

MAN, MACHINE AND THE GODS

Skill, Hegemony and Culture in the Making of Taiwanese Machinists

By

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Abstract

Using ethnographical data from three sites in Taiwan, this study explores the co-evolution of configurations of the industrial labor process with folk religion, kinship, gender, and other cultural domains in Taiwan in the 1990s. The three sites are: a Taiwanese naval ship and two mid-size machine factories, and a cluster of small shops owned by self-employed machinists in the Taichung Area.

The folk cultural tradition inherited from the late-Imperial Chinese social formation, with its inherent class contradictions, is visible in various modern technological environments, and strongly framing the social relations of production as well as people's perception of such relations. In these microcosmic culture worlds, work skill is often perceived as a proxy for quasi-patriarchal seniority, and rarely fragmented as in a typical Fordist workplace. Managerial hegemony is largely based on the symbolic correspondence between their leadership over workers and the seniority hierarchy among the workers. Folk rituals rigorously practiced at the workplace further strengthen these values. Social relations embedded in the technological and organizational artifacts designed in the West, such as CNC technology and ISO-9000, are often found incompatible with the local configurations, and are thus shelved—symbolically venerated but pushed aside in daily practices.

However, with the transformation of Taiwanese society that has accompanied industrialization, these traditional elements enframing the practices and experiences of the industrialized labor process are also changing. Patriarchy used to be a powerful form of social organization through which the Chinese commoners solidify kinship and kinship-like organizations to confront the commodity market on one hand and the tributary state on the other. Now, the patriarchy is gradually replaced by more versatile reciprocal interpersonal relationships. The traditional privilege of the patriarch to appropriate women and junior kin's labor power has diminished. Therefore, the male skilled workers who have previously been able to fall back on the kinship and seniority hierarchies often find that they have to confront the market as

individuals, where they find that the secure ascending paths for men in such hierarchies have been replaced by a widening class differentiation in the trade as well as in the larger society.

Correspondingly, the ritual practices and beliefs are transforming into more individualistic forms.

Industrialization has not change the labor process and people's experience of it directly, but in a larger process of social transformation.

Table of Contents

Abstract	i
Table of Contents	iii
Chapter 1: Introduction	1
1.1 Some Conceptual Issues	11
1.1.1 Social Construction of Skill and Patriarchy	11
1.1.2 Hegemony	14
1.1.3 Petty Capitalism	18
1.1.4 Encompassment and Shelving	20
1.2 From Boyhood to Family Man: Organization of the Thesis	21
1.3 Literature Review	25
1.3.1 Skill and Hegemony in Labor Process	25
1.3.2 Social Construction of Skill, Gender and Hegemony	36
1.3.3 Flexible Management and the East Asian Model	40
1.3.4 Industrialization and Traditions in Taiwan	44
1.3.5 Folk Ideologies and Hegemony in Taiwan	47
1.3.6 Summary	54
Chapter 2: The Goddess and Her Boys	56
2.1 Seniority vs. Rank	61
2.2 Advancing with Age in the Patricorporation	67
2.3 The State and Folk Rituals	74
2.3.1 Rituals of the State	74
2.3.2 Rituals of the Folks	78
2.4 Taylorism as Rituals	84
2.5 Politics of Rituals	90
2.6 Summary	94
Chapter 3: The Factory as a Village	96
3.1 Two Factories in the Land of the “Black Hands”	106
3.2 DY Enterprise: The Amalgamated Craftsmen	111
3.3 TW Gear: Village in a Corporation	121
3.3.1 The Village of Precision	124
3.3.2 The “Army of Sons and Brothers”	131
3.4 Earth God of the Company	137
3.5 The Class Demarcation	141
3.6 Summary	146
Chapter 4: Family Men in Industrial Suburbia	149
4.1 The Stationary and the Mobile, the Process and the Product	154
4.2 Labor, Capital and Skill	161
4.2.1 The Fair Rate	162
4.2.2 Bending the Fair Rate	164
4.2.3 Skill and Technology	168
4.3 The Family Ties	171
4.4 The Village Tudi Gong and Civic Life	181
4.5 The Weiya Blues Syndrome	186

4.6	Summary	190
Chapter 5:	Shelving the ISO-9000:	192
5.1	The Taylorist Face of Information	196
5.2	Quality and the ISO-9000 Regime	201
5.2.1	What is ISO-9000?	202
5.2.2	The Elusive Quality	207
5.3	The Craftsmen and the ISO-9000 Ladies	212
5.3.1	Difficulties at DY	212
5.3.2	Solutions at TW	219
5.4	Information: Feminine and Masculine, Local and Global	227
5.4.1	The Femininity of Information Work	227
5.4.2	ISO-9000 as Women's Ritual Responsibility	230
5.5	Summary	231
Chapter 6:	Conclusions	234
6.1	The Cross Cultural Comparison	238
6.2	The Temporal Dynamic	242
6.3	De-centered Capitalism?	246
6.5	We Are All Ghosts Now	248
Appendix:	A Note on Research Method	254
	List of Informants	256
	Bibliography	258

Chapter 1: Introduction

The development of the complex systems model [in contemporary American culture] that seems so salient to us in so many contexts, the model that seems to underlie the organization of our body, our group, our work settings, our world--this model itself repudiates any notion of a structure built on one foundation, an explanation that rests on one principle. . . . All is in flux, order is transient, nothing is independent, everything relates to everything else, and no one subsystem is ever necessarily continuously in charge. (Martin, 1994: 250)

Any spot [in a Taiwanese] temple offers the same possibilities for involution, as any fragment of a hologram retains the entire image. At the same time, every spot also offers new stories with no particular relation to each other or to the temple as a whole. The heat and noise is everywhere Everyone believes that a center exists, but no one can quite find it for sure. Unlike the Forbidden City, where a sufficiently august visitor would finally meet the Emperor at some point on his journey to the center, in temples the center recedes forever. (Weller, 1994: 121-122)

In an age when “[a]ll fixed, fast-frozen relations, with their train of ancient and venerable prejudices and opinions, are swept away, all new formed ones becom[ing] antiquated before they can ossify, [a]ll that is solid melt into air, all that is holy is profaned” (Marx and Engels, 1848/1978: 476), proclamations about new eras have themselves become a constant affair. Accompanying the advent of every major technological change, is the by now predictable myriad of observations and assertions that social relations have become more flexible, transient and variable than ever. It is, however, also apparent that, despite the constant changes, the ancient and the venerated do not simply melt into air. Instead, they linger and haunt one generation after another in altered forms.

In the realm of work, since the 1980s, the decline of rigid, vertically integrated corporate structure and the advent of the flexible organization of work have occupied much attention in popular and academic discourses in the West as well as in the peripheries. This micro-level trend of flexibilization is intertwined with the macro-level dispersion of industrial structure. More and more, industrial production is now shifting from the gigantic, self-contained and vertically integrated plants, owned by big corporations, into networks of smaller firms, across national borders into many countries that had been raw-material producing neo-colonies only a generation ago. Similar to so many changes in the past, this round of capitalist transformation has sparked

both anxious and exhilarated announcements of a brand new age—an age of globalization—in which a vastly increasing complexity challenges all hitherto articulated conceptions about human society. However, compared to the prevailing conceptions of modern capitalism in our immediate past—the post-WWII era—much of the contemporary discourse emphasizes more on the diversifying, rather than unifying aspects, of capitalist expansion and transformation. In discourses ranging from TV commercials to academic treatises, the great historical variety of human cultures, both within advanced industrial countries and throughout the world, is now viewed as a colorful, enriching background to a cool, fast and complex high-tech global society, instead of being seen as a collection of tattered and outdated relics that are bound to be crushed by the relentless forces of progress.

Seeing the world as complex and transient is by no means a uniquely late-Twentieth-century phenomenon. Juxtaposing the two paragraphs quoted above—one depicting the cultural landscape of contemporary U. S. society, the other a typical Late Imperial Chinese religious scene, one can detect a remarkable similarity.¹ Like the Taiwanese temple goers, contemporary social analysts often find the world as constituted of diverse but complexly interconnected elements. Yet, this complex world is not totally fluid, versatile and free of authorities, as in an anarchist utopia. Instead, a set of relentless orders still dominates the world, but the authority operating it is now safely hidden out of sight. It is even more concealed than in the typical mechanical bureaucracy, in which individuals are fixed on their functions according to a supposedly rational design, and carry with them more-or-less visible powers according to their official capacities. Now, even those functional positions are transient. In other words, the “visible hand” depicted by Alfred Chandler (1977) is once again invisible, as in Adam Smith’s world, perpetrating its sleights of hand in the clamorous world of both Taiwanese folk temples and the late twentieth century

¹ Late Imperial China is the term Sinologists commonly use to denote the period from the beginning of the Sung Dynasty in 960 AD to the end of the last of the imperial dynasties—the Qing—in 1911. The most popular religion in Taiwan, the Chinese folk religion practiced by descendants of Chinese settlers since the 16th century, is mainly a product of this historical period.

marketplace.

The following thesis is greatly inspired by the above outlined observation of the supposedly brand new ideas in the West coinciding with the age-old ones in Taiwan, my natal society. The eerie feeling of meeting the past in the present started occurring to me long before I read extensively on the current transformation of capitalist economies and societies. It started in 1990, on my first day as an apprentice in the engine room of a Taiwanese navy landing ship *CNS Chung-Chi*, when I was instructed by my seniors about my work, social, and ritual duties. In addition to learning the intricate ins and outs of tending and maintaining the machines, I was taught to guard the body of trade secrets of my own group of seamen--handing it down to successive generations and keeping it out of reach of the official authority—and to keep rigorous worship of the patron god of the seamen and the machines—the sea goddess Mazu. These ancient and modern knowledge and practices were all regarded as the essentials for our manhood—the source of our defiance and self-respect. With these, we managed to keep a degree of autonomy vis-à-vis both modern and traditional official authorities ruling over us, while maintaining an authoritarian hierarchy among us.

In the mean time, I started reading Harry Braverman's *Labor and Monopoly Capital* and shared what I read with my fellow seamen and fellow workers of various trades at the naval shipyard. It astonished me to see the remarkable similarity of the degrading working conditions of Western workers and the institutions my fellow workers and I confronted every day. Albeit in different forms and apparently with greater success, our daily struggle with the officers was not unlike the Western workers' struggle to preserve their skill against the onslaught of Taylorist management's constant effort to cut their labor process as well as their autonomy into pieces. Many of the machines, technologies, and institutions we worked with even seemed straight out of Braverman's account without substantial changes.

However, when I came to the U. S. and started my research on labor and technology in Michigan, I found that distaste for the Taylorist scientific management, along with the Fordist

mass production Taylorism gave rise to, was no longer the sole domain of radical workers like Harry Braverman. Almost everywhere in the business discourse, from the publication of prestigious academics to the quality manual of the local plant of Ford Motor Company, the era of the rigid management bureaucracy ruling over the masses of deskilled workers is pronounced dead, and replaced with a new flexible world.

