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## Satanic Mills or Silicon Islands? The Politics of High-Tech Production in the Philippines

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## Satanic Mills or Silicon Islands? The Politics of High-Tech Production in the Philippines

### Abstract

[Excerpt] So how do we make sense of high-tech production as it emerges in developing countries like the Philippines? What explains the changes and wide variation in how work is organized? What can these changes tell us about the transformation of work in a globalizing economy? And finally, what consequences do these changes have for workers, the vast majority of whom are women? This book engages these key research questions by taking them up at a strategically crucial and empirically grounded flashpoint: a local site of global production and the local labor market in which it is embedded.

### Keywords

high technology industries, Philippines, electronic industry, industrial relations, work, economy, organize, global, women, production, labor market

### Comments

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SATANIC MILLS  
or SILICON ISLANDS?

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*The Politics of High-Tech  
Production in the Philippines*

STEVEN C. MCKAY

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*For my mother,*  
*Remedios Bautista McKay*

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## *Acknowledgments*

FEW BOOKS are the products of political implosions and Plan B's. But in 1998, the volatile circumstances in Southeast Asia propelled my research in an unexpected yet fruitful arc, bringing me back to questions and to a country that first sparked a lifelong engagement with issues of justice and international development. Originally, I had planned a year of research in both Indonesia and the Philippines to compare the different labor politics and worker movements in the two Southeast Asian nations experiencing unprecedented growth and social change. But the financial crisis that broadsided the economies of the region also scuttled my initial comparative project.

Nevertheless, circumstances presented old and new questions about development, stability, and the role of foreign capital in an area that seemed to go from "boom" to "basket case" overnight. How does a more global, interconnected economy affect a locality's ability to transform itself? What roles do international investment and the nation state play in promoting or thwarting that transformation? And ultimately, what meanings and political possibilities does the "new global economy" open for those drawn into its web and who—by the sweat of their brows—bring it forth? Zeroing in on the Philippines and high-tech electronics refocused my attention on new state development strategies and the changing character of global production in which local workers find themselves deeply enmeshed.

The journey from asking such questions to the attempts to answer them in this book has been a long but enlightening one, aided by countless people and groups across two hemispheres. My first and greatest debt of gratitude goes to my mentor, advisor, cajoler, and friend, Gay Seidman, of the Department of Sociology at the University of Wisconsin, Madison, who provided intellectual guidance and critical feedback throughout the many stages of research and writing. Her scholarship, enthusiasm, and dedication to stu-

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Finally, my most heart-felt thanks and love to my own family, who have shared all my adventures and frustrations and have sacrificed so much to make this book—and me—possible. To Miles, for putting up with market

sellers and an office door too often closed, but for embracing *tawilis*, typhoons, and silly dancing. To Charlie, who literally cut his teeth on mangos, Jollie Bee, and the Red Hot Chili Peppers. Most of all to Amy, my partner in crime, *abenteuer*, and love. For more years and on more shores than I can usually remember, you have been there, with your grace and strength and laugh, keeping the late-night coffee flowing and the spark incandescent.

*Satanic Mills or Silicon Islands?*

## I *A New Politics of Production*

AT 6:00 A.M., seventy-five bright blue buses, packed with dozing young women, careen along scattered Philippine roadways and begin to converge. The rumbling buses throw dust clouds over rural roads and turn the heads of farmers already knee-deep in their fields. They funnel into the backstreets of a peri-urban boomtown clogged with belching jeepneys, squatters' shacks, and barbecued-banana stands. The acrid fumes of raw sewage and vulcanized tire repair choke the air. Out of the chaos and inevitable traffic jam, the buses turn into a restricted private road, past the reclining officers at the Provincial Industrial Police station, to finally reunite at the gates of the Philippine Technology Park.<sup>1</sup>

The guards wave the familiar buses into the empty streets of the export zone, an industrial park dotted with low-slung buildings sporting the logos of some of the world's best-known electronics companies. Arriving from strategic pickup points as far as two hours away, the buses shuttle some four thousand workers to the back door of Storage Limited, a manufacturer of bleeding-edge hard disk drives. A crowd of prospective applicants pooled around the guardhouse eyes the parade of buses enviously as it delivers the first shift.

Once inside, the women make their way to the long rows of lockers to wrestle into their hospital-blue "bunny suits." Talking and dressing in tandem, they tuck and straighten each other's full-body uniforms, covering each inch of skin until only their eyes are exposed. After swiping their ID badges into the electronic time clock, they file through the long air shower corridors, turning slowly with arms raised, before entering the virtually dust-free production area, a shop floor ten times more sterile than a hospital operating room.

