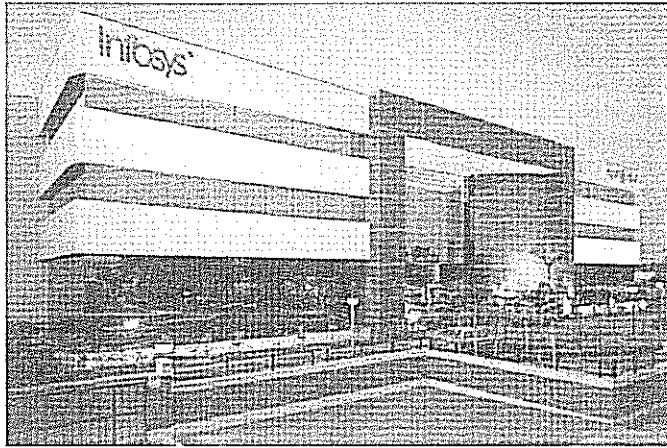


Photo 3. Illuminated Nighttime Operations of Indian ICT Firm, Infosys. Source: Wikipedia (2006).

“globally mobile citizens of Gurgaon, the newest subspecies of the yuppies, who are creating a city within a city in a maze of malls, multinationals, and Manhattan mores” (p. 120). Narayan Murthy, CEO of Infosys, takes this imagery further in the *New York Times*, describing his high-tech park in Bangalore: “we live in a make believe world Right now, when you come to our campus, you are leaving India behind” (p. 116).

In the process, the temporality of the local (especially the poor) is submerged and suppressed. Dalit (“backward”) castes were evicted from their homes en masse to make way for the expansion of Infosys’s campus in India’s southern state of Hyderabad. In Haryana, the land for the shopping malls, apartment buildings, high-tech parks, and call centers has come at the expense local farmers, who gave up and/or were encouraged to sell off their land. What used to be miles and miles of agricultural fields are now ICT residential and commercial sprawl. That this trend is part of a grand plan by the state is clearly displayed in their policy materials, like the front cover of the Haryana government’s IT Policy 2000 (Government of Haryana, 2000). Under the subtitle “Transforming Haryana Into an IT Driven Economy” are two photos (See Photo 4): on the upper left, a picture of farm tractor harvest a field of grain *in the daytime*, on the lower right, a skyline of huge office buildings all lit up *at night*. The states’ vision of the new Haryana is a nighttime IT center, springing out of the daytime agricultural economy.

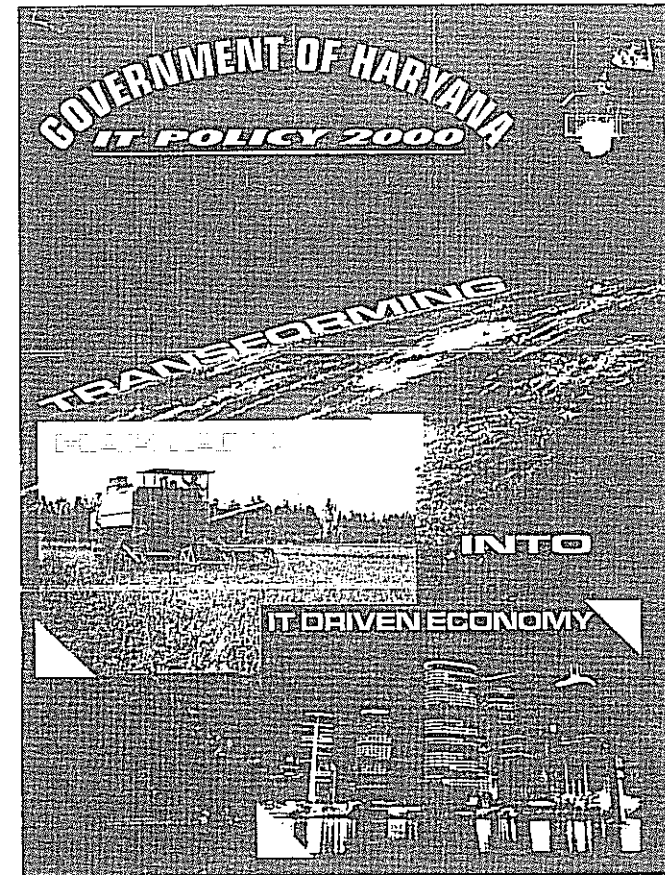


Photo 4. Day versus Night Images in Government ICT Policy. Source: Government of Haryana (2000).