The perception of the economy and society as complex and flexible has its ramification well beyond the realm of work. The predominant view in the post –WWII era saw the advanced industrial society as a set of well-coordinated, bureaucratically organized, monopoly-dominated, and state-regulated production machines which put every conforming individual into place according to some master plans. “Organization man” (Whyte, 1956) seemed to be the common fate of people in both advanced capitalist and socialist societies. In response, social critics focused strongly on the non-human, “rational” and mechanical aspects of modernity as the greatest threat to human liberty. (e.g. Marcuse, 1964) Instead, the current picture is filled with intense, complex, and always indeterminate competition among individuals. This new picture takes hold not only in social economic discourses, but also in our images of nature. Emily Martin (1994) depicts the shift of American cultural outlook from mechanical to complex in terms of the conception of the human body, the corporations and the state. She also points out how the changes in each realm reinforce that in other realms, and thus constitute a general cultural shift. For instance, the agile human body composed of strong, “well trained” immune cells, is often used as an allegory for trimmed-downed, competitive corporations consist of high-skill, highly-motivated individuals. In such a world, individual and social well-being is never achieved by a better universal arrangement of the social and political whole, but by equipping each individual with better weapons, with the strategy of engaging ourselves in the relentless competition, wishing the best (wo)man wins, and wishing we, in particular, will be the winners.

In short, social Darwinism.²

In this social-Darwinian imagery of the society and economy, the “invisible hand” of Adam Smith rules again and many reformist agendas of the welfare states cease to look feasible. The ideas of welfare states is based in large part on the insight that there is a “visible hand” commanding the social economic activities of modern capitalist societies. Reform can achieve benevolent ends, as defined with the egalitarian principles of modern democracy, by directing or inducing this “visible hand,” i.e. big corporations, with rationally designed government regulations, planning, and so on. (Offe, 1985: 5-9) However, in the current perception of a complex world market, where invisible imperatives for competition are forced on every nation, corporation and individual, any human attempt to check the market forces are bound to be futile and even catastrophic, and will result in loss of the competition. If reformist measures are futile, revolutionary overthrow of the capitalist social orders is even more utterly unthinkable with the complex imagery of the world, for it is well beyond human capacity trying to articulate meaningful critiques of the fragmented status quo and organize coherent collective struggles against it. Compliance is the only choice; there is no alternative.

Robert Reich’s *The Work of Nations* (1991) is a fine example of arguments following this line. Taking the received wisdom of technological determinist accounts, such as Daniel Bell’s “knowledge society” and Alvin Toffler’s “the Third Wave,” but adding a fretful tone, Reich laments the passing of the Golden Age, ca. 1950s and ‘60s. In those days, an “American bargain” was maintained by active consent of corporations, labor, and government. Rises in industrial productivity are always followed by the rises of wages and expansions of consumer market, profits, investment and productivity gains; thus profit for capital and living standard of workers

² I would like to point out, though, that there is a difference between this contemporary social Darwinism from the earlier one. The earlier social Darwinism often implied, if not explicitly held, that, inherited traits of individuals—race, gender, IQ, etc.—greatly determine the outcome of the competition for survival. Contemporary social Darwinism emphasizes on skill—an acquired, not inherited—trait. The outcome of the struggle is therefore even more undetermined.

walk hand-in-hand. Sadly, this harmony is broken down by the invincible forces of globalization. Now that, in economic terms, there is no such thing as a nation. People, on a global scale, are now categorized according to their skills and rewarded by the economy accordingly. There is no stop to the trend that the fates of the few business executives (and other “symbolic analysts” who decide for the rest of the society “where and how . . . to dedicate their energy and money” (p. 294)) and the mass of underemployed workers will drift apart further and further, even if they reside in the same country and vote to elect the same government. The best thing, and almost the only thing, American government can do for its people, is to provide better education in the hope that the majority of Americans can one day be equipped with the best skills necessary to become champions in the global competition for lucrative positions.

Besides the rejection of the previous reformist agenda of rationally managing capitalist economy, two features stand out in this dominant discourse. The first is the reification of work skill as the most important criteria for categorizing people. Skill, in this discourse, is often seen as a tangible, quantifiable good that can be accumulated and possessed by individuals. The second is the emphasis on individual initiatives and active consent to the rules of the labor market competition, namely capitalist hegemony. These two features are often two sides of a coin. Management scholar Peter Cappelli (1995), in his recent article, asks “Is the ‘skill gap’ really about attitudes?” and answers “yes” to his own question. Cappelli points out that character attributes, such as “positive attitude toward authority” and “positive emotions in the job” actually concern employers more in hiring and training than academic performance. In other words, in this discourse, consent to the rules of capitalism is itself a skill.

Most curious for a Taiwanese like me is the fact that the mainstream discourse on the flexibilization of work and society is often reinforced with an orientalized picture of the

burgeoning East Asian economies.³ In this picture, workers in the Orient, under the positive influence of Confucian culture, are highly motivated and both highly educated and skilled. Their industrial structures and management style, at least according to some versions such as the “lean production” model of Womack et al. (1990), are highly fluid and flexible. Their state policies toward private- sector businesses feature either a non-interventionist laissez-faire attitude, such as in one version of Taiwan (Clark, 1989), or friendly strategies of active coordination and facilitation, such as in in another version of Taiwan (Redding, 1990). Moreover, a central component in the miraculous growth of East Asia, these dominant views hold, is the East Asian’s heavy investment in “human capital,” i.e. accumulation of marketable skills. (World Bank, 1993) These images stand in sharp contrast to that of the Occident, circa 1970s and ‘80s in the U. S., where people are unskilled and businesses stiffened with excessive government regulations and labor contracts.

In the context of Taiwan, the Western mainstream’s orientalizing, in turn, is uncritically borrowed by indigenous mainstream discourses to justify the dominant social economic orders (Greenhalgh, 1994). Echoing the two lines of Western orientalizing of Taiwan, scholars and politicians debate endlessly over who, the benevolent authoritarian state or the innovative entrepreneurs, are to be credited for the economic miracle. Yet there is no doubt on both sides that it is a miracle, and central to this miracle are common people’s active engagement in the capitalist economy, their consent to the social economic order, and their focusing their own pursuit for a better life in capitalist terms, such as acquiring marketable skills so as to excel in the labor market.

These celebrations of the status quo in Taiwan is disturbing for Taiwanese like me who become critical of that society through witnessing the social inequalities accompanying the

³ The term “orientalization” in recent academic discourse is developed by Edward Said in his influential work *Orientalism* (1978) Orientalization, in Said’s sense, is a discursive practice to construct a set of timeless “Oriental” essences that exist in radical separation from and in opposition to the West.

economic boom. More troubling, though, is the fact that at least part of the orientalist and self-orientalist accounts are true. There *is* a strong hegemony of the dominant capitalist orders in the ostensibly complex and clamorous Taiwanese popular worldviews. Especially after the democratization of the late 1980s erased the image of a latter-day emperor from the political scene, social and political activists constantly find themselves having difficulty articulating an indigenous counter-hegemonic discourse despite the frequent outbreaks of spontaneous social protest throughout the island. Common Taiwanese people's experience of oppression, resistance, and aspiration for a better society are scattered and complex. How to make sense of this experience in a critical, reflexive and coherent way is a task for everyone seeking effective social changes.

I try to approach this task by combining several lines of inquiry and critique into this thesis. Foremost among the bodies of intellectual work I build my own inquiry upon is the now twenty-some-year-old labor process studies started with Harry Braverman's groundbreaking work. In this theoretical tradition rife with heated debates, two lines of inquiry—one centered on the skill question, another centered around the question of capitalist hegemony—have constituted powerful critiques on the conditions of modern capitalism in the advanced industrial countries. Chief among the contributions of labor process studies to our understanding of capitalism is its focus on the connections and interactions between minute details of workers' everyday experience with technology and social relations in the workplace and changes in the macro-level social formations.⁴ By examining the production and reproduction of technological conditions and social relations at work as central sites for class struggles instead of simple consequences of

⁴ The terms "social formation" and "mode of production" are often used in overlapping and interchangeable ways in the Marxist tradition as well as Marx's own work. In this thesis, I follow Samir Amin (1973) and use "mode of production" to denote a specific political economic form in which productive labor is organized and surplus is extracted, and "social formation" to denote historically existing "concrete, organized structures that are marked by a dominant mode of production and the articulation of around this of a complex group of modes of production that are subordinate to it." (16)

technological imperatives, labor process studies has provided crucial insights for the critiques of the paralyzing dominant accounts of contemporary social changes typified by Reich's.

However, the struggle over the control of labor process, in which the contest over work skills is a central part, has never been in pure and simple terms of antagonism between capital and labor. No class struggle has ever been. Instead, it is always interwoven with contradictions in various social domains. Especially in contemporary global capitalism, where multitudes of cultural elements are celebrated and incorporated into the capitalist workplace, a broader view of labor process is needed to take into account of broader cultural contexts. In the Western labor process studies, gender is highlighted as one crucial field where social struggles over skill take place, as historically male craftsmen have been the most salient resisters to capitalist deskilling in the rise of modern industrialism. The changes in labor process, in this light, are intricately bound with the transformation of patriarchy. Other cultural domains, religion, family, community, ethnicity and so on, are, however, given much less attention by Western researchers. This is understandable in view of the fact that segregation of work and non-work lives is a norm in contemporary North American and Western European industrial societies and research on the connections between work and after-hour lives in such societies is relatively difficult. This deficiency calls for further studies to develop a cultural perspective of labor process. This is a pressing matter as capitalist globalization is now involving more and more people in a great variety of cultures into the industrial workplace, and the faces of capitalist labor process are rendered more and more complex as a result.

Under this theoretical concern, I developed my study centered on the labor process and cultural lives of Taiwanese male skilled workers. Using retrospective ethnographical data from my own experience of working as a seaman aboard a Taiwanese naval ship, and fieldwork data from a one-year study in the machine industry in Central Taiwan, I explore the work and cultural experience of Taiwanese working-class man in a fast-changing society. How is their work organized? How are skill, gender, ruling class hegemony, and their perception of the world

constructed, reproduced, and changed? And how are these changes related to their actual work? These are the empirical questions I seek to answer.

In my study, I use folk religion as a strategic entry point leading from the context of work to other cultural domains—kinship, gender, peer group, etc. Rigorous practice of folk rituals on the point of production conspicuously distinguishes Taiwanese workplaces from the Western ones, and characterized the intertwined work and non-work lives in Taiwan. In addition, I choose religion as an entry point in order to best utilize previous anthropological studies on Taiwan. In striking resemblance to the development of labor process studies, anthropology on Taiwan and Chinese societies in general started paying close attention to the questions of hegemony and patriarchy in the 1980s. Practices and symbolism in folk religion is one focal point of examination and has resulted in much insightful analysis. My study on labor process and culture extends this line of inquiry into the point of production.

In addition to exploring the configuration of labor process and culture, I try to grasp the dynamics of a society under profound transformation. In the past decades, Taiwanese society is not only undergoing constant technological revolutions characterizing capitalism since the Industrial Revolution, but also a long-term transition from the late-Imperial Chinese social formation into one with modern capitalism in the dominance. This latter change is culminated, exactly during the period of my study, into the establishment of a parliamentary democracy in place of the authoritarian KMT regime, which very much resembled the old Imperial dynasties. Corresponding to this political change, what previously existed as a subaltern folk society under the dynasties has now come up to the surface, and transformed itself, intensifying the class distinctions within it. In this process, the crucial role of patriarchal family, the most important social organization in the previous era, dwindles, and is replaced with a host of more individualized social relations. The male skilled worker, who has previously been on a sure line of ascendance in the patriarchy as well as the patriarchal seniority hierarchy in the trade, is now faced with a much more uncertain future. In this aspect, the central figure in my study is a vivid

sign of the time.