1. All names of firms and zones in this study are pseudonyms.

The vast production floor, with its long, neat lines of automated assembly machines topped by red, yellow, and green warning lights, resembles an Orwellian casino. Yellow lines along the floor direct traffic. Through the production area's glass walls, passing managers glance at the color-coded target boards that hang above each section, announcing the productivity, quality, and defect rates tallied by the computer monitoring system. Signs suspended above the crowded testing area warn, "Absolute silence please." Video cameras hover in nearly every corner so those in the control room can watch, or not watch, what happens on the shop floor.

As they pour out of the air showers, workers take up the familiar positions they left just twelve hours before. Because of the hard disk drives' extreme sensitivity to static electricity, each worker wears a grounding cable attached to her body that she "plugs in" to her workstation. Workers may not leave their stations without permission, even to go to the bathroom. Thus, for most of their twelve-hour shift, six and often seven days a week, they stand literally tethered to the line.

Even outside the production area, workers must adhere to the strictly enforced "good housekeeping" policies that stress orderliness, discipline, and cleanliness in all areas of the plant. Roving inspectors, dubbed the "Quality Control Patrol," are armed with Polaroid cameras and photograph workers caught out of uniform or improperly dressed. They then display the pictures, with blacked out faces, on a large bulletin board outside the canteen as a warning to others.

Finally, an electronic bell chimes, the workers' muffled chatter dies away and the computerized assembly line lurches to life.

The scene described above conjures up contradictory images of the promise and menace of the global economy. Spurred by the dizzying changes in markets and technology, the trillion-dollar-a-year electronics sector has, since the 1990s, deluged developing countries with a wave of manufacturing investment. On the one hand, advanced electronics such as semiconductors and computer hard disk drives are widely coveted as leading industries in the twenty-first century. For receiving countries, such investments provide access to the latest technologies, bundled—it has been promised—with new ways to organize work, better jobs, and a survival strategy in the cutthroat world economy. On the other hand, the foregoing scenario seems to confirm our worst fears about globalization's impact on workers: that increased foreign investment only leads to higher levels of exploitation in low-cost production areas—the new "dark satanic mills"—where workers and nations are more vulnerable to the whims of unmoored capital.

In reality, neither of these polarized views captures the dynamic character of high-tech work. When I arrived in the Philippines to begin my fieldwork, I found the landscape of high-tech production vastly more complex. First,

the multinational companies that have flooded into the Philippines are not simply assembling last year's boom boxes or robot pets. Rather, these firms churn out state-of-the-art products like the microprocessors in our wafer-thin laptops or the digital signal chips for our shrinking cell phones. This move to more sophisticated products has dramatically changed the organization of work, but not in uniform ways. Confounding the expectations of both critics and proponents of transnational production, I found—even within one industry in a single country—a wide array of curious organizational hybrids among firms, where production is flexible, innovative, and of high quality, yet can still remain quite “sweated.”

Where production takes place has also changed. Although investments continue to pour almost exclusively into export processing zones, or EPZs, the zones themselves have been transformed. In the past, export processing zones, from Shenzhen to Central America, have been depicted by the media and academics as simply deregulated and deterritorialized spaces of cheap labor. But a new breed of zone has taken root in the Philippines, one owned by private developers who have strategically relocated and reorganized the zones, and downplayed the issue of wages. In fact, despite the relatively high cost of Filipino labor, the country now boasts one of the top five export processing zone programs in the world. In large part because of their revamped zones, the Philippines has become one of the few places in the world outside of China where leading electronics multinationals from the United States, Europe, and Asia have all set up manufacturing operations.

Finally, the workers themselves defied my expectations. At first glance, they seem to mirror the paradigmatic “nimble fingered” export processing zone worker found around the world: young women working exhausting schedules in tightly disciplined workplaces. But it seemed that reorganized production has strengthened the workers' hand: these workers are all permanent—rather than temporary—employees in heavily invested, high-profile multinationals that are acutely vulnerable to production disruptions. The Philippines also has a long history of militant labor unionism that led the fight for the world's first successful organizing of an entire export processing zone. Yet, in spite of often harsh working conditions and what looks to be an improved bargaining position, workers have shown little collective resistance. Indeed, many workers described their work to me as “clean,” “easy,” and even “fun,” and seemed genuinely committed to their jobs and companies. Despite several concerted labor organizing campaigns, only about 1 percent of the labor force works under a union contract.

So how do we make sense of high-tech production as it emerges in developing countries like the Philippines? What explains the changes and wide variations in how work is organized? What can these changes tell us about the transformation of work in a globalizing economy? And finally, what consequences do these changes have for workers, the vast majority

of whom are women? This book engages these key research questions by taking them up at a strategically crucial and empirically grounded flash-point: a local site of global production and the local labor market in which it is embedded.