Finally, the development of the nighttime city has spawned an underclass of nocturnal manual workers. This migrant labor force of the ICT industry, often hidden to the daytime world, became visible during my fieldwork at night in the call centers. During a tour of the SmallCo building, the President showed me a construction zone where he was expanding the call center from 40 to 200 seats. Just above the operational shopfloor (where rows of phone agents were seated in front of computer terminals) was another in preparation, still without windows or walls, where a group of migrant



Photo 5. Nighttime Migrant Construction Workers Build an Expansion at SmallCo. *Source:* Author's Fieldwork, 2003.

construction workers was huddled by a fire on a concrete floor (See Photo 5). These workers represent the class polarization of the nighttime city in multiple ways. They are situated within the heart of the new ICT buildings and communities, yet barely visible to the outside world. Their hands will build the infrastructure of the nighttime city, yet they will never be able to step inside or use its computers. And in perhaps the most symbolic irony, their residences are positioned right along side the new IT buildings. Adjacent to Convergys (one of Gurgaon's premier call centers), and literally lined up on its side, is a migrant worker ghetto camp composed of tent cities of blue plastic tarps, held up by bamboo poles and tree branches. These workers, without homes, electricity, running water, or sanitation facilities, are the sweepers, dishwashers, and construction workers for the ICT industry, fundamental to its physical creation and daily maintenance in the nighttime city, but excluded from its global and virtual operations. Indeed, this underclass of the night city is a segment of the ICT workforce of India that is somehow absent in the accounts of globalization noted by popular pundits, like Thomas Friedman (2005).⁵

In this way, the temporal regime of reversed work time has implications outside the call centers themselves, into the larger urban environment as well. Attention to the nocturnal employees of New Delhi reveals what "global cities" mean in the South. They illustrate a different type of urban stratification. If Sassen notes the increasing polarization of global cities

(socially and even physically), what the reversal of work time shows is a polarization of temporalities. In turn, some segments of nighttime city receive access to the global, the powerful, and the wealthy. Others are brought in that world to serve it, rather than to reap its benefits. Call center employees occupy a liminal position in this nighttime city – they have access to the global virtual world through their phone calls (unlike the IT construction laborers), but they are not given authority over it or the ability to design it (the way engineers and architects do), or the ability to live in it, move through it, and profit from it (like the IT professionals and managers).

DISCUSSION

This analysis has documented the reversal of work temporality in Indian call centers, in which an entire industry of back office customer service work is run at night. In some ways, we can see parallel trends in other parts of the world. Increasing numbers of U.S. employees, for instance, are working "non-standard" schedules as the 24/7 economy expands and more industries operate nocturnally (Presser, 2005). In 1997 almost half of U.S. employees worked jobs with evening, night, rotating shift, and non-fixed weekly schedules. Moreover, like the Indian case, the majority of these jobs are in services. Presser observes a distinctive feature of U.S. jobs though (p. 21):

they are all service-sector jobs that serve the local community ... In other words, most of those working nonstandard schedules are not producing services for the global economy. Thus, we cannot attribute the schedules of a large part of our 24/7 labor force to technological advances that connect us with the rest of the world.

Herein lies the fundamental difference of non-standard time in Indian call centers. As the target of the globalized service industry, call centers represent a *transnational* temporal hierarchy. Several broad scale trends – including the offshoring and outsourcing of global capital, advancing communications and satellite technologies, and historically embedded "politics of time" – have converged to generate this stratification of labor temporalities (especially within the ICT industry). While an upper tier of technical, professional, and managerial "knowledge workers" may be experiencing more control over their time, the middle and lower tiers of information service workers are more often experiencing a reverse trend of decreasing temporal control. Most importantly, what distinguishes these lower tier ICT labor forces in the Global South from their counterparts elsewhere, is how they are

organizing their lives around the conveniences and interests of firms/consumers in the Global North (in my case, the U.S. and UK).

This process illustrates how time has become a key element of the international division of labor. While in previous eras, the interests of Northern capital in the Global South were focused on natural resources and manual labor power, now they include the temporality of white collar service work as well. American firms can set up back offices in India that look exactly like those in the U.S. except for one thing – they are open at night. From the point of view of employees', what is being extracted in this process is daylight labor time.