1.1 *Some Conceptual Issues*

Before further introduction of my study, I would like to outline several key concepts I use to analyze the complex cultural worlds of the sites I explore. Most of the concepts are well developed in the literature I review later in this chapter. The only new term I coin is “shelving”—a form of passive resistance by deference that has repeatedly appeared in many contexts during my study.

1.1.1 Social Construction of Skill and Patriarchy

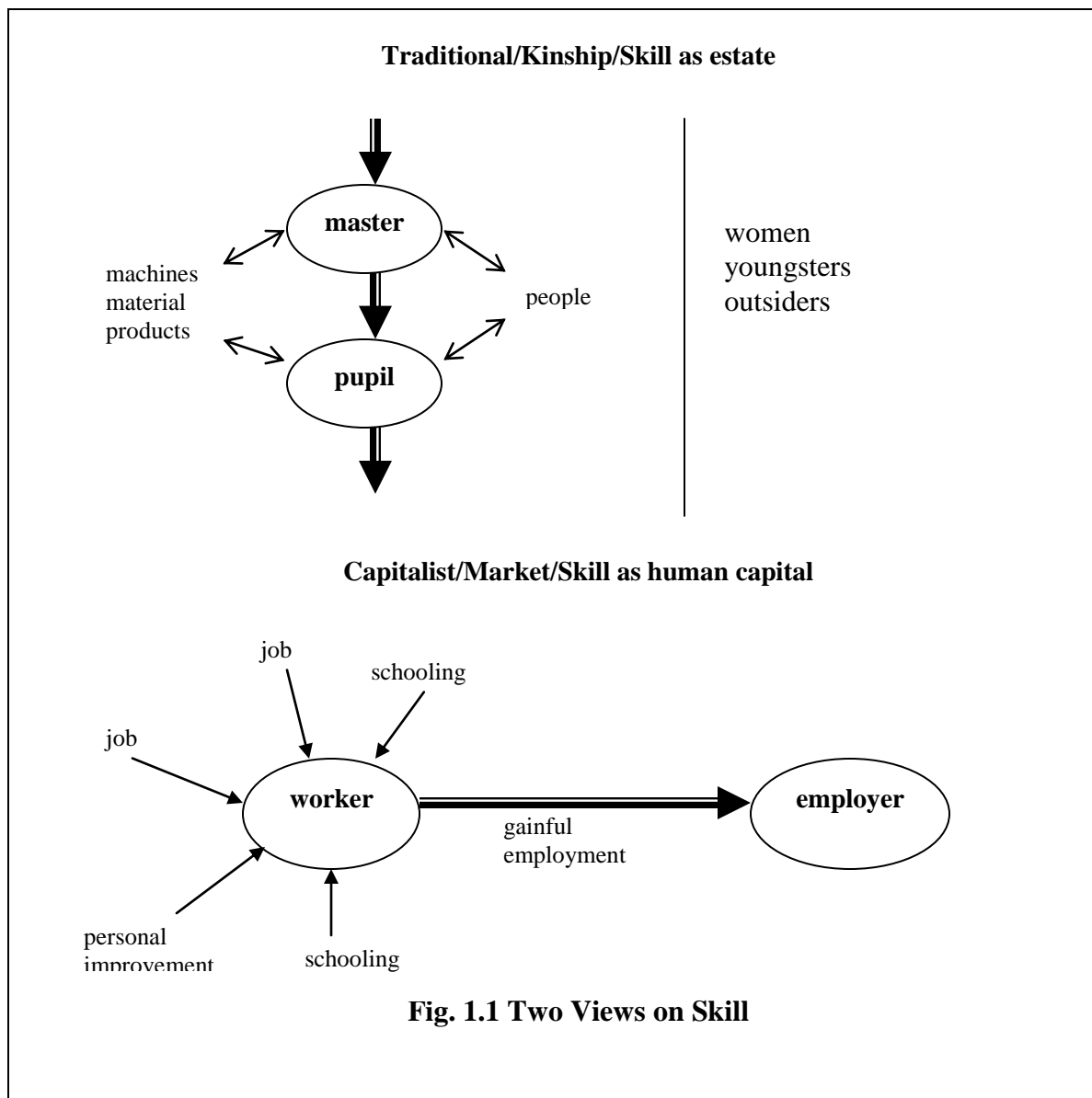
Work skill, as the essential criterion for classifying wage laborers in the capitalist workplace, can be analyzed as a social construct. In other words, the definition and ranking of the skills required for a certain job, and the type of people needed for such a job is less determined by the objective attributes of the job and aptitudes of the persons, but more by the struggles between management, different groups of workers and prospective workers in the social relations of the capitalist mode of production. This is not to say, of course, that skill can be created solely out of social actions without material basis. Work skills, human capacities to engage in certain kinds of productive labor, to perform certain tasks within the technological and social conditions of work, are products of the general development of a society at a specific historical epoch. Yet, it is in a social process that technological and social configurations of work are set up so that people with one set of capacities instead of another become crucial to the work, and are defined as skilled.

A central site for the practices of skill construction is technological design, through which certain characteristics of one group or another are rendered necessary or irrelevant. The configuration of the socially constructed skills of a given workplace, however, is not simply determined by the politics embedded in the design of technological or even organizational artifacts. Instead, it is contested by various social forces in the specific context. One good

example is the vastly different configuration of skills and social relations around the computer numerical-control machine tools in U. S. factories (See Section 1.3.1.2.1 and Noble, 1974) and in the Taiwanese small machine shops explored in Chapter 4 of this thesis.

Within capitalist production relations, social construction of skill is, at a fundamental level, a practice of struggle between workers seeking autonomy on the job, often translated into better wages and working conditions, and management seeking effective use of labor power for surplus-value extraction and capital accumulation. It is, however, also often practiced within existing social-cultural hierarchies. Historically, especially in studies on Western industries, gender is foregrounded as the most important of these hierarchies. Social construction of skill is often simultaneously sexual segregation of work. Work skill is a central component of masculinity in the context of technologically intensive work. Masculinist conceptions and embodiment of work skill often exclude women (and younger people) from certain jobs, while enhancing some adult male workers' bargaining power with the employers.

Skill is closely linked to patriarchy on yet another level. Patriarchy as a social order consists of two essential components: domination of men as a biological sex over women, and domination of the senior over the junior in a generational hierarchy. This latter component of patriarchy is most often reproduced in the social construction of skill, especially in traditional, trade-guild-like contexts. As the family patriarch pass down the family blood and estate along the male descent line, the masters of the trade pass down skill along the teacher-pupil hierarchy, gain control over the novices, and exclude outsiders from the trade. This form of the pre-capitalist social construction of skill often competes with the modern capitalist form, in which skill is treated as the properties of an individual worker's labor power. The competition of the traditional and the capitalist form of skill, intertwined with the competition of the traditional and the capitalist form of hegemony at the workplace, is the major theme throughout this thesis.



1.1.2 Hegemony

The concept of hegemony was first fully developed in the Marxist tradition by Antonio Gramsci (1971) to describe the leadership of the bourgeoisie in democratic revolutions, and to formulate future political strategies for the revolutionary proletariat. Following the Leninist critique of economic determinism, Gramsci argues that, in any concrete social formation, the ruling class maintains its dominance not simply through special organization of direct, political force but by being able to go beyond its narrow, corporative interests, establish moral and intellectual leadership, and make compromises (within certain limits) with a variety of allies who are unified in a social bloc of forces. The hegemony of the dominant class is created and re-created in a web of institutions, social relations and ideas. Subsequent social theorists find hegemony an especially useful idea for analyzing diverse and relatively stable class societies such as Western liberal democracy (Laclau & Mouffe, 1985; Bocock, 1986). Labor process theorists and anthropologists of Chinese cultures also use this concept to examine the consent of subjects to authority. (See Sections 1.3.1.3, 1.3.4, and 1.3.5.)

In the literature that I will review below, the concept of hegemony is used as a form of politics in which the dominated groups actively engage in practices that often implicitly reinforce the leadership of the dominating group(s), and hence consent to the dominant values. The antithesis of hegemony is despotism, in which unilateral exercise of (raw or ideological) coercive power is directly present in full view, and “compliance,” rather than consent, of the (often passive) dominated groups is the objective of power. (Burawoy, 1985; Sturdy et al., 1992) By contrast, active but contained heterodoxies are essential to a hegemonic order. (Sangren, 1987b) Hegemony is also different from ideology; the former is subtle, dissolved, and often self-contradictory, the latter is well articulated.

In addition, two often-intertwined forms of hegemony can be observed in these bodies of literature. One I shall call “traditional hegemony”, in which the consent of the subjects to the

authorities is established and reproduced through association with other traditional hierarchies. Traditional Chinese ruler's dominance over commoners corresponds to commoner patriarch's dominance over women and children, for instance. (See Section 1.3.5) The other I shall call "capitalistic hegemony", in which consent to the authorities is created and reproduced through rivalries between atomized individual subjects. Competition among workers reinforces their consent with managerial authority, for example. (See Section 1.3.1.3)

In the capitalist labor process, the most important form of coercive power is so-called "market coercion," i.e. the fact that the working class as a whole cannot sustain itself except by selling its labor power on the market. Market coercion is most effective when and where competition on the labor market is intense, and the fear of losing her job, and hence livelihood, can drive a worker to endure whatever she is subjected to. However, in most situations, labor control need not appear in overt, coercive, and despotic forms. Acquiring workers' consent for a particular production regime, i.e. establishing capitalist hegemony in the workplace, is often key to successful achievement of managerial control.

A hegemonic workplace often features a high degree of direct workers' control (or perception of control) over the labor process, and workers' identifying themselves as "skilled." By contrast, in a despotic workplace, workers are usually defined as "unskilled" and under tight managerial control. At the workplace, establishment of capitalist hegemony often takes the form of a multifaceted inter-class alliance produced and reproduced in conflicts in non-class terms: gender, ethnicity, trades, inter-personal or factional rivalry, and so on. This leads to the establishment of a constrained field for active exercise of workers' free agency in essentially non-subversive and localized resistance—a kind of "healthy heterodoxy," so to speak, that strengthens the orthodoxy. My analysis of various workplaces in the following chapters will be focused on the production and reproduction of such heterodoxies.

Because the evasion of the fundamental class contradiction embedded in the capitalist relations of production is a prerequisite to the establishment of capitalist hegemony at the

workplace, relationships borrowed from cultural realms other than the realm of production are necessary to constitute such hegemony. In his now classical work on hegemonic relations in the workplace in the U. S., *Manufacturing Consent* (1974), Michael Burawoy describes the central mechanism of hegemonic control to be a playful game-like competition among workers for “making-out”—achieving production quota with the least effort and without exceeding the quota. Such a game replaces the competition for production bonuses, which the management intended for the workers to play, and thus maintains a defiant stand of the workers vis-à-vis the management. (See Section 1.3.1.3) Modern competitive games themselves are, of course, corresponding to capitalist market competition. Yet the operation of projecting the human relations on the shop floor to the world outside the workplace and back into the realm of production effectively shifts the point of conflict away from class contradiction, and successfully reproduces capitalist hegemony.