Specifically, through detailed case studies, I explore how four multinational electronics firms—American, Japanese, European, and Korean, respectively—located in four different Philippine export processing zones choose to organize work, control labor, and secure worker commitment by reaching beyond their factories and into workers' lives and communities. I also trace the rise of privatized export processing zones, highlighting the Philippine state's shifting but still significant role in labor control and the wider politics of global production. Finally, this book gives voice to the workers themselves, emphasizing the meanings they attach to high-tech work and their strategies to negotiate factory discipline on and beyond the "new" shop floor.

A common blind spot for both sides in globalization debates is a vision of globalization that is as frictionless as it is placeless; a vision in which developing countries appear as either simple sites of despotism or as substitutable templates for capital's unfolding production strategies. While globalization critics argue that low-cost production locations are becoming increasingly homogenized as they compete against one another to attract investment, proponents see high-tech production delivering the fruits of higher technology and better jobs anywhere. But at the core of both arguments is an overly generic characterization of production itself, whether exploitative or empowering, which makes the substitutability of locations possible. Overlooked is the elementary notion that, despite its transnational and high-tech nature, advanced production must still be constituted *someplace*, by a specific group of workers in gritty locales like the one sketched above in the Philippines.

This book challenges the myths that high-tech production is generic and that globalization is simply a homogenizing force. First, I argue that technological change, new competitive demands, and contradictions within production are pushing high-tech firms to use a wide range of diverse organizational strategies, which I label flexible accumulation. Second, I argue that the restructuring of work has broadened the scope of labor control, extending it outside the factory and making the specificities and uniqueness of place *more*, not less, important. Third, I argue that firms, aided by host country governments, directly intervene in the local labor market in order to constitute and reproduce the social and gendered relations of flexible accumulation.

My arguments focus on two related processes integral to high-tech manufacturing in the Philippines. The first process is what I call the strategic localization of production. Here, I expand on a term used by economic geographer Andrew Mair (1997), referring to how firms develop site-specific

labor control and work organization strategies depending on local patterns of labor regulation. The second process—a recasting of Michael Burawoy’s (1979) notion of worker consent—is the active creation of worker commitment. Central to both of these processes and linking them together is the political construction of the local labor market. Each of these processes will be discussed in more detail below.

Most fundamentally, this book tells the story of how four different electronics manufacturing firms, facing contradictory demands in high-tech production and a crucial need for stability, craft a variety of new and more complex systems of production control. These variable systems include mastering new production technologies, securing worker commitment, and tapping into both formal and informal institutions of state regulation. The proper combinations of these elements are often realized through firms’ localization strategies that exploit the uniqueness of place, the dynamics of space, and social cleavages in the labor force—based on gender, age, class, and residence—in order to leverage workers’ labor market vulnerabilities and elicit worker commitment and consent. My objective is to look below macrolevel state interventions, beyond factory strategies, and more deeply into labor market manipulation to develop a broader, place-sensitive theory of high-tech production politics. This new model, which I call the “political apparatus of flexible accumulation,” highlights the various roles that firms, state, and nonstate actors play in the reorganization of production and the reproduction of workers themselves.

## Building a Theoretical Framework

In tackling the questions of how production is being restructured and how it affects workers and their lives, it is important to begin with a fundamental point: that work and markets are socially organized, and that the social relations in production depend heavily on the nature of managerial authority and the structures of organizational control. We start here because, while it has been the bedrock of much scholarship on work from Karl Marx to the labor process tradition to contemporary studies of organizations, the rise of restructured workplaces has prompted claims that “traditional” authority relations under mass production—often based on bureaucratically thick hierarchies—are being radically transformed in favor of devolved decision-making and increased worker autonomy and control over work.

Indeed, out of the ashes of what some see as a “failure” of centralized forms of mass production to respond to the new changes have emerged several models of restructured production that are viewed as not only more competitive, but also empowering for frontline workers, whose tacit knowledge and participation are seen as crucial. Framers of the first model, dubbed flexible spe-



cialization, argue that small, highly flexible, and networked firms using a strategy of permanent innovation, multiuse equipment, and a bevy of skilled production workers respond most ably to changing markets and technology (Piore and Sabel 1984). As an antidote to alienated labor under mass production, flexible specialization “is predicated on collaboration. . . . the production worker’s intellectual participation in the work process is enhanced—and his or her role revitalized” (Piore and Sabel 1984, 278). A second and now more prevalent model is known as “lean production,” which emerged from studies of the Japanese manufacturing industries and their emphasis on quality. The crucial elements here are new forms of efficiency—statistical process control, just-in-time production, low inventories, and “efficient” staffing—anchored, again, by the participation of multiskilled, securely tenured workers organized into teams (Kenney and Florida 1993; MacDuffie 1995; Womack et al. 1990). Finally, proponents of what are known as “high-performance work organizations” draw on the core technical and organizational elements of both previous models, but with a greater emphasis on the complementary human resource practices such as individualized incentive schemes and employment relations policies to inspire worker commitment and participation (Appelbaum et al. 2000; Belanger et al. 2002; MacDuffie 1995; Osterman 1994; Pfeffer 1994). Like their predecessors, these authors argue that firms adopting their model can become globally competitive precisely *because* they dismantle hierarchical relations in production and draw on workers’ knowledge and decision-making autonomy to drive innovation and flexibility.