This study presents an alternative trajectory to some of the previous accounts of work temporalities under globalization. The first is that work temporalities are not “disappearing” (Castells, 2000) in Indian call centers. Instead, time is becoming more and more important – it is reified. Time is central to several managerial strategies in the physical site of the call centers – the schedules, the shuttles and housing, the video surveillance of doors and hallways, the computer monitoring systems, etc. Time is also central for the virtual work that employees do on the phone. Keeping track of time zones and localized meanings of time are primary requirements when interacting with consumers in different global locations. Rather than a freedom from time then, Indian call center workers experience a job that is temporally dependent and even temporally chaotic. Time does not dissipate – it becomes “heterogeneous” (Chatterjee, 2004)⁶.

The second dynamic is a rigidification and standardization of time. Work time has not become more flexible for these employees. The labor process is structured tightly around the traditional 8 hour work day. In fact, ICT workers in the Global South are more likely to experience work time as a return to Taylorist managerial strategies, rather than as a form of flexible work arrangements that are occurring in many countries of the Global North. This temporality differs from that of upper tier information workers like engineers who are running on deadline, project, or contract time. While these engineers may experience cyclical time that has breaks and down time between heavy periods of overtime, there is no hiatus or respite for Indian call center workers. Reversed work time is continuous for the full duration of the year, and industry representatives are pushing for additional work days on national and international holidays. Call center work is also hyper-managed and monitored from numerous vantage points: from the quality control department at end of the production line, to the president/CEO of the Indian call center, to the client firm in the U.S. Needless to say, self-management is far from the picture here. While managers of call centers in

Europe, Australia, and the U.S. are experimenting with alternative participatory work systems like teams (Batt & Moynihan, 2002; Kinnie, Hutchinson, & Purcell, 2000; van den Broek, Callaghan, & Thompson, 2004), this trend has had little impact in India and did not appear at all in my case studies.

Third, work temporalities are re-territorialized in Indian call centers. ICTs do not reduce the salience of nation in call center interactions – rather, they make it stronger. Time is not de-territorializing, it is becoming more connected to place. Mirchandani (2004) has argued for this reason that there is an “expansion” of time-space relations in Indian call centers. The world gets “bigger every day” for these workers, instead of “shrink”-ing (p. 365). I would elaborate that temporalities in the virtual world of call centers are not only expanded, but concentrated and compacted. Workers have to become knowledgeable of time patterns in many regions of the world, but at the same time, they have to switch between them quickly and then interact with them proficiently according to localized social patterns.

Outside of the call centers, there are many implications of reversed work time for workers' lives as well. Unlike typical household strains in the U.S. involving a “time bind” or a “time famine” (Hochschild, 1997; Perlow, 1999), work-family tension for Indian call center workers is not an issue of overtime or extra hours. In fact, the irony is that call center employees may be working the same or even *fewer* hours as employees in other types of work or other regions of the world. Rather, the critical problem is the quality of the disruption that night work poses for their personal lives. The reversal of work time involves a complete disjuncture of their waking hours from the rest of society, which isolates them almost entirely from their families and social circles; from the public markets and businesses needed to run their households; from the state services and medical professionals to provide care, etc.

In turn, rather than experiencing a “care deficit,” in which globalization drains the family's ability to attend to its members (Blair-Loy & Jacobs, 2003), what we see is a more dramatic case of a “global care crisis” in which workers are literally pulled away from the family to serve global economies (Isaksen, Umadevi, & Hochschild, Forthcoming). Hochschild and colleagues refer to this process as a “hidden injury of global capital” on families. Indeed, my analysis of call centers adds another dimension to their account of the global care crisis. Complementary to the *physical* displacement of immigrant workers from the Global South (like women domestics) who travel internationally to Northern households and leave their own families behind for months or years at a time (Ehrenreich & Hochschild,

2003; Parrenas, 2001), these Indian call center workers illustrate a *temporal* global displacement. They may be in fact living in the very same home as their children, parents, spouses, etc., but living at directly opposite hours in order to be available to Northern consumers.⁷

Lastly, reversed work time has an impact on the wider urban landscape. The global ICT industry has (in conjunction with other forces, of course) turned a subsection of New Delhi into a nighttime city. This phenomenon presents an alternative to patterns of the “global city” (Sassen, 2006a). New Delhi (and its suburbs) is not necessarily a 24-hour city that runs continuously as a transnational hub for financial transactions or inter-governmental politics. Rather, it is a temporally stratified metropolis, with a daytime world operating for the local population, and a nighttime world providing services for the Global North. Call center employees demonstrate the intersection and tension between those two worlds, as they attempt to work in one of these temporalities and live in the other.