The situation in Taiwanese workplaces is more complicated for two reasons. Firstly, unlike in a typical North American or European workplace where segregation of work and non-work lives is the norm, the Taiwanese workplace is rife with personal ties constituted in various cultural realms: kinship, school, community, ethnicity, and so on. The borrowing of relationships from other realms into the workplace is therefore much more thick and drawn from more sources than in the West. Secondly, in addition to being complex and hegemonic from the start, those realms from which relationships are borrowed to constitute workplace hegemony are constantly changing along with the industrialization of Taiwanese society. In other words, relationships inside and outside the workplace are co-evolving. This co-evolution of various cultural realms certainly exists in the West as well, but the pace is more intense in a developing society like Taiwan.

Facing the more complicated task of analyzing Taiwanese workplace hegemony, I have chosen to use folk religion as the primary focus to explore the dynamic co-evolution of workplace social relations with that in other realms for two reasons. First, the symbolism in religion is

usually more explicit than in other cultural realms, and Chinese folk religion in Taiwan has been better analyzed by previous researchers. And second, folk religion is rigorously practiced at Taiwanese workplaces and is thus an essential part of the cultural world at the point of production. Yet this by no means imply that there is a causal relationship between religion and work, either from the former to the latter, as cultural-determinists would have it, or from the latter to the former, as economic-determinists would like to see.

I will briefly review the literature on Chinese folk religion in Section 1.3.5. Here, I would like to point out the salient hegemonic features of the cosmos in the folk religion. Unlike most other religions and ritual traditions, whose points of correspondence with the social world are usually indirect and subtle, Chinese folk religion quite directly reproduces the Late Imperial Chinese social order in its symbolism. Its pantheon closely simulates the imperial bureaucracy, for instance. Yet, contrary to the common misconception, such as that in Wittfogel's *Oriental Despotism* (1957), these orders are highly hegemonic in that the beliefs in Chinese folk religion manifest a hegemonic, instead of simply despotic, relation to authority. They are characterized by:

- a) an utilitarian attitude toward the worship of the supernatural; the ends of religious activities are decided by the worshipers' self-interests instead of preordained by a higher authority;
- b) the concept of fate is perceived as a precondition for active intervention for the bearer's benefit, instead of a destiny to be followed, as common conceptions of fatalism would imply; and
- c) the cosmological ordering is characterized as a closed-ended dialectic between dominant masculine order and subversive feminine chaos, instead of a constant subjugation of the latter to the former.

Features a) and b) manifest a fairly capitalist-like social order, in which self-interested

individuals can actively seek to maximize their gains in the marketplace. Yet feature c) indicates the understanding that these “economic persons,” although they may be able to make a fortune on the chaotic market from time to time, are, in the final analysis, dominated by the well-ordered imperial bureaucracy. Such a society is definitely hegemonic, with a ruling imperial bureaucracy dominating over a capitalist-like society of commoners at a safe distance. Anthropologist Hill Gates (1996) calls this kind of capitalism-in-subordination “petty capitalism.”

1.1.3 Petty Capitalism

Recent Marxist researchers of pre-capitalist class societies tend to use the more generic term “tributary mode of production” to replace the classical Marxist “feudal” and “Asiatic” modes of production. These latter two formulations, being developed within the more parochial views of Europe, are often found ill-applicable to non-European contexts. (Amin, 1972; E. Wolf 1982) According to Eric Wolf, the tributary mode of production is one in which “the primary producer . . . is allowed access to the means of production while tribute is exacted from him by political or military means” (1982: 79-80). Wolf distinguished three most commonly seen social formations in complex societies::

In social formations that deploy labor through relations glossed as kinship, people are assigned to networks or bodies of kin that are distinguished by criteria of gender, distinct substances or essence of descent, connections with the dead, differential distributions of myth, rituals, and emblems. Tributary formation hierarchize these criteria and set up distinct social strata, each stratum marked by a distinctive inner substance that also defines its positions and privileges in society. Capitalist formations peel the individual out of encompassing ascriptive bodies and install people as separate actors, free to exchange, truck or barter in the market, as well as in other provinces of life. The three modes of categorizing social actors, moreover, imply quite different relations to “nature” and cosmos. (quoted in Gates, 1996: 11)

In the tributary societies, the state functions as a dominant non-market mechanism for surplus extraction, while leaving open the possibility of additional, subordinate mechanisms based on other formations: kinship, communal, or even capitalist-like formations based on private ownership and free labor. In late imperial China, the most salient of such subordinate mechanisms

is an ever-expanding market-based “petty capitalist” economy.

According to Gates, petty capitalism is a “dialectical response” to tributary relations; that is, it is complimentary and contradictory to the dominant state-operated modes of production. Petty capitalists are commodity producers—producers for market more than for use—working within firms organized under the idiom of kinship. The crucial difference between petty capitalism in Chinese society and full-fledged capitalism is not the size of firms but the socio-historical condition that, “in capitalism, legally distinguished individuals confront the market; in petty capitalism, state-defined households do.” (1996: 224) Patriarchal family is the basic political-economic unit in petty capitalism. Within the unit, family members’ labor is organized according to gender and generation hierarchies to produce commodities for exchange, truck and barter on the open market. The surplus is also appropriated within the family according to such hierarchies.

Petty capitalism has a set of contradictory principles in different levels of social organization. It features both commodity exchanges on equal footings between households, and immutable gender and generation hierarchies within household. I use the metaphor of “village” to denote the market-like aspect of petty capitalism. In a traditional village, all households were in principle equals. Although they were often divided into antagonist classes of landlords and tenant farmers or moneylenders and small producers, the division is usually attributed to variable fortunes, instead of inherent hierarchy of rights and privileges as in the case of European feudalism.

A distinctive character of late Imperial Chinese society is that each of two modes of production—tributary and petty capitalist—deeply incorporates elements of its opposite into itself. The state bureaucracy, although essentially a non-market mechanism, is non-hereditary and sees itself as a more-or-less competitive “meritocracy.” The petty-capitalist households compete on the market but organize themselves internally according to non-market, hierarchical patriarchal orders. Yet the acts of incorporation are not balanced. In Taiwan, until recently, the tributary state maintained a clear hegemonic superiority. Its values are celebrated in the commoners’ folk rituals

and ideologies, although the ruled subjects carefully keep its authority at a distance. The following section outlines two common practices to keep away the authority's direct control.

1.1.4 Encompassment and Shelving

Hegemonic order is defined by the ruled subjects' active engagement in producing and reproducing the leadership of the rulers. The practices of the dominated subjects vis-à-vis the dominating order is always multifaceted and contradictory: compliance at one level, but subversive at another level. Two kinds of such practices became especially visible during my study of the Taiwanese workplace.

The first one is "encompassment." This term was coined by anthropologist Louis Dumont, for whom it is "the way in which one social group or idea includes its opposite at a higher level." (Hess & DaMatta, 1995: 11) For example, in European languages, the term "woman" always includes its hierarchical superior "man." However, this act of inclusion cannot be simply understood as compliance with the ruling ideology. Instead, it is a "by-passing" maneuver, so to speak." When a group encompasses the values of its superior, it maintains its own autonomous sphere while acknowledging the leadership of its superior. In the Brazilian context, DaMatta argues, the traditional, relational cultural form does not give way to the modern, individualistic one, but actively encompass the latter. Hess provides one such example in the field of religious therapy, in which the African-originated Umbanda encompasses all other forms that are its superior in the cultural hierarchy in Brazil. (180-208) In contemporary Taiwanese workplace, cultural elements of both modern Western science and technology and traditional bureaucracy are often encompassed by the Taiwanese workers.

One result of the encompassment of the dominant order by the dominated is that the ruled subjects can sometimes play the rulers' game to their own benefit. One good example is provided by Hill Gates' analysis of the symbolism of the god of localities, Tudi Gong, whose questionable spiritual origin (association with ghosts) and official title make him a supernatural equivalent of a

village-bully-turned police officer. According to Gates:

Tudi Gong, analog of the fearsome yamen-runner, is popularly promoted, in effect, from a mobile and troublesome bully to a respectable official when people build him an office. He is, after all, the quintessential god of the locality. Immobilized by elaborate etiquette and concealing architecture, he is pushed unto passivity by his subordinates. As so commonly happens in Chinese life, the form of respect and control are cleverly manipulated to give a modicum of control to those who in theory are controlled. (1996: 166)

In the Taiwanese language, such an act of placating and trapping one's superior with their supposed respectability is described with an idiom "*pâi-ti âng keh toh-tèng*," literally "putting on the red shelf" (where altars for the deities are kept). I use the term "shelving" to denote this practice. By "shelving" an official, the commoners transform him from an aggressive law enforcer nosing around in the village and making people's lives difficult, into a passive god sitting in his office, feasting on the people's tribute, adorned with the etiquette and civility fit for a gentleman, and reigning at a safe distance. Taiwanese people constantly shelve bullies into honorary offices and official doctrines into slogans painted with big characters on the wall. Most recently, the international standards for quality organization—the ISO-9000s—have been enthusiastically pursued by various industries, only to be shelved as great material for publicity campaigns. (See Chapter 5)

Both encompassment and shelving provide greater agency for the dominated and subvert dominant hierarchy to one extent, but strengthening it in another. The outcome of such maneuvers is often a tense stalemate, instead of the subversion of the authority.

1.2 From Boyhood to Family Man: Organization of the Thesis

My exploration of the labor process and cultural world of Taiwanese male skilled workers is centered on three sites presented in chapter 2, 3, and 4 respectively. They are: a Taiwanese naval ship, two medium-size machine factories, and a cluster of small machine shops. The latter two sites are located in the Taichung area—a center of machine industries in central Taiwan. In this thesis, the three sites are connected to each other in several ways.

Firstly, the three sites represent three stages of personal growth of a traditional, ideal-typical Taiwanese male worker—from the rites of passage in the military, to a wage employee, and to a self-employed and then employing proprietor. This progression is simultaneously from the working class to the capitalist class, and, in terms of formal organization of work, from regimentation to flexibility. This movement is often perceived as a continuous process of accumulative growth, instead of a quantum leap. Thus, class position appears as determined by seniority, skill, and luck—a view combining both capitalist and traditional hegemonies.

Secondly, the organizational principles of these three sites represent three different combinations of elements from tributary, petty capitalist and capitalist modes of production. The ship was in a typical late-Imperial Chinese social formation. Tributary authority of the bureaucracy exerted symbolic leadership, while an active class of petty-capitalist workers, internally organized according to patriarchal principles, ran everyday operations. The factories, being in the private sector and devoid of the authority of tributary state, had strong petty capitalist characteristics. But the social organization of work in the factories appear less like a petty capitalist household with immutable patriarchal hierarchy, but more as a village composed of multiple competing households. The small machine shops, located in the actual village and often owned by a single household, were supposed to be in a most quintessentially petty capitalist situation. However, with the transformation of Taiwanese society, the patriarchal family organization, which should have provided the patriarch with the right to appropriate junior family members' labor power, had cease to function in this way. Instead, the shop owners had to rely on a host of more versatile personal relationships for essential connections and cope with a strongly capitalistic market.