What the three strands of the optimistic flexibility literature have in common is a belief that mass production has failed as a viable mode of industrial organization. Ardent proponents claim that flexible or lean production is the new “one best way” to remain competitive under the new global capitalism. But while most manufacturers acknowledge that there have been changes in the demands of global competition, precious few are “taking the cure” of flexible production (Babson 1995; Osterman 2000). In the United States, despite dramatic results in several model cases such as the Saturn and NUMMI auto assembly plants, and the wide adoption of some practices across firms, the pace of innovation and organization change has been generally slow (Appelbaum and Batt 1994; Kalleberg 2003; Vallas 2003). According to Osterman’s (2000) longitudinal survey of American firms, only about 15 percent of large firms have adopted fully reorganized workplaces and production processes.

So in the face of the ostensibly superior performance and competitiveness of restructured work organization, why have so few firms adopted these new models? The fundamental answer is that there are multiple paths to flexibility and ways to respond to changing economic conditions that do not *necessarily* call for the radical reorganization of production. This then leads to further questions: what has changed, and how are competitive firms re-

sponding, and their workers faring, under such changes? Here, it is important to begin with a reassessment of the core model from which so much of the flexible and lean production systems draw their inspiration; the “Japanese” system.

In a brilliant, historical account of the reception and adaptation of American management ideas in Japan, William Tsutsui (1998) argues that the success of contemporary Japanese industry is due in large part to the ways in which F. W. Taylor’s scientific management ideas have worked both as an ideological framework and as a shop floor methodology. Tsutsui traces how the ideas of progress through rationality and science were extended from the shop floor to the industry and national political level to form the core of Japan’s postwar productivist vision for economic growth. This productivist ideology served to enhance, and was itself undergirded by, the application and adaptation of engineer-led Taylorist practices, such as the appropriation of workers’ craft knowledge and the application of statistical process control. Lean production at Toyota, he shows, relied particularly heavily on the core Taylorist practices of time-and-motion studies and layout design developed during the war and postwar period. Tsutsui (1998, 242–43) concludes:

The pervasive influence of Taylorism and the frustrated career of Fordism suggest that a label like “non-Fordist”—or, better yet, “revised Taylorite”—best captures the nature of contemporary Japanese production arrangements. . . . In Japan as in the West, managerial commitment to the humanization of work has remained shallow and, for the most part, rhetorical rather than practical: even Japanese innovations like quality control circles, so widely praised as models of democratic and compassionate management, were born of the perennial managerial drive to Taylorize the shop floor.

When we demystify “Japanese-style management” and expose its essentially Taylorist roots, it becomes obvious that combining flexibility with hierarchical employee relations remains a viable and competitive strategy in advanced manufacturing. For example, in large apparel firms in both the United States and abroad, managers deploy expensive new flexible technologies to respond to the vicissitudes of a changing market, yet maintain the same, fundamentally labor-intensive production processes and leave unchanged hierarchical relations on the shop floor (Collins 2003; Taplin 1995). Similarly in the North American auto industry, lean production has not proven to be a blueprint, but rather more like a menu of technical and social practices (Babson 1999). Firms may choose from the menu depending on the specific technical requirements of the product, but more important, depending on “the particular history of the plant- or firm-level collective bargaining, past practices, demographics, and other factors [that] constrain or facilitate implementation” (Babson 1999, 26).

This critical approach is particularly relevant for lean production as it is applied in developing countries. Shaiken and others have shown convincingly that competitive, high-tech production can be successfully sited in a low-wage, low-skill context and in ways that do not fundamentally disturb traditional power relations on the shop floor (Shaiken and Browne 1991; Deyo 1997). Luthje (2004) describes state-of-the-art semiconductor plants in China that are flexible and produce high quality products, but in which work remains resolutely standardized and workers directly controlled by supervisors. In fact, it was found that managerial flexibility, more than low wages, proved more important to production efficiency, particularly in highly automated plants. This flexibility was gained primarily because management had a freer hand, unencumbered by union opposition (Shaiken 1995; see also Herzenberg 1996; Carrillo 1995).