Ultimately, while scholars have offered competing accounts of the impact of reversed time on Indian call center employees, e.g., neocolonialism (Mirchandani, 2004; Shome, 2006) versus consumptive liberation (Friedman, 2005), I find that elements of both are true. The contradictory class position of call center workers as both service and networked employees means that they straddle multiple worlds and social locations in the global information economy. Consequently, along with all the facets of marginalization are certain degrees of empowerment as well.

CONCLUSION

The phenomenon of outsourced call centers is a growing trend transnationally, well beyond the countries represented here. The newest call center industries are developing in entirely different world regions, and crossing highly varied temporal zones (although still within historic and linguistic dyads): France to Senegal; Germany and Switzerland to Czechoslovakia or Hungary; Finland to Estonia; Japan to Manchuria; Spain to Mexico, etc. (USA Today, 2004; Verma & Metters, Forthcoming). In this context, the 12-hour-gap between the U.S. and India may represent one of more extreme versions of reversed temporalities. Still, differences of time (as well as nationality) within these dyads are bound to pose issues for labor relations in many locations of the Global South. For instance, the temporal heterogeneity of virtual customer service work will yield new dilemmas for interactive service work (Leidner, 1993). As these jobs become globalized,

the “scripts” that guide and regulate the work process will need to be multiplied and expanded for the varying national contexts of the consumer bases.

At the same time, there are favorable implications of temporal heterogeneity in call centers, even for everyday people like workers. It offers a disruptive potential, as the alternative temporalities challenge existing time regimes. Sassen describes how the clash of global and national temporal orders offers a possibility for social change:

It is, I argue, the juxtaposition of sharply different rates of acceleration in different economic activities that is decisive for what are some of today's leading sectors. It is not a homogeneous or homogenizing process of overall acceleration, even though that is part of the trend. The differences engender the possibility of different temporalities, and that is what matters. ... the encounter of a global actor such as firm or market with one or another instantiation of the national state can be thought of as a new frontier zone where two different temporalities intersect and, at the limit, produce conflict. It is not merely a dividing line between the national and the global. It is a zone of politico-economic interactions that produce new institutional forms and alter some of the old ones. [2006b, pp. 391, 396–397]

This interaction between temporal forces represents a “new frontier zone” which can dislodge previously archaic or autocratic time orders. It produces conflict, transformation, and “new institutional forms.”

In turn, the globalization of ICT industries may also provide an opportunity for worker-empowered time. If the global can disrupt the national in Sassen's terms, then employees who traverse the domain of global temporalities (like call center workers) may also be able to disrupt – or at least intercede upon – the managerial authority of time in their work settings. Indeed, many scholars have illustrated how “time” is often a key tool for employees in gaining authority in the workplace (Burawoy, 1979; Pena, 1996; Shih, 2004). Under some conditions, the ability to slow down or change the pace of production is the main or single aspect of the labor process over which employees have any control. Even in the highly monitored environment of the Indian call centers, I observed some glimpses into this process.

For instance, workers at both SmallCo and BigCo reported using their ability to “pause” the digital recording of the calls on the computer as a way to manipulate “time” on the job. Against the wishes of management to maximize numbers of sales, service requests, etc., employees would prolong calls in order to talk unrestrained with customers, to protect them from potential financial harm, to reveal their Indian location, and to form relationships (Poster, 2007). Workers would also take advantage of their

entree into global time for their own purposes. They use time on the phone with people in the Global North subversively – to make personal connections, network with people, explore job opportunities, etc. Finally, the single incident of formal activism that I came across during my fieldwork was centered around issues of time, as employees of another call center reportedly organized collectively to refuse forced overtime. Although no formal call center unions exist yet in India, there are several organizing drives in process, some of which are bridging labor movements across India and the U.S. (Bhattacharjee, 2006; Bibby, 2002, 2003; Jobs With Justice, 2005; Noronha & D’Cruz, 2006; Sandhu, 2006). Reversed work temporality will be a challenging but crucial issue for these efforts.

NOTES

1. I use the terms “Global North” and “Global South” to draw attention to socio-economic inequalities among countries (i.e., U.S., Europe, and Japan versus South America, Africa, South/Southeast Asia, etc.). These terms reflect current geopolitical hierarchies in a more accurate and less normative manner than previous concepts, like East/West, First/Third World, etc. They also overlook important nuances within the North and South, however, such as the marginalized nations in the North, and the powerful nations in the South. See Rai (2002) for an informative discussion.

2. By “formal” sector, I refer to the organized, legally protected arenas of employment, rather than agriculture or informal economies. In many countries of the Global South like India, formal sector jobs are less prevalent than the other kinds.