Thirdly, as can be discerned from the second point, the progression from the late-Imperial Chinese style formation on the ship to the versatile market environment of the small shops is a reflection of Taiwanese society's transformation in recent decades. On one hand, the authoritarian state was overthrown. On the other hand, the civil society that overthrew the age-old dynastic

bureaucracy and took over the state intensified its internal divisions. This is reflected in the changing relationships surrounding the skilled workers, and the changing role of skill, in the three sites. On the ship, skill was primarily a proxy for seniority, and workers were organized into household-like seniority and teacher-pupil hierarchies. Such hierarchies guaranteed a sort of equality between inherently unequal individuals, as ascending the seniority ladder was a matter of life for every individual. In the factories, while these hierarchies still existed in the form of competing factions, they were less taken for granted, less often justified with immutable teacher-pupil hierarchy, and more often reinforced with reciprocal interpersonal connections. In the village of small shops, teacher-pupil and seniority hierarchy had all but disappeared. Interpersonal connections between equals became the most important social relations. In the mean time, the division between the prosperous big factory owners and the small shop owners struggling to survive, and the dependence of the latter on the former, was now so intensified that ascending the hierarchical ladder is no longer a matter of seniority but becoming almost impossible.

Table 1-1: The Three Sites

<i>Site</i>	<i>Life Course</i>	<i>Social Formation</i>	<i>Ruling Principles</i>	<i>Folk Ritual</i>
SHIP	Rite of Passage	Late Imperial China; Tributary State > Petty Capitalist Households	Skill = Seniority	Mazu; Concealed; Communal (<i>gongxi</i>)
FACTORIES	Wage Employment; Maturing Adult	Petty Capitalist Village	Competition / Reciprocity > (<i>gongxi</i>)	Tudi Gong; Open; Communal (<i>gongxi</i>)
WORKSHOPS	Entrepreneur; Family Patriarch	Late Imperial China → Capitalism	Seniority = Class Reciprocal Personal Connections	Tudi Gong; Open; Communal; Class-Differentiated

The practices of folk rituals reflect the characteristics of each site. On the ship, folk religion was a focal point of the ethnic Taiwanese seamen's solidarity against the official authority. It was officially discouraged, and the altar of Mazu, the patron goddess of sailors and ethnic Taiwanese, was concealed below deck, but almost all seamen rigorously practice the rituals. In the factories,

the altar of the patron god Tudi Gong was prominently located in the front office and folk rituals were openly celebrated by management and the core workers who were analogous to household heads in a village. In the industrial suburb, the smaller workshops often did not have their own altar, and the shop owners worship at local shrines. However, corresponding to their submissive and dependent positions viz. the big firms, small shop owners were usually passive participants in the ritual organizations, as richer and more powerful people dominated such organizations as well as civic life in general.

The ideal of petty-capitalist village life, featuring free market exchange between patriarchal households, was central to the understandings of workplace social relations of both the seamen on the ship and the workers in the factories. In these workplaces, the village metaphor appeared in many details of the microcosmic cultural worlds, from the conceptions of skill to the practices of religion. However, as the male worker went through these stages of his life, accumulating skills and connections, and finally became the ideal petty capitalist patriarch—an owner-operator of a family business, he would find that the village was no longer there.

While chapter 2 through 4 examine the cultural-bound local configurations of social relations in labor process, chapter 5 connects these configurations with the global forces of capitalism. My analysis of the local-global interactions will be focussed on the seemingly brand new issue of ISO-9000s, and touching on the often-debated issue of information in labor process. ISO-9000s is a series of international management standards in the name of “quality” but stressing more on the “openness of information” in production and business procedures. With a strong deskilling tendency suitable for the monopoly capitalist environment of the West, this managerial paradigm is incompatible with the local configurations of labor process. However, instead of rejecting the ISO-9000, Taiwanese factory management embraced it, in acknowledgment to the dominance of the global capitals, but shelved it without altering the local conditions. In operations such as this, local management and workers alike “feminized” information work and put it under the dominance of culturally defined men’s work of production

and manipulation of interpersonal connections. This was in stark contrast to the hierarchy of information over production that is so often found in the labor processes of modern Western capitalism.

Chapter six concludes this thesis with a summary of the findings. In addition, I will assess the heuristic values of the cultural perspective of labor process in furthering our understanding of contemporary capitalist labor process in general, and in formulating Taiwanese workers' strategies for action in particular.

1.3 Literature Review

1.3.1 Skill and Hegemony in Labor Process

The degradation of work skills under detailed division of labor and mechanization in modern industry had been a central issue for early 19th-century social struggles such as the Luddite rebellion, and inquiry on the issue of skill and its relations to technology dates back as early as Adam Smith's *The Wealth of Nations*. Yet there is no doubt that contemporary debates on this issue started with Harry Braverman's mile-stone work *Labor and Monopoly Capitalism* (1974). Braverman's work started a renewed social and scholarly interest in critical perspectives on the skill question and labor process in general. Braverman puts forward a "deskilling" thesis, which has served as a crucial reference point for the most heated debates in the field of labor process studies for the past two decades.

In contrast with Braverman's emphasis on class contradictions in the skill question, another line of inquiry starts with Michael Burawoy's *Manufacturing Consent* (1979) and focuses on the concealment of class contradictions in the hegemonic social organization in labor process. While granting Braverman's general thesis, Burawoy argues that there is an equally important tendency in the capitalism to render the control of capital over labor invisible. Later researchers bridge the Bravermanian and Burawoyan approaches by bringing in a gender perspective, and develop the view that struggle over skill is instrumental in the constituting both capitalist and patriarchal

dominance in the workplace.

1.3.1.1 Conventional View of Work Skill

Outside of the more critical labor process studies, the dominant view of work skill is heavily based on mainstream economics such as G. S. Becker's *Human Capital* (1975, first edition published in 1964). Becker provides a well-articulated model which treats human work skills as tangible commodities. These commodities are produced and accumulated through formal education and valuable work experience, and then invested on the labor market "for a profit." Wages and salaries, in this view, are like dividends to stocks--the distribution is always according to contributions. There is, of course, no guarantee on the return of human capital investments. As in any other type of investments, market demand fluctuates, and obsolete commodities don't sell. But the equality of the market on the whole is always maintained by the invisible hand of supply and demand. Moreover, skill as commodity can always be measured and quantified. The monumental Dictionary of Occupational Titles (DOT) surveys done by U. S. Department of Labor has provided the most comprehensive ever quantitative measurements of work skills in the U. S. In the fourth edition published in 1977, it covers over 12,000 jobs. (see Cain, 1981) Skill level, in the DOT study, is measured by a complex of 44 indicators including general educational development, specific vocational preparation, aptitude, temperament, interests, and working conditions.⁵

According to the human capital theory, almost all kinds of economic inequalities are caused by the disadvantaged people's lack of skills. And this deficiency, in turn, is caused by lack of

⁵ Some of these indicators, as Spenner (1988) points out, are highly problematic. For example, the ratings of "temperament and interest" are not personality temperaments and interests as such but are more like typical role demands of a job. While it may be reasonable to assume that people with some certain personality may be more suitable for certain jobs, it is not clear whether those traits measured by DOT are constant parts of individual characters. It is hard to imagine that a person, except in George Orwell's 1984, can have such a personality that she always prefers "repetitive or continuous processes", or dislikes "feeling, ideas, or facts." In addition, enduring hardship on the job, such as extremely high or low workplace temperature, will also be measured as "skill."

prudent investment. Women, for instance, are paid less because they choose to pursue opportunities in the family and are generally short on valuable skills. In addition, aggregate studies using the DOT survey data almost always show that: a) the general level of skill in the economy is rising; b) reward for work is in proportion to the skill levels; and c) disadvantaged groups like women are lower in their aggregated skill levels.⁶ Skill, in this line of study, thus becomes an all-purpose explanation for social inequality. Recent critics of the DOT occupational sociology have pointed out that the research design of DOT itself entails such outcomes (Spenner, 1983, 1990; Atwell, 1990).

Despite the serious epistemological deficiencies and conservative political consequences, this conventional view of skill is still alive and well today. It serves as the basis for various mainstream discourses on skill and society, such as that of Reich (1991) and the World Bank (1994). In addition, many workers in my study also adopt this individualistic view of skill as a tradable commodity. This view is especially instrumental in transforming hegemony in Taiwanese workplace from a traditional one to a capitalist one.

1.3.1.2 *Deskill and Enskill*

In sharp contrast to the human capital/DOT research, Braverman argues that capital and its agents have an intrinsic interest to deskill and to assert ever more control over workers. As Frederick Engels explained in his 1891 introduction to Marx's *Wage Labor and Capital*, what the employer buys from workers is not "labor" (the activity of work itself), as Marx originally suggested four decades earlier, but "labor power" (the potential ability to work). (Engels, 1891/1968) This distinction is crucial in understanding the capitalist labor process. When the employer hires a worker, he purchases a commodity of undefined quality and quantity.

⁶ There are some notable exceptions in recent years. Howell and Wolff (1991), for instance, link changes in employment in 64 industrial and 264 occupational categories from 1960-1985 to their descriptions in the DOT. They find that low-skill service industry work grew more quickly than high-skilled. Furthermore, in service industries and for nonsupervisory workers as a whole, the most rapid growth was in the highest skill segment but in the lowest wage segment.

What he buys is infinite in *potential*, but in its *realization* it is limited by the subjective state of the workers, by their previous history, by the general social conditions under which they work as well as the particular conditions of the enterprise, and by the technical setting of their labor. . . .

It thus becomes essential for the capitalist that control over the labor process pass from the hands of the worker into his own. This transition presents itself in history as *the progressive alienation of the process of production* from the workers; to the capitalist, it presents itself as the problem of *management*. (Braverman, 1974: 57-58)

Historically, capitalists tackle this problem of management by undermining workers' skills with detailed division of labor and use of new technologies in order to separate conceptual and executive tasks. The development of production technologies under capitalism is also a history of progressive deskilling for the majority of the working population.

Braverman never positively defines what "skill" is. Instead, it is conversely defined with the historical model of pre-industrial tradesmen's work. (Thompson, 1989: 92) His use of "skill" usually carries a dual meaning: 1) specialized knowledge and capabilities (the "objective" skill), and 2) the autonomy-control of a worker over his own labor process (the "subjective" skill). Autonomy-control is related to, but not determined by, the existence of "objective" skills. (Attwell, 1987, 1990; Vallas, 1990)

The Brighton Labour Process Group (1977) provides a general theoretical argument for the deskilling thesis from Marx's labor theory of value. They argue that in order to expand itself by securing more and more surplus labor, capital inherently needs to transform the condition of labor from "formal subsumption" (such as in the case of subcontracting or the "skilled" labor process) to "real subsumption." Extraction of surplus value in formal subsumption of labor is achieved through wage employment or unequal exchange of products in commodity forms, but not through the capital's direct control of labor process. In real subsumption of labor, workers are totally separated from conditions of labor, the particularistic organization of work is replaced with "objective" organization of the collective worker (i.e. individual workers are rendered interchangeable), technology is fetishized, and the reproduction of the workers' subordination is built into the labor process itself. Skill, in this light, is primarily a component of social

relations--the relations between worker and the conditions of production (workplace technology).

The deskilling thesis is supported by numerous case studies including the early ones collected in Zimbalist (1979) and Wood (1982), more recent studies such as Vallas (1993), and the much celebrated study by David Noble (1984) on the development of Numerical Control machining as a capitalist attempt to undermine the control of skilled unionized machinists. Harley Shaiken (1984), in his similar study on machining technology, generally agrees with Noble, but he also argues that the very unpredictable nature of the material world makes full deskilling (completely replacing human workers with machines) impossible. Yet both Noble and Shaiken suggest that management's propensity to control workers is so strong that it sometimes overrides the pursuit for profit, and deskilling is often done at the expense of productivity.