Thus it becomes increasingly apparent that recent market changes are intensifying competition and pushing firms to adopt strategies, generally designed along neo-Taylorist lines, to produce more (and better) with less. However, this important but still quite general insight does not bring us closer to understanding why, in the Philippine case, there remains so much organizational variation between the high-tech firms in a single industry. Why do workers in these firms continue to be committed to such neo-Taylorist jobs? And what do the recent changes in production have to do with changes in how the export processing zones are organized? What is needed is a stronger theoretical framework for understanding both continuity and change under globalization, and the variation in the meanings and organization of work in advanced manufacturing.

### Labor Control and the Politics of Production

In this book I propose we revisit the issues of labor control and the social relations in production that were at the core of labor process theory, but in light of recent trends, recast and transcend the analytical framework of one of its most advanced theorists, Michael Burawoy. Specifically, I develop a more comprehensive model of labor control, focusing on three key areas where the “new” politics of high-tech production play out, namely: at the point of production, where workers and managers struggle over contradictory logics in the labor process; in the local labor market, where firms engage in localization strategies to enhance their bargaining position vis-à-vis labor; and finally, through national and local state institutions that regulate and help reproduce the social relations in and of production. Through this integrated approach, I hope to better explain the wide range of organizational strategies I found among the four case studies, the impetus for the reorganization of the export processing zones, and the reasons for the low levels of collective resistance among the high-tech manufacturing work force.

Burawoy (1985) breathed both controversy and new life into labor control debates by theorizing a dynamic link between shop floor politics and broader state politics. Based on his distinction between the *labor process*—or the technical organization of production—and the *political apparatuses of production*—or the institutions that regulate and shape workplace struggles—he posits two basic types of capitalist factory regimes: the despotic, in which work is organized around shop floor coercion; and the hegemonic, in which workers “must be persuaded to cooperate” or consent to their own exploitation (Burawoy 1985, 126). Although Burawoy identifies four contributing factors to regime difference—the labor process, market competition, labor power reproduction, and state intervention—it is state intervention that critically distinguishes despotic from hegemonic regimes. He argues that when states provide welfare benefits and enforce labor legislation, workers gain enough bargaining leverage to extract concessions from management, leading to a consent-based hegemonic regime. But he also warns that hegemonic regimes in advanced countries are undermined by capital mobility and competition from developing countries, where low-wage, despotic work regimes still reign.

While providing a strong analytical framework to approach restructuring, Burawoy’s unmodified theory is at pains to explain the complexity of work organization and the blurring of coercion and consent in contemporary electronics manufacturing, particularly in developing countries. Burawoy, like many globalization critics, argues that production in developing country export processing zones simply exploits cheap labor, “requiring brutal coercion at the point of production” (Burawoy 1985, 265). Although such despotism still exists—as we will see in one of the case studies—production in the larger, now dominant sectors of advanced electronics manufacturing is not so neatly characterized.

Recent technological and market changes have meant increased capital intensity and a more complex competitiveness. Firms producing high-tech commodities such as hard disk drives, microprocessors, and integrated semiconductor chips now compete simultaneously on the bases of cost, quality, product differentiation, *and* speed-to-market (Ernst 2003). They must also orchestrate intricate production networks that are both globally dispersed and regionally agglomerated (McKendrick et al. 2000). For the labor process, these market imperatives create a number of contradictions. Manufacturers must juggle the standardizing pressures of high-quality, high-volume production and economies of scale with the flexibility pressures of extremely short product cycles, rapid technical innovation, and responsiveness to customers. These contradictory demands often mean that firms experiment with a variety of production organization and labor control strategies to achieve what might best be called competitive flexible production (Vallas 2003; Babson 1999). And as many studies have shown, work regimes based solely on coercion and simple control often lead to instability, inflexibility, and poor

quality—precisely those areas in which advanced producers must compete (Edwards 1979; Burawoy 1985).

Given the need for production quality and stability, management often prefers worker consent over coercion, even in the absence of state intervention to enforce labor laws or provide welfare provisions. This is increasingly true for final assembly processes, since on-time delivery and relations with customers are crucial and a consent-based system is less disruptive. As will be shown in the case studies and discussed in detail below, management tries to organize worker commitment in order to reduce costly turnover and head off any stoppages or slowdowns in production. Firms must also contend with existing and potential collective worker resistance, employing different strategies depending on, as Babson (1999) noted above, the history of collective bargaining, past practices, worker demographics, and other factors that might restrain the free hand of management.