3. Names of firms, informants, and some organizations have been changed to protect the anonymity of the participants in the study.

4. There are many reasons why managers require this re-territorialization. They often say it is a way to improve communication on the phone: when the agent “acts like” the customer, s/he will be more receptive to the service. I argue it is part of a larger strategy of “national identity management” however, which also includes smoothing transnational political tensions and perhaps even attempting to conceal outsourcing from Northern consumers (Poster, 2007).

5. These trends of social polarization have prompted some observers to ask (Pal, 2003): “What will the information society do to the Indian city?” Will it “bring about the death of the metropolis in India,” e.g., from the collapse of a single industry, as happened in Detroit, or “will its peculiar development conditions simply extend the geographic realms of urban sprawls,” as in Silicon Valley, where high-tech parks and residential zones have taken the place of urban centers (pp. 106–107)?

6. See Aneesh (2006) for an excellent discussion of how “temporal dissonance” accompanies “temporal integration” in the multi-time zone world of computer programming. His case of virtual migration also provides an important counter-example to the privilege of the “networker” status: namely, the experience of temporal marginalization when these jobs are located in the Global South.

7. A key omission of this discussion has been gender. Evidence suggests that women do experience the reversed work day differently than men (Kelkar, Shrestha, & Veena, 2002, 2005; Mirchandani, 2004; Patel, 2006; Singh & Pandey, 2005). Patel, for instance, argues that call center work constitutes “temporal entrapment” for women workers. She finds that they are subject to an even greater range of surveillance than male employees. These controls not only affect women’s temporal and physical mobility *inside* the call center, but *between* work and home too, as residential neighbors and police monitor what women are doing at night. Not surprisingly, women call center employees also have a different experience of work–family balance than their male colleagues, given that they are more often responsible for household chores. This complex dynamic deserves full attention in future study.

ACKNOWLEDGMENTS

Data were collected with support from the National Science Foundation (#SES-0240575), the Vice Chancellor for Research at the University of Illinois at Urbana-Champaign, and the William and Flora Hewlett Foundation. I am grateful to the participants of the study for their generous offerings of time and energy, and to Beth Rubin for her insightful suggestions. The opinions expressed herein are those of the author alone.

REFERENCES

- Adam, B. (2002). The gendered time politics of globalization. *Feminist Review*, 70, 2–29.
- Anand, N. (2005). No women at night in Haryana BPOs. *Times of India*, indiatimes.com (Retrieved September 27, 2005), p. 1.
- Aneesh, A. (2006). *Virtual migration*. Durham, NC: Duke University Press.
- Appadurai, A. (1996). *Modernity at large*. Minneapolis, MN: University of Minnesota Press.
- Butt, R., & Moynihan, L. (2002). The viability of alternative call centre production models. *Human Resource Management Journal*, 12(4), 14–34.
- Benner, C. (2002). *Work in the new economy*. Malden, MA: Blackwell.
- Bhatia, G. (2006). New (and Improved?) Delhi. *New York Times Magazine*, (May 21), 162.
- Bhattacharjee, A. (2006). Bi-national perspective on offshore outsourcing: A collaboration between Indian and US labor. www.jwj.org: Jobs with Justice, US-India.
- Bibby, A. (2002). A new union mould: India’s IT workers are looking for a fresh approach as they begin to defend their interests collectively. *Financial Times*, www.financialnewsdirectory.com (February 27), 1–2.
- Bibby, A. (2003). Organising in Financial Call Centres. In www.andrewbibby.com
- Blair-Loy, M., & Jacobs, J. A. (2003). Globalization, work hours, and the care deficit among stockbrokers. *Gender and Society*, 17(2), 230–249.
- Burawoy, M. (1979). *Manufacturing consent*. Chicago, IL: University of Chicago Press.
- Castells, M. (2000). *The rise of the network society* (2nd ed.). Malden, MA: Blackwell Publishing.