Shaiken's point, that the labor process dealing with the unpredictable material world is intrinsically complex and thus cannot be completely abstracted and deskilled, is also echoed by others who argue that this demonstrates the inherent dependence of capital on labor. (Sturdy et al., 1992; Darrah, 1996) Darrah, for instance, conducts long-term observation in two electronic assembly plants in California and finds that even the nominally "unskilled" assembly work is full of unpredictability--machine breakdowns, material defects, and so on--and full accounts for these work activities are not possible, let alone abstractions, routinization and mechanization of them. This notion is well accepted by the more mainstream scholars under the rubric of human-centered management. Yet while the labor process researchers take this indispensibility of human labor as the *limit* of the capitalist de-killing tendency, the human-centered management scholars argue that it actually *refutes* the deskilling thesis. (Adler, 1988; Adler and Borys, 1989; Kelley, 1984, 1990; Zuboff, 1984)

The human-centered management scholars have a two-edged political agenda: against the Marxist critique of capitalism, on one hand, and persuading corporate management to apply more worker-friendly organization of work on the other. They apply similar case-study methods to prove that level of "skill," no matter what it means, actually rises with technological innovation.

Zuboff, for instance, argues that:

By redefining the grounds of knowledge from which competent behavior is derived, new information technology lifts skill from historical dependence upon a laboring sentient body. While it is true that computer-based automation continues to displace the human body and its know-how (the process that has come to be known as *deskilling*), the informing power of the technology simultaneously creates pressure for a profound *reskilling*. (1984: 57)

In other words, the trend of deskilling appears so only in so far as we define work skill as a historically static term, i.e. according to the model of craft mastery. Changing the definition of skill, association with high-tech machines as a criteria for higher skill, for instance, can lead to a scenario of skill upgrading. Therefore, workers need not worry about themselves being degraded, and management should compensate workers for their upgrading skills. These scholars agree with the labor process researchers on the point that capital is inherently dependent on human labor for production, especially in the aspect of quality assurance. In the case of machining, Adler and Borys (1989) argue that although NC machines have replaced traditional machining skills, machinists are now required to bear more responsibility when operating the expensive machines, and they are more interdependent with other workers [and dependent on the company]. Thus the requirement for the machinists' "commitment" (to the company) and their social skills rise with the introduction of NC machines.

Curiously enough, the same objective social process--loss of worker's autonomy over his/her job--can be described as both degrading and upgrading of his/her skill by the labor process and human-centered management scholars. Judged by the dual definition of skill implicit in Braverman's account, such an "upgrading" is dubious. For example, Vallas's (1993) study on the automation of telephone systems shows that the (predominately female) telephone operators' autonomy and control over the labor process can actually decline with computerization even though their tasks are becoming more complex and demanding. Such women workers are also consistently labeled "unskilled" regardless of the changes of their work content and the level of technology they work with.

The twenty-year-long debate on whether there is actually a “deskilling” trend in the capitalist mode of production, if seen solely on this specific issue, ends with a totally muddled definition of skill. And the elusive meaning of skill is often freely bent and stretched to suit a particular agenda. This situation is exacerbated in the contemporary “lean production” workplace, where the content of “skill training” is often stretched to include the “right attitude” (i.e. conformity) toward the company. A strike in a lean-production auto plant in Canada actually broke out over differing definitions of skill. While workers perceived work skill as something that can enhance their market standings, from assembly-line jobs to skill-trade jobs, for instance, they found that the “skill training” sessions provided by the company amount to brain-washing propaganda. (CAW, 1993) Yet, according to the “enskill” theorists, “right attitude” *is* part of skill. This muddled situation can only be clarified when we consider the skill question with the discussion of workplace hegemony and the feminist critique on Braverman’s thesis. I will discuss these issues in the following section.

1.3.1.2.1 Historical Perspectives: The Case of Machine Tools

More than any other technology, metal working has long been a focus of the live struggle over deskilling. The commonplace argument about the American’s intrinsic inclination toward innovation is effectively challenged by Merritt Roe Smith’s *Harpers Ferry Armory and the New Technology* (1977) In graphic details, Smith depicts the persistent resistance to new methods and organization of work by craft workers at the Harpers Ferry armory, who also coalesced with local businesses and politicians to form a conservative bloc. The relative affluent and comfortable situation of this community of ante bellum Southern whites fostered strong attachment to traditions. By contrast, workers at the Springfield, Massachusetts, armory, having newly come from farms and villages, offered much less resistance to technological changes. Interchangeable manufacturing, specialized machine tools, gauges, jigs and fixture, and more detailed division of labor were first developed in Springfield, then introduced by the U. S. Ordinance Department to Harpers Ferry through dispatching Springfield engineers there. Yet both the Northern engineers and Northern technologies were fought tooth and nail by the Virginians, and viewed as aggressive

“Yankeeism.”

Besides specialized machines--Blanchard's gunstock lathe, turret lathe, milling machine, and so on--the most notable technological innovation from the ante bellum armories is the advent of a series of jigs and fixtures which hold and guide the movements of work piece or cutting tool on the machine tools. The use of jigs and fixtures divided metal workers into two strata--the skilled workers/engineers who designed and built the jigs and fixture, and the production workers whose movements were guided by the jigs and fixtures. This division of labor persists to this day in the American factories. The innovations were often transmitted through close personal ties between machinists, and through deployment of machine tools from one workplace to another and from one industry to another. Machine tools industry appeared to be a strategic point of diffusion of technology. (Rosenberg, 1963) Hounshell (1984) traces the movement of people and machines from ante bellum small arms manufacturing, to sewing machine, woodworking, bicycle, and harvester industries. Each one of these 19th-century industries produced some more innovations that replace machinists' labor with machines and subdivides the workforce. For instance, the introduction of the stamping press in the bicycle industry replaced the previous work process of making parts by machining rough forges, and divided workers into a few die makers and a large number of press operators--in the same pattern as the case of jigs and fixtures. These innovations finally converged in Henry Ford's Highland Park Plant and formed the assembly line.

Workers' resistance existed all along and helped shape the course of technological development. The traditionalist craftsmen's resistance in Harpers Ferry was soon superseded by larger trade unions under the banners of Knights of Labor, AFL, and IWW. In spite of the novelty of these organizations, the late 19th-century skilled workers often present their collective effort against management control as based on customs dating back to time immemorable. As David Montgomery (1979) points out, mutual support and “manliness” are central to the trade union consciousness, and in maintaining worker-defined work rules. Through control of technical knowledge and a moral collectivity often embedded in the union's code of conduct, the male

metal workers before the advent of the assembly line could to a great degree set their own hours, pace, and elements of the price of their labor such as piece rates. The issue of masculinity will be discussed later. Scientific management and employment of large number of immigrant and women workers gradually beat back skilled workers' control. The employment of unskilled operators greatly intensified the management's reliance on elite groups of tool-and-die workers. "Cheap men need expensive jigs," Montgomery quotes an associate of Frederick Taylor, while "highly skilled men needs little outside of their tool chest." (p. 118) Yet, despite the management's attempt to incorporate machinists to the rank of foreman, the International Machinist's Union became one of the most militant American craft unions, and a backbone of American Socialist Party and the Communist Party in the early 20th century. The strikes initiated by machinists often focused on issues of shop floor control, rather than wages, and their targets often went beyond the employers and directed at the capitalist system as a whole. These "control strikes" continue to take place even after the New Deal labor paradigm excluded the technological issues from collective bargaining.⁷

In light of this historical background, it is understandable why deskilling has been such an imperative for U. S. employers; so much so that the pursuit of control could sometimes override concerns over product quality, efficiency, and profits, as previously discussed. This concern of U. S. employers is in large part political, instead of inherent in the logic of the technological system. Specific historical conjuncture shapes the course of technological changes and human relations in industries as much as capital's universal impulses do. As I will discuss in Section 5, the absence of similar history of craft unionism helps Japanese corporate management adopt a different form of work organization.

⁷ In a series of groundbreaking collective bargaining agreements from the 1940s to the 1950s, United Auto Workers gave up much of the rights to bargain over technological arrangements and designated the technological issue as "management prerogatives" in exchange for linking wage rate with increase in productivity. This is often regarded as the completion of the New Deal labor paradigm. See, for example, Moody (1988)

1.3.1.3 *Consent to Work*

Michael Burawoy's *Manufacturing Consent* (1979) marks the starting point of a second line of contemporary labor process studies. While acknowledging the validity of Braverman's argument about the general deskilling tendency and the progressively narrowing discretion of direct workers, Burawoy urges us to take notice of the "equally important parallel tendency toward the expansion of choices within narrower limits. (94) The primary goal of Burawoy's inquiry on labor process is to seek an answer to the question--why workers work as hard as they do-- "at the point of production." He raises the issue of workers' active engagement in the reproduction of their subordination to management, and thus allowing for a connection between intricate workplace politics and capitalist hegemony in larger cultural contexts.

In Burawoy's field work at a machine shop, he finds that a game-like competition among machinists for reaching production quota plays a crucial role in establishing management hegemony, but not in the terms explicitly stated by the management. Workers turn the management-defined competition around with informal rules and practices and define their own goal in this game as "making out"--reaching the assigned quota with minimum effort, and without exceeding it (so as to avoid prompting management to raise the quota." Fiddling and the pride in being able to do so in defiance to explicit management rules, instead of the monetary bonuses, are the most prized awards for winning the game. And those behaviors are indulged by the management.

Yet, at the end of the day, the result is reinforced workers' consent to the whole power structure, because: "[o]ne cannot play a game and question the rules at the same time; consent to rules become consent to capitalist production." (p. 92) For example, instead of an understanding of the relations of exploitation, workers' experience of "being screwed" was attached to the company's failure to provide the proper conditions for making out. The interdependence of workers and their superiors in the game of making out (where they symbolically beat the company as well as coworkers), ironically incorporates workers into the company at a deeper

level.

In contrast to the deskilling thesis of Braverman and others, Burawoy suggests that there is a historical trend towards internalized or invisible control--hegemony in the factory through job enrichment and rotation schemes, for example (1979: p. 94) Edwards (1979) agrees with Burawoy on this point. Following Friedman's (1977) criticism that Braverman does not account for broader spectrum of workplace power configuration, Edwards suggests a categorization of labor control: 1) *simple control*, by way of direct physical presence of the employer and his functionaries; 2) *technical control*, by machine pacing (e.g. the assembly line) and other physical designs; and 3) *bureaucratic control*, by impersonal rules and organizational structures. These three forms of labor control, Edward contends, generally follow one another in a historical movement of capitalism toward more sophisticated domination over labor. The deskilling tendency Braverman raises, in this light, is a prominent phenomena only in the "technical" phase of control.

Burawoy (1985) later developed a typological concept, which he terms "factory regime," to connect different types of shop-floor labor control with broader political economic context. When the labor and product markets are competitive, factory regime tends to be despotic, because the forces of market coercion facilitate workers' compliance (giving in to employer's demand without active consent), and urge employers to exploit; when the markets are regulated (through monopoly, unionization, and state regulation), the factory regime tends to be hegemonic, because predictability and stability are the primary goal of management. Zetka's (1995) historical study on labor control in the U. S. auto industry confirms this tendency up to the late 1970s.