These new and more active strategies to stabilize production exploit a broader basis for constructing worker consent than Burawoy and others theorize. In his analysis, Burawoy remains firmly focused on the shop floor. Other theorists, such as Ching Kwan Lee (1998) in her comparative study of workers in Hong Kong and Guangdong, China, extend his insights, arguing that worker consent is crucial but that nonclass subjectivities formed outside the workplace—based on gender, culture, and conditions in the labor market—are equally important factors shaping worker interests. However, Lee, like Burawoy, fails to recognize alternative types of state intervention beyond the bureaucratic model that nevertheless have a direct role in reproducing labor power and constructing worker consent. Burawoy implies that the state acts primarily on the macroeconomic level: providing general welfare benefits and regulating industrial relations.<sup>2</sup> Lee cites only the state's conspicuous absence in intervening at the firm level. Yet increasingly, because of the complexities of global production and competition, states must often go beyond traditional bureaucratic regulation at the national level in order to draw and retain investment (O'Riain 2004).

Finally, in Lee's extended model of consent, it is workers' labor market dependence that "determines management strategies of incorporating labor" (Lee 1998, 12). However, her account treats conditions in the labor market as entirely exogenous. As noted above, she does not acknowledge the active role of the state, a central player in the political construction of the labor market. She also underestimates the power of employers, who do not simply respond to labor market conditions but can actively shape labor markets in order to increase worker dependence, enhance commitment, and diffuse resistance.

2. This position is consistent with neoinstitutionalists who recognize that states under globalization still matter, but mainly through national-level policies (Hollingsworth and Boyer 1997).

## A New Framework for a New Politics

Changes in advanced manufacturing are leading to a greater need for production stability and worker consent. But both firms and the state have developed new strategies and intervene in a variety of arenas, constructing more complex political apparatuses of production than Burawoy considers. In particular, the active roles of both employers and the state in the manipulation of the labor market require a rethinking and expanded understanding of labor control and worker consent that goes beyond the shop floor.

Beginning in production, I draw on the theories of “flexible accumulation” as a better way to characterize and understand recent changes in work organization in the face of technological change, intensified global competition, and rising uncertainty since the 1970s (Harvey 1989; Rubin 1995; Gottfried 2000). At the macro level, flexible accumulation represents a regime shift in the dominant mode of economic growth, distribution, and regulation, from mass production, mass consumption, and a liberal welfare state under “Fordism” toward more customized production, fragmented markets, and increasingly neoliberal governance under “flexible accumulation” (Piore and Sabel 1984; Harvey 2001).<sup>3</sup> At the level of production, flexible accumulation represents a shift in the labor process and labor relations. As Vallas (1999, 91) explains in his critical review of workplace restructuring, “As firms added new and more flexible ways to accumulating capital—or put differently, removed inherited barriers to profitability—they have at the same time refashioned the structures of work, labor markets, and the employment relation itself.” In direct contrast to theories of lean production or high-performance work organizations that see such changes in technology and organization as having positive or at least neutral impact on production workers, flexible accumulation theory views these refashioned structures as far less benign.

First, Vallas (1999; 2003) and others note that restructuring often *intensifies*, rather than diminishes the separation between “professional” and “production” workers. In the case studies to follow, this is most apparent in the growing divide between production operators and technical or engineering staff. Crucially, this process of technological change on the shop floor is also highly gendered, intensifying an already gender-segmented job structure and limiting the potential for mobility and upskilling for women production workers. Second, flexible accumulation has led to the rise of decentralized but hierarchical production networks and new power relations, such as the rise in customer power and the dominance of the parent

3. Gottfried (2000) makes the same distinction between modes of economic growth, but labels the “new” regime following Fordism as “Neo-Fordism” to highlight the continuity of Fordist, or standardized, hierarchical ways to organize work, rather than a fundamental break.

firm through research and design. In this book, the firms are all branch plants of much larger electronics multinationals involved primarily in assembly and test manufacturing. At this end in the production chain, their principal concern is not generating innovation through genuine worker participation, but primarily positive customer interaction and production stability through workplace control. These issues of the limits of workplace participation for worker empowerment and the widening (and gendered) gap between production and technical workers will be discussed more fully in chapter 3. Finally, flexible accumulation recognizes that firms not only consider, but can also affect the social and cultural environments in which they exist. While Vallas (1999) focuses on how firms influence tastes and market demand rather than treat them as exogenous, I focus in this research on how firms not only actively engage with their localities but can shape inequalities within them as well.

To better understand how work is organized in the four case studies, I develop a more integrated notion of labor control drawing from Burawoy's own emphasis on the *reproduction* of the social relations in and of production. Here I draw on the work of critical economic geographers for their insights into how differences or segmentation both within and between labor markets and locales interact with investment decisions and the organization of production itself. In terms of labor control, I take a more expansive, place-sensitive view following Peck's (1996, 179) broader definition: "labor control refers to the reproduction of the social relations of both the labor process and the labor market. This conception of labor control embraces the interrelated processes of (1) securing an appropriate labor supply, (2) maintaining control within the labor process and (3) reproducing this set of social relations."