- Catalyst (2000). *MBA grads in info tech: Women and men in the information technology industry*. New York, NY: Catalyst.
- Chakravarty, P. (2001). Flexible citizens and the internet: The global politics of local high-tech development in India. *Emergences*, 11(1), 69–87.
- Chatterjee, P. (2004). *The politics of the governed*. New York, NY: Columbia University Press.
- Ehrenreich, B., & Hochschild, A. R. (Eds). (2003). *Global woman: Nannies, maids, and sex workers in the new economy*. New York: Metropolitan Books.
- Evans, J. A., Kunda, G., & Barley, S. R. (2004). Beach time, bridge time, and billable hours: The temporal structure of technical contracting. *Administrative Science Quarterly*, 49, 1–38.
- Freeman, C. (2000). *High tech and high heels in the global economy: Women, work, and pink-collar identities in the Caribbean*. Durham, NC: Duke University Press.
- Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century*. New York, NY: Farrar, Straus, and Giroux.
- Galinsky, E., Friedman, D. E., & Hernandez, C. A. (1991). *The corporate reference guide to work family problems*. New York, NY: Families and Work Institute.
- Government of Haryana (2000). *IT Policy 2000: Transforming Haryana into an IT driven economy*. Chandigarh, India: Principal Secretary of Information Technology.
- Guravitch, G. (1990). Varieties of social time. In: J. Hassard (Ed.), *The sociology of time* (pp. 67–76). New York, NY: St. Martin's Press.
- Harvey, D. (2001). *Spaces of capital*. New York, NY: Routledge.
- Hochschild, A. R. (1997). *The time bind: When work becomes home and home becomes work*. New York: Metropolitan Books.
- Hochschild, A. R. (2003). *The managed heart, twentieth anniversary edition*. Berkeley: University of California Press.
- ILO. (2001). *World employment report 2001: Life at work in the information economy*. Geneva: International Labour Office.
- Isaksen, L., Umadevi, S., & Hochschild, A. R. (Forthcoming). Global care crisis: A problem of capital, care chain, or commons? *American Behavioral Scientist*.
- Jobs With Justice. (2005). Jobs with justice tour with Indian allies a success! www.jwj.org (February), pp. 1–8.
- Kelkar, G., Shrestha, G., & Veena, N. (2002). IT industry and women's agency: Explorations in Bangalore and Delhi, India. *Gender, Technology and Development*, 6(1), 63–84.
- Kelkar, G., Shrestha, G., & Veena, N. (2005). Women's agency and the IT industry in India. In: C. Ng & S. Mitter (Eds), *Gender and the digital economy: Perspectives from the developing world* (pp. 110–131). New Delhi, India: Sage.
- Kinnie, N., Hutchinson, S., & Purcell, J. (2000). Fun and surveillance: The paradox of high commitment management in call centres. *International Journal of Human Resource Management*, 11(5), 967–985.
- Lash, S., & Urry, J. (1994). *Economies of signs and space*. London: Sage.
- Leidner, R. (1993). *Fast food, fast talk: Service work and the routinization of everyday life*. Berkeley: University of California Press.
- Leidner, R. (1996). Rethinking questions of control: Lessons from McDonald's. In: C. L. MacDonald & C. Sirianni (Eds), *Working in the service society* (pp. 29–49). Philadelphia, PA: Temple University Press.
- MacDonald, C. L., & Sirianni, C. (Eds). (1996). *Working in the service society*. Philadelphia: Temple University Press.