The condition of labor in Japan and East Asian newly-industrialized countries (NICs) and the trend of corporate restructuring in the West in the past two decades pose a challenge to this analysis. In these cases, both labor and commodity markets are competitive, but management style is characteristically hegemonic. Burawoy and other researchers coin the new paradoxical term "hegemonic despotism" to describe these cases (Burawoy, 1985; Lee, 1995; Shieh, 1992 and

1994) In the literature on “hegemonic despotic” factory regimes, “outside” cultural factors are often found to be crucial to management hegemony. For example, Lee Ching-Kwan investigated two electronic factories in Hong Kong and Shenzhen, China, both owned by the same Hong Kong firm and run by the same group of management and found that factory regime in both places are shaped by the cultural stereotypes and social positions of women. I will discuss this issue in Section 7.

Critiques of Burawoy’s work generally focus on two points: his neglect of the significance and persistence of workers’ resistance and over-emphasis on the efficacy of management hegemony (Thompson, 1989 and 1990; Littler, 1990; Sturdy et. al., 1992); and his marginalization of the influence of “external” factors such as culture, race and gender, and of social institutions (e.g. schools, media, and family) in conditioning the organization of the labor process, especially of the core workers (Knights and Willmott, 1990). Among all the criticisms, feminist work on labor process is especially useful in building a coherent view that can link the approaches of Braverman and Burawoy and provide insightful critique on capitalist workplace (Cockburn, 1985; Baron, 1992; Steinberg, 1990). There is also a large body of literature inspired in part by the feminist critiques; this later body of work generally treats skill as a social construct, and the construction of skill as a contested site for establishment of management hegemony and masculinist authority. (e.g. Vallas, 1993; Knights, 1990, Yarrow, 1990)

1.3.2 Social Construction of Skill, Gender and Hegemony

The thesis of the social construction of skill emerged in feminist labor process studies from a very practical problematic in the women’s movement in the 1970s in the U. S. and Britain. Starting in early 1970s in several states and mainly in public sector, women’s effort for pay equity incrementally gained ground through a series of lawsuits and legislative actions. The focus of the issue correspondingly evolved from “equal pay for men and women,” to preventing gender segregation of jobs, eventually to uncovering the “invisible” skills of jobs historically performed by women and demanding compensation for those skills. The slogan changes from “equal pay for

equal work,” to “equal pay for comparable worth.” Unions representing incumbents of traditionally women’s jobs, notably nurses, clerks, and childcare workers, fought a long tug-of-war with employers and male-dominated unions over definition of skill. It is argued that characteristic skills of these traditional women’s jobs, such as verbal skills and interpersonal skills, are often taken for granted and unacknowledged. (Steinberg, 1990) Their approach has evolved from using conventional job evaluation systems, to modifying the systems, and finally to designing their own pay equity study. The term “social construction” of skill, in the comparable worth movement, is often used as a substitute for “biased or false and something needs to be purged for the sake of more complete knowledge. A new profession called “comparable worth specialist” was built to probe every occupation from women’s view, uncover the “hidden skills,” and construct new skill evaluation systems that can deliver gender equality. (Rhoads, 1993) The success of the reformist agenda of the comparable worth movement is still very limited. Yet, it has aroused great interest in and awareness of the systematic gender discrimination in the skill question, and the centrality of “outside” factors such as gender in shaping the labor process.

Outside the context of work, Willis’ (1981) study on the culture of working-class teenagers in England provides a basis for subsequent studies on the gendering of work and skill. Willis found that the teenage boys’ construction of masculinity is instrumental to their acceptance of class position, and their rejection of schooling as a (usually vain) channel for upward mobility. Manliness, in their culture, is defined with toughness, manual work, and endurance of hardship. “Real jobs” for men is opposed to the “pencil pushing” jobs for women. Thus their subordination in class terms is symbolically compensated with dominance in sexual hierarchy, and they are ideologically prepared for factory work long before they are hired. Within the workplace, this active construction of masculinity by male workers in response to class subjugation is repeatedly shown by labor process researchers as a central component of the construction of work skill.

Pioneered by Cockburn (1985), a series of study on the history of printing industry provides a well-founded account of the construction of skill in concrete context of work. Cockburn

demonstrates that the struggle between male printers' masculinist conception of skill and employers' attempt to undermine it are central to the technological changes from conventional manual type setting to Linotype machine (which combines composing and casting of types and is operated with a keyboard) in late nineteenth century, and from Linotype to computerized photo-composition systems in recent decades. To protect their skilled status, nineteenth century printers in Britain actively struggle to define Linotype work as high skilled and essentially masculine job. Employers, in turn, sought to undermine the skilled status of the craft workers by introducing low-wage women workers to the job. The nineteenth century controversy ended with the male craft workers' victory and dominance over the printing trade. This remained so until Linotype was replaced by computerized equipment using typewriter's QWERTY keyboard, which is historically associated with typist--a women's job, and printers' ability to operate the Linotype keyboard is rendered useless.

In this light, the construction of skill and gender definition of jobs is at once a ideological struggle and a material practice in both class and gender terms. Concrete physical arrangements are made to embed class or gender domination. The gendered nature of these arrangements can be purely historical (e.g. typewriter keyboard = female and Linotype keyboard = male), or more natural (e.g. the heavy weight of printing forme favors men's brawn), but they are only made relevant to the jobs through social practices (Wajcman, 1991).

In Cockburn and other's accounts, men as a gender and capitalists as a class are equally powerful in shaping capitalist labor process and defining skill. However, Baron (1992), in her historical work on the Linotype controversy in the U. S., argues that just as the labor process was shaped by patriarchy, male printers' own definition of masculinity and skill were also changed by the struggle.

Working men's efforts to resolve the crisis of masculinity [posed by the Linotype] led them to redefine competence in terms which heightened the demands on them both as men and as workers. In earlier decades [of the nineteenth century] they stressed the difference between men and women printers in terms of morality and training. By contrast, in the 1890s men viewed competence as deriving from particular biological traits they had as men, which women lacked, enabling men to work faster and for longer periods. These definitions of

masculinity in terms of speed and endurance, however, meant that men workers had to prove themselves as men on an on-going basis. (p. 82)

In class terms this meant that they accepted the speeding up of work. In gender terms this meant that their gender identities were formulated in ways that left them insecure. (p. 83)

Thus, the masculinist construction of skill is not based on pre-capitalist ideology of gender roles, but co-evolves with masculinist ideology itself. Furthermore, the construction of skill itself is a practice in which workers, despite their explicit conflict with management's agenda, actively constructs managerial hegemony.

Yarrow's (1992) study on the evolution of Appalachian coal miners' class consciousness and masculine identity brought yet another dimension into the picture. Yarrow finds that the three vectors of masculine identity--toughness, male bonding and paternalist responsibility to women and children--change their class meanings in different situations of balance of power between classes. They can derive a limited form of class militancy (autonomy from management, solidarity with male coworkers, emphasis on workplace safety as a paternal responsibility) or class accommodation (endurance of hazards as male toughness, exclusion of women from masculine jobs, and sacrificing for the family's daily bread as paternal responsibility). Vallas's (1993) study on gender segregation of work in the telephone industry also indicates a highly ambiguous and versatile relation between male workers' quest for autonomy and skill and their class consciousness.

To summarize, there is a definite connection between masculinity and skill in the labor process. Masculinist conception and embodiment of work skill exclude women from certain jobs and enhance some male workers' power vis-à-vis the management, and management's quest to define jobs as feminine (thus unskilled) is based on the existing patriarchal order. Yet it does not follow that there will be a solid alliance between patriarchy and capitalism. Instead, both skill and gender are highly versatile terms; they are interrelated and always allow for multiple interpretations. Unlike the despotic forms of political control, hegemonic regimes generally tolerate, or even require, versatility and multiple meanings, as active but fragmented heterodoxies

can often be integrated into the hegemonic orders.

However, gender is only one, albeit a crucial one, among a multiplicity of age-old cultural hierarchies that have been intertwined, incorporated, and co-evolving with capitalism. Even in pre-capitalist patriarchal kinship, gender is usually interwoven with other dominating hierarchies such as seniority and lines of decent. In the following section, we can see that, especially in the “flexible” management system, other cultural elements are also often invoked in the construction and reproduction of capitalist hegemony. Thus, in order to better understand contemporary workplace, it is important to develop further the line of inquiry pioneered by feminist scholarship on labor process, and take into account of a more holistic picture of culture. This is a central goal of my study.

1.3.3 Flexible Management and the East Asian Model

In order to alarm the industrial managers for their loss of control at the shop floor and to convince them of the need for scientific management, Frederick Winslow Taylor depicts a typical scene of a late 19th-century factory with 500 to 1000 workers in some thirty trades as the following.

The workmen in each of these trades have had their knowledge handed down to them by words of mouth . . . This mass of rule-of-thumb or traditional knowledge may be said to be principle asset or possession of every tradesman . . . [The] foremen and superintendents know, better than anyone else, that their own knowledge and personal skill falls far short of the combined knowledge and dexterity of all the workmen under them . . . They recognize the task before them as that of inducing each workman to use his best endeavors, his hardest work, all his traditional knowledge, his skill, his ingenuity, and his goodwill--in a word, his “initiative,” so as to yield the largest possible return to his employer. (Taylor, 1911/1967: 31-2)

The situation Taylor sought to remedy with detailed time study and unilateral management command over every single movement of worker have now become celebrated buzz words in the corporate restructuring in industrial countries since the early 1980s: workers’ initiative, high-skill work force, and so on. Ostensibly, this trend poses a challenge to earlier labor process critiques. Instead of continuous deskilling as Bravermanians argue, corporations and governments now emphasize continuous training and skill upgrading of employees. Instead of progressively

bureaucratizing as Burawoy and Edwards suggest, corporations are now cutting back on job classifications and managerial staff, and scrapping the Byzantine legalistic work rules in their labor contracts. Yet, on closer look, many of the attributes of this new factory regime show continuities from previous ones.

Two most influential piece of work advocating the new style of management is Piore and Sable's *The Second Industrial Divide* (1984) and *The Machine That Change the World* by Womack et al. (1990). In both books, the demise of Fordism is explained by the growing demand on flexibility in work process and quality in products, and such demands are imposed by the advent of new all-purpose computer-based production technologies. In addition, a central problematic common to both approaches is how to induce direct worker's initiatives on the job.

Piore and Sable find their inspiration of a post-Fordist future, which they call "flexible specialization," in the community of interconnected small craft workshops in northern Italy's high-end garment industry. Thanks to the advent of programmable automatic machines and other "flexible" production technologies, these workshops are able to produce high-quality, low-cost commodities in small batches. Thus their versatile products can come as a much-sought-after remedy to the monotonous mass-production consumer market. The informal kinship or regional ties that characterize the organization within and among those small family-owned high-tech cottage industries also work much more efficiently (and humanely) than the bulky and faceless bureaucracy of big corporations.

Womack et al., in turn, see the Japanese-style "lean production," especially that of the Toyota Company's approach of team organization around traditional assembly line, as a more realistic and market-proven alternative. The "lean production" model is more influential among the big corporations. Similar restructuring schemes, variably termed Just-in-Time Production, Quality of Work Life (QWL), Total Quality Control (TQC), "reengineering," "team concept," "employee involvement," and so on are permeating throughout American, British, and, increasingly Continental European workplace. Yet a great part of the "lean production" system is

composed of small subcontracting shops organized in ways not unlike what Piore and Sable's "flexible specialization.