My approach, then, is a reconstruction of Burawoy's political apparatuses of production modified for new forms of flexible accumulation, giving equal weight to the three interrelated processes of labor control. Specifically, I look below the macrolevel interventions of the national welfare state and the interests of "capital-in-general," evoking Jonas's (1996) concept of a local labor control regime. As Jonas (1996, 335) explains:

Whereas capital-in-general is interested in the free and unlimited exchange of labor power, particular capitals are sensitive to the local contexts in which that exchange takes place. As such, they develop labor control strategies which limit the "freedom" of labor and regulate the conditions under which it enters the labor process.

Using the lens of local labor control, I examine two key processes of reproducing labor power and the work regimes taking place in the Philippines: the strategic localization of production and the active construction of worker

commitment. I trace these two key processes as they shift across different local institutional domains, namely, in the factories, in the labor market, and through national and local governments.

## Strategic Localization of Global Production

One of the central goals of this book is to demonstrate not only *that* localities continue to matter under globalization, but *how*. To this end, I develop an expanded notion of strategic localization to better understand the role of place in securing control over production and the consent of workers. Strategic localization can also help illuminate how both firms and local governments are intimately involved in constructing a multilayered, place-based political apparatus to regulate high-tech production. Despite the outcry from globalization critics, the dispersal of increasingly sophisticated production across space has not created a kind of placeless globalism in which all capital is necessarily footloose and production locations equally substitutable (Frobel et al. 1978; Burawoy 1985; Greider 1997). Rather, the new, more complex competitiveness has lead firms to seek distinct local “fixities” such as pockets of uniquely skilled labor and particular regulatory regimes to maximize their cost, quality, *and* speed-to-market advantages (O’Riain 2004; Brenner 2004). The specific nature of the firm, its production process, and its labor needs will influence what types of workers, and thus what type of locality, it seeks (Massey 1995). As we will see, the four multinational electronics firms in this book all came to the Philippines in the mid 1990s for a complex set of reasons that include the availability of highly educated and English-speaking production and technical workers, proximity to corporate headquarters and/or key markets, existing clusters of other high-tech producers, and a variety of government incentives aimed specifically at high-tech manufacturers.

National and local states, then, play crucial roles in strategic localization by attempting to lure such global investment. State actors matter not only because they preside over basic regulatory policies, such as setting wages, enforcing employment contracts, providing social welfare benefits, and crafting wider economic policies (Berger and Dore 1996; Hollingsworth and Boyer 1997). Increasingly, state actors at multiple levels respond directly to particular industrial investors by pursuing more targeted strategies such as upgrading complementary infrastructure and selectively regulating both industry and labor to provide the appropriate conditions for more advanced production (O’Riain 2004). To meet the changing needs of the electronics industry, the Philippine state has quite actively transformed its export processing zone program from an emphasis on deregulated public zones to attract simple manufacturing assemblers in the 1970s to a model of reregulation



lated, privatized high-tech enclaves that appeal to the leading multinational manufacturers of the twenty-first century. The transformation of the zone program and its accommodation to the needs of the global electronics industry will be more fully explored in chapter 4.

Under strategic localization, multinational firms also actively adjust their policies and work regimes to fit local conditions. For example, Japanese consumer electronics producers that have set up production in California use very few “Japanese” production practices such as quality circles or JIT (Milkman 1991). Instead, these firms chose to adapt most of their policies to local conditions, norms, and practices. As Andrew Mair (1997, 80), studying the Honda Motor Corporation in the United States and Europe, notes: “The objective of local human resource managers was precisely to design structures able to build a *coherent bridge* linking Honda’s fixed labor process requirements, such as very low absenteeism, good discipline, assignment flexibility, and willingness to suggest improvements, with the local cultural and social environment” (emphasis in original).

But what Mair refers to as “the local cultural and social environment” is in fact primarily patterns of local labor regulation and conditions and wages in local labor markets. And, as we will see in the four case studies, employers not only try to adapt to local conditions, but in fact also attempt to directly and indirectly influence conditions in the labor market to enhance their competitive advantage and control over labor and the work process. At the national level, for example, firms may seek exemptions from national labor laws in order to align location conditions to their work regimes—rather than the other way around. The weak bargaining position of developing country governments and their desperate need to attract investments often mean they must grant such concessions and refrain from imposing too many restrictions. But not all local conditions can be negotiated at the national level, and all firms must engage with their locality, particularly in terms of building and reproducing their workforce.