- Marx, K. (1973). *Grundrisse*. Middlesex, UK: Harmondsworth.
- Massey, D., Quintas, P., & Wield, D. (1992). *High-tech fantasies*. London, UK: Routledge.
- Matthews, G. (2003). *Silicon Valley, women, and the California dream*. Stanford, CA: Stanford University Press.
- Meiksins, P., & Whalley, P. (2001). Controlling technical workers in alternative work arrangements: Rethinking the work contract. In: R. Baldoz, C. Koeber & P. Kraft (Eds), *The critical study of work: Labor, technology, and global production* (pp. 236–257). Philadelphia, PA: Temple University Press.
- Mirchandani, K. (2004). Practices of global capital: Gaps, cracks, and ironies in transnational call centres in India. *Global Networks*, 4(4), 355–373.
- NASSCOM. (2001). IT enabled services the Indian scenario. www.teleworkingindia.com (Retrieved February 27).
- NASSCOM. (2003). *Strategic review*. New Delhi: NASSCOM.
- NASSCOM. (2006a). Annual Report 2005–06. www.nasscom.in (Retrieved July 19, 2006), pp. 1–32.
- NASSCOM. (2006b). Knowledge professionals fact sheet. www.nasscom.in (Retrieved July 15, 2006), pp. 1–5.
- Nigam, A. (2004). Imagining the global nation: Time and hegemony. *Economic and political weekly*, www.epw.org.in January 3 (Retrieved February 9, 2006), pp. 1–13.
- Noronha, E., & D'Cruz, P. (2006). Organising call centre agents: Emerging issues. *Economic and Political Weekly*, (May 27), 2115–2121.
- Ó Riain, S. (2000). Net-working for a living: Software developers in a global workplace. In: M. Burawoy, J. A. Blum, S. George, Z. Gille, T. Gowan, L. Haney, M. Klawiter, S. H. Lopez, S. Ó Riain & M. Thayer (Eds), *Global ethnography: Forces, connections, and imaginations in a postmodern world* (pp. 175–202). Berkeley, CA: University of California Press.
- Pal, J. (2003). The developmental promise of information and communication technology in India. *Contemporary South Asia*, 12(1), 103–119.
- Parrenas, R. S. (2001). *Servants of globalization*. Stanford, CA: Stanford University Press.
- Patel, R. (2006). Working the night shift: Gender and the global economy. *ACME*, 5(1), 9–27.
- Pellow, D. N., & Park, L. S.-H. (2002). *The Silicon Valley of dreams*. New York, NY: New York University Press.
- Pena, D. (1996). *The terror of the machine: Work, gender and ecology on the U.S.-Mexico border*. Austin, TX: University of Texas Press.
- Perin, C. (1991). The moral fabric of the office: Panopticon discourse and schedule flexibilities. *Research in the Sociology of Organizations*, 8, 241–268.
- Perlow, L. A. (1999). The time famine: Toward a sociology of work time. *Administrative Science Quarterly*, (44), 57–81.
- Peterson, V. S. (2003). *A critical rewriting of global political economy: Integrating reproductive, productive, and virtual economies*. London, UK: Routledge.
- Poster, W. R. (2001). Dangerous places and nimble fingers: Discourses of gender discrimination and rights in global corporations. *International Journal of Politics, Culture, and Society*, 15(1), 77–105.
- Poster, W. R. (2007). Who's on the line? Indian call center agents pose as Americans for U.S.-outsourced firms. *Industrial Relations*, 46(2), 271–304.
- Presser, H. B. (2005). *Working in a 24/7 economy: Challenges for American families*. New York, NY: Russel Sage Foundation.

- Rai, S. M. (2002). *Gender and the political economy of development*. Cambridge, UK: Polity Press.
- Ramesh, B. P. (2004). Cyber coolies in BPO. *Economic and Political Weekly*, (January 31), 39(5), 492–497.
- Sandhu, A. (2006). Why unions fail in organising India's BPO-ITES Industry. *Economic and Political Weekly*, 41(October 14), 4319–4322.
- Sassen, S. (2001). Spatialities and temporalities of the global: Elements for theorization. In: A. Appadurai (Ed.), *Globalization* (pp. 260–278). Durham, NC: Duke University Press.
- Sassen, S. (2006a). *Cities in world economy* (3rd ed.). Thousand Oaks, CA: Pine Forge Press.
- Sassen, S. (2006b). *Territory, authority, rights*. Princeton, NJ: Princeton University Press.
- Sassen, S. (Forthcoming). Two stops in today's international division of labor: Shaping novel labor supplies and employment regimes. *American Behavioral Scientist*, 1–36.
- Shih, J. (2004). Project time in Silicon Valley. *Qualitative Sociology*, 27(2), 223–245.
- Shome, R. (2006). Thinking through the diaspora: Call centers, India, and a new politics of hybridity. *International Journal of Cultural Studies*, 9(1), 105–124.
- Singh, P., & Pandey, A. (2005). Women in call centres. *Economic and Political Weekly*, 40(7), 684–688.
- Smith, C., & Pun, N. (Forthcoming). Putting the transnational labour process in its place: The dormitory labour regime in post-socialist China. *International Journal of Human Resource Management*.
- Smith, C. (2003). Living at work: Management control and the dormitory labour system in China. *Asia Pacific Journal of Management*, 20, 333–358.
- Taylor, F. W. (1911). *The principles of scientific management*. New York, NY: Harper and Brothers.
- Taylor, P., & Bain, P. (2005). India calling to the far away towns: The call centre labour process and globalization. *Work, Employment, and Society*, 19(2), 261–282.
- Taylor, P., Baldry, C., Bain, P., & Ellis, V. (2003). A unique working environment: Health, sickness, and absence management in UK call centres. *Work, Employment, and Society*, 17(3), 435–458.
- UNDP. (2005). *Human Development Report*. Geneva, Switzerland: United Nations
- UNESCO. (2005). *Statistics on Research and Development*. www.uis.unesco.org. (Retrieved May 25, 2006). Geneva, Switzerland: Institute for Statistics.
- USA Today. (2004). Outsourcing comes to Africa, bringing jobs and fake Parisian accents. www.usatoday.com (July 10), pp. 1–3.
- van den Broek, D., Callaghan, G., & Thompson, P. (2004). Teams without teamwork? Explaining the call centre paradox. *Economic and Industrial Democracy*, 25(2), 197–218.
- Verma, R., & Metters, R. (Forthcoming). History of offshoring knowledge services. *Journal of Operations Management*.
- Wikipedia. (2006). Bangalore_Infy.jpg. en.wikipedia.org/wiki/Image (Retrieved September 29).
- Zuboff, S. (1988). *In the age of the smart machine*. Oxford, UK: Heinemann Professional Publishing.