Critiques of the new "flexible" and "quality" workplace abound. Anthologies edited by Wood (1989) and Babson (1995) and Parker and Slaughter (1988, 1994) provide the most comprehensive critiques on the aspects of this new system. Yet for the purpose of my project, the two most interesting features of these restructuring projects are their reliance on hegemonic control of workforce, and the centrality of patriarchy to this type of control. Most of these restructuring projects place great emphasis on fostering workers' sense of belonging to the company (sometimes in conjunction, other times in competition, with their identity with the trade unions), workers' spontaneous but well-controlled initiatives on the jobs, and workers' "skills" in solving the quality problems and in building prides in themselves. Yet in the overwhelming majority of cases, these projects are not aiming at workplace democracy as a value in itself, but are presented as more efficient leadership of the management--hegemony, in other words.

Unlike hegemonic control in the regulated markets described by Burawoy, where workers' antagonism to management is shifted and contained, "lean production" demands utmost devotion of workers to the company's goals. As Kumazawa and Yamada (1989) point out, this high degree of management hegemony is achieved in Japanese big corporations primarily through a paternalist system, and secondarily through competition among workers (hence tacit agreement with the rules of the competition, as in Burawoy. The paternalist feature of Japanese management style include: 1) a seniority-based hierarchy (justified by the progressively accumulating experience, hence skill, of workers) that ensures steady advance of male core workers as in patriarchal lineage; and 2) exclusion of temporary women and marginal workers from this hierarchy; and 3) the dominance (and/or perception of dominance) of the core-corporation's management and core workers as a whole over subsidiaries.⁸

⁸ This last feature is manifested in the common practice of Japanese big corporations to assign their own low-ranking senior employees to management posts of their subsidiary. In addition, Kumazawa and

As discussed in Section 3.1.2, the history of technological development in U. S. metal working industry has been, to a great extent, shaped by struggles between employers and craft workers. Almost every part in the machining labor process has been at one time or another a field for intense controversy. Exclusion of workers' control over the labor process, therefore, presents itself to American industries as a political necessity. By contrast, Kumazawa and Yamada suggest, Japan never had a tradition of craft unionism and class distinction has not been solidified in history. Therefore, management can allow workers more control over labor process without the fear that they will lose control of the workers. Kumazawa (1996) further argues that, lacking traditional solidarity among workers, the Japanese workplaces have much stronger interpersonal competition than in the West. In addition, Japanese labor market strongly discourages workers from switching jobs. Wage, benefit, and a host of working conditions all depend on one's seniority in a company. Thus both historical and contemporary conditions help to forge management and the core workers in big Japanese company into a clan.

One can easily find the historical imagery of Japan's not-so-distant feudal past in this kind of workplace regime. Similarly, Jenson (1989) finds that the patriarchal family organization in pre-industrial craft trades is crucial to the "flexible specialization" model of Piore and Sable. When transplanted into highly capitalistic culture of North America, however, the paternalistic aspects of the Japanese-style management are not well-received by workers, nor is the patriarchal family of "flexible specialization." Instead, as Parker and Slaughter (1988) suggest, cultural imagery of masculinist competition and bonding of sports teams is most frequently invoked in the management training in North American lean production. The role of manager, for instance, is usually associated with clan elder in Japan, but "coach" in the U.S.

This contrast corresponds to the dual ideological meaning of skill—as a proxy of seniority

Yamada point out, wage level, in Japan, usually corresponds to the subcontracting hierarchy among firms—workers of first-tier company such as Toyota receive substantially better pay than their counterpart in the second- and third-tier suppliers.

and, such as in the notion of human capital, as a commodity that needs to be produced and sold. In the context of Japanese big corporations, where the institutional environment fosters core male workers' steady seniority-based promotion and cultural environment encourages maintenance of traditional patriarchy, seniority-based (and thus largely tacit) work skills are favored. Conversely, in the context of the U. S. workplace, where worker turnover is a constant affair and equal exchange of commodity is the dominant cultural model of wage employment, work skill tends to be perceived as something that can be documented, analyzed, and acquired by individual worker through designed training. Individual workers, once acquired the commodity of skill in exchange for their work, are free agents of this property, and should seek to maximize gains from their own investment.

These insights suggest that, although patriarchal-hegemonic ideologies is instrumental to all flexible workplaces, a deeper understanding of the flexible workplace need to be grounded in the configurations of patriarchy in specific cultural contexts. My study of Taiwanese workers is exactly aiming at this well-grounded understanding.

1.3.4 Industrialization and Traditions in Taiwan

The most popular argument on the relationship between culture and industrialization in Taiwan in particular and East Asia in general is that the "Confucian culture" prepared the people with "excellent work ethic"--diligence, docility, respect for authority, "collectivism" oriented toward family, etc. (Harrell, 1985; Pye, 1988; Redding, 1990; Rozman, 1991; Tai, 1989) It is also argued that the East Asian culture, vaguely defined, is parallel to Calvinism in facilitating modern capitalism, as in the case of (a vulgarized version of) Max Weber's classics. (Yu, 1987; Huang, 1988) As to the reproduction of such a work ethics, moral education in schooling is a focal point of examination (Wielemans, 1992; Young, 1992), as well as other institutionalized socialization (Wilson, 1970) and "government assisted entrepreneurial prestige" for profit-making. (Steinhoff, 1980)

Much of this literature, as Susan Greenhalgh (1994) points out, is conservative-oriented and

uses an orientalized image of the East, in the cases of Western authors, and the awe for the fast accumulation of capital in East Asia to promote “traditional values” in the authors’ natal societies. East Asian authors, in turn, borrow the power of Westerners’ praise to legitimize the existing political, economic, and social regimes. The dispersed industrial structure based on small family firms serves as the central symbol of a constructed image in which the new and the old can cooperate faultlessly. Capitalist-industrial quest for profit, productivity and innovation can be synthesized with both the coziness of family and the individualistic freedom of a laissez-faire market. The traditions of Taiwan are often portrayed as a homogenous totality, and the current situation a harmonious paradise.

Critical scholarly work on Taiwanese culture and society is scarce before the mid-1980s. As Gates (1987) notes, the case of Taiwan is constantly used in post-WWII American academe as a substitute for the hard-to-study China of the past and the present. Scholarly work on Taiwan often contains a noticeable bias toward seeing Taiwan as a well-preserved sample of an essentially homogenous Chinese tradition. In addition, the Nationalist government constantly kept a tight control on access to fields for social research that might uncover unpleasant facts, and (even American) scholars with potentially critical projects hardly ever got funded in the Cold War years. Some critical work on Taiwan, however, did manage to “slip in” onto English-language publications through years, and, since 1988, a small but steadily accumulating literature in Chinese began to emerge around the liberal academic journal *Taiwan: A Radical Quarterly in Social Studies*. Studies on labor in this body of English and Chinese literature are remarkably concentrated on two topics: women workers in Export Processing Zones, and family-owned workshops in export-oriented manufacturing of consumer durable products. The persistence of patriarchy in modern industry is a common theme in both topics.

Taiwan is a pioneer in the model of Export Processing Zone (EPZ), which, in today’s widely popularized critique on globalization, epitomizes the exploitative part of transnational capital investment. Research on this topic is primarily done by a small group of American

Marxist/feminist scholars (e.g. Arrigo, 1980, 1984, and 1985; Kung, 1983; Greenhalgh 1985). The first EPZ was established in the early 1960s in Taiwan. Characteristic in the earlier two decades in Taiwan and now in other countries, an EPZ industry is typically foreign-owned or joint-venture; it imports parts and components from U. S. or Japan, employs large number of mostly female “low-skill,” low-wage workers in labor-intensive assembly processes, and exports the end products to consumer markets in the U.S. Studies on Taiwanese EPZ often found that women workers are compliant to despotic control of predominantly male management; that women workers perceive their wage employment as temporary, thus the hardship bearable; that their wages are used as supplements to natal family’s income or savings for their own dowry (Kung; Greenhalgh); that traditional patriarchal values are explicitly used by management to justify their authority; and that the personnel management in EPZ is tightly linked to the thought-control apparatus of the Taiwanese state (Arrigo, 1985; Deyo, 1989). Similar studies are carried out on EPZs in other newly industrialized economies such as the Philippines (Kyoko, 1980), Korea (Koo, 1987; 1990), Hong Kong (Salaff, 1981), Malaysia/Singapore (Ong, 1987; Lim, 1981; 1983; 1990) and Mexico (Fernandez-Kelly, 1983).

Outside of the EPZ, the tens of thousands of interconnected family-owned workshops scattered through out the island is the most well-attended topic for critical scholarship on the industrialization of Taiwan. Gates (1981, 1987) and Niehoff (1987) note that these shops are generally free from official regulations. They do not get financial credits from state-monopolized banks, nor do they register their establishments with the government, and they manage their business almost solely with informal ties among acquaintances. Gates (1996) terms this class “petty capitalist”--an age-old response of Chinese peasantry to both their own desire to expand commodity production and the state’s constant hostility to commodity production by retreating to the state-sanctioned kinship corporations. Kinship is crucial to the organization of work, and women and junior family members often serve as unpaid laborers. The bondage of women and children’s labor power to the family is a crucial character that differentiate the “petty capitalism”

from the full-blood capitalism where every individual is a free agent of his/her own labor power.

Greenhalgh (1985, 1994) suggests that commodity production is also changing the patriarchal kinship hierarchy. The most prosperous son, instead of the family patriarch, often dominate over his kin in business. Recent study of Li and Ka (1994) and Hsia and Cheng (1989), Shieh (1992, 1994) and Ka (1993) in the intra-firm sexual division of labor also suggest that women, at least in the “low-tech” garment industries, are often more powerful in the household than before; they often play crucial roles in financial and personnel management and training, while doing manufacturing work at the same time; and the wife’s relatives are sometimes more important in business than the husband’s.

Central to this body of literature on the persistence of patriarchal kinship relations in Taiwan’s industrialization is their emphasis on the petty bourgeois character of Taiwan’s working class. Both men and women workers often perceive wage employment, in this analysis, as transitory. Only small business owned by one’s own family is considered a proper resting-place. As I shall illustrate later, I find that this character is waning in both reality and ideology in the machine industry of the 1990s. Yet the ideological importance of family is more than a stubborn residue of the bygone years. It arose from the antagonism between the state bureaucracy and the populace in late imperial China, and persisted into post-War Taiwan where such antagonism still had a strong presence. Only in the late 1980s did the state of Taiwan started to be subsumed by the civil society, and the traditional cultural, political and social configuration of the hegemonic order started to crumble. The hegemonic order under state-populace antagonism in Chinese societies is most thoroughly discussed in the realm of religion, which I shall now turn to.

1.3.5 Folk Ideologies and Hegemony in Taiwan

Western scholars have long noticed Chinese civilization for its longevity and the remarkable continuity of its political structure, especially when compared with the rapid changes in Europe for the past millennium. Needham (1978) contends that one of the most important difference between the worldviews of China (as seen through the orthodox classical schools of thoughts) and

the West is the absence of the concept of a creator God in the former. As a result, the idea of a pre-ordained laws of nature, which could be deciphered and re-stated simply because there had been a rational Author of Nature, never occurred to Chinese scholars, nor has precisely