### Manipulating Labor Markets

The clearest demonstration of how location continues to matter even after the initial investment is in the workings and regulation of local labor markets. Rather than accept an economist’s human capital view of the labor market as a container for universal, smooth, and power-neutral market exchanges, I draw on more sociological theories of the labor market that recognize it as a power-laden and contingent process of negotiation between firms, workers, and their networks in matching different kinds of people with different types of jobs (Granovetter and Tilly 1988; Tilly and Tilly 1994). Employers are interested primarily in two main aspects of matching jobs and

workers: productivity and organizational maintenance (Tilly and Tilly 1994). Organizational maintenance, in the context of advanced electronics production, is focused on the stability of production and the construction of worker commitment. But as we will see through the case studies, there are multiple ways to maximize both.

To understand how this can happen, I turn to labor market segmentation theory, which recognizes that the differences among people and among jobs are stratified—that is, the rules governing the matching process differ in each segment and that mobility between segments is often difficult (Peck 1996). Thus workers and job seekers are characterized and grouped in a wide variety of ways—by age, gender, race, civil status—giving them different levels of labor market bargaining power even if they share ostensibly equal “human capital.” While employers do not necessarily create unequal social divisions, this does not prevent them from exploiting, and thus reproducing them. As Rubery and Wilkinson (1994, 31–32, emphasis added) note:

Segmented labor markets with comparable labor available at different terms and conditions provide the opportunity to employers to tailor their labor market strategies to their needs without necessarily sacrificing the benefits of an established and committed workforce. . . . Thus employers have the best of several worlds: the domestic circumstances of married women, for example, provides the basis for a flexible, committed but cheap labor force: *primary workers at secondary prices*.

In the four cases I present in this book, we will see how different firms, with different production strategies, choose to manipulate the labor market positions of diverse groups through their gendered recruitment practices, union avoidance policies, and active disorganization and dispersal of worker housing.

It must also be emphasized that other actors and conditions affect this negotiation between workers and employers. As Miriam Wells (1996) points out, labor markets are not just socially but also politically constructed. In her study of the California strawberry industry, she highlights how active state policies, such as border control, immigration, and (lack of) labor protection shape labor markets and workers’ labor market leverage even before employment. In particular, she demonstrates that the surplus labor market conditions can have the appearance of being unstructured and competitive. But, in fact, political forces and state policies often affect aggregate labor supply and constrain the options of labor market participants.

Similar forces affecting labor market power seem to be at work in the Philippines. Given the vital importance of political stability to multinational firms and the Philippine state’s own dependence on foreign investment, the state plays a critical role in labor control and the politicization of the pro-

duction context. As we shall see in chapter 4, the state actively reduces workers' bargaining power, even before they step onto the shop floor, through the reorganization and regulation of export processing zones (EPZs), enforcement of "industrial peace," and in its selective *nonenforcement* of the Philippine Labor Code, which guarantees the right to organize and bargain collectively.

### Securing Commitment in an Insecure World

The second key process that helps stabilize high-tech production and secure labor control is the active construction of worker commitment. My focus on securing commitment is akin to Burawoy's notion of "manufacturing consent," or the need to persuade workers to cooperate. However, as many have pointed out, Burawoy's understanding of consent and worker interests remains undertheorized because it fails to unravel, from a worker's point of view, all the myriad elements (gender, age, culture, and other experiences) that contribute to workers' interests, identities, and subjectivities—those that go beyond issues of class and beyond the shop floor (Lee 1998; Freeman 2000; Salzinger 2003). At the same time, traditional studies of commitment from the psychology, organizations, and human resource literatures remain woefully underpoliticized; these studies often neglect issues of power and control, the effectiveness of negative sanctions, and the influence of wider social inequalities. While proponents of "high performance" or "high commitment" work organizations are correct that worker commitment is crucial to advanced manufacturing, too often they assume a direct causal relationship between positive incentives, worker commitment, participation, discretionary effort, and improved firm performance (Appelbaum et al. 2000; MacDuffie 1995; Lincoln and Kalleberg 1990). As I will show, worker commitment is deeply intertwined with management strategies to maintain power and control: the four firms in this book elicit worker commitment primarily to ensure workplace stability, dampen worker disruption and turnover, and increase overall control over production. And in securing this commitment, slack and segmented labor markets again play a vital role, as firms leverage workers' labor market vulnerabilities and dependence on their jobs to induce greater willingness to accept conditions and terms at work.

At least since Hirschman's (1970) theory of exit, voice, and loyalty, research on organizational commitment has focused on a firm's internal and positive rewards system (see Meyer and Allen 1997 for a review). But while firms in this book do use positive internal incentives, such as good pay and benefits, they also use many negative and external strategies, such as strict shop floor discipline and selective recruiting of women workers from impoverished rural areas. To understand the use of both positive and negative