PART II: ORGANIZATIONAL TEMPORALITIES

RESEARCH IN THE SOCIOLOGY OF WORK VOLUME 17

Research in the Sociology of Work

Series Editor: Lisa A. Keister

Series Editor Volumes 1–16: Randy Hodson

- Volume 1: Class Consciousness
- Volume 2: Peripheral Workers
- Volume 3: Unemployment
- Volume 4: High Tech Work
- Volume 5: The Meaning of Work
- Volume 6: The Globalization of Work
- Volume 7: Work and Family
- Volume 8: Deviance in the Workplace
- Volume 9: Marginal Employment
- Volume 10: Transformation of Work
- Volume 11: Labor Revitalization: Global Perspectives and New Initiatives
- Volume 12: The Sociology of Job Training
- Volume 13: Globalism/Localism at Work
- Volume 14: Diversity in the Workforce
- Volume 15: Entrepreneurship
- Volume 16: Worker Participation: Current Research and Future Trends

WORKPLACE TEMPORALITIES

EDITED BY

BETH A. RUBIN

*Professor, Management and Organizational Science
Director of Research, Belk College of Business
University of North Carolina-Charlotte, USA*



Amsterdam – Boston – Heidelberg – London – New York – Oxford
Paris – San Diego – San Francisco – Singapore – Sydney – Tokyo

JAI Press is an imprint of Elsevier

JAI Press is an imprint of Elsevier
Linacre House, Jordan Hill, Oxford OX2 8DP, UK
Radarweg 29, PO Box 211, 1000 AE Amsterdam, The Netherlands
525 B Street, Suite 1900, San Diego, CA 92101-4495, USA

First edition 2007

Copyright © 2007 Elsevier Ltd. All rights reserved

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher

Permissions may be sought directly from Elsevier's Science & Technology Rights Department in Oxford, UK: phone (+44) (0) 1865 843830; fax (+44) (0) 1865 853333; email: permissions@elsevier.com. Alternatively you can submit your request online by visiting the Elsevier web site at <http://elsevier.com/locate/permissions>, and selecting *Obtaining permission to use Elsevier material*

Notice

No responsibility is assumed by the publisher for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions or ideas contained in the material herein. Because of rapid advances in the medical sciences, in particular, independent verification of diagnoses and drug dosages should be made

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-0-7623-1268-9

ISSN: 0277-2833 (Series)

For information on all JAI Press publications
visit our website at books.elsevier.com

Printed and bound in the United Kingdom

07 08 09 10 11 10 9 8 7 6 5 4 3 2 1

Working together to grow
libraries in developing countries

www.elsevier.com | www.bookaid.org | www.sabre.org

ELSEVIER BOOK AID Sabre Foundation

CONTENTS

LIST OF CONTRIBUTORS	ix
TIME-WORK DISCIPLINE IN THE 21ST CENTURY <i>Beth A. Rubin</i>	1
PART I: NEW TIMES FOR THE NEW ECONOMY	
CHRONEMICS AT WORK: USING SOCIO- HISTORICAL ACCOUNTS TO ILLUMINATE CONTEMPORARY WORKPLACE TEMPORALITY <i>Dawna I. Ballard</i>	29
SAYING 'GOOD MORNING' IN THE NIGHT: THE REVERSAL OF WORK TIME IN GLOBAL ICT SERVICE WORK <i>Winifred Rebecca Poster</i>	55
PART II: ORGANIZATIONAL TEMPORALITIES	
THE DANCE OF ENTRAINMENT: TEMPORALLY NAVIGATING ACROSS MULTIPLE PACERS <i>Deborah Ancona and Mary J. Waller</i>	115
INDIVIDUAL TEMPORALITY IN THE WORKPLACE: HOW INDIVIDUALS PERCEIVE AND VALUE TIME AT WORK <i>Sally Blount and Sophie Leroy</i>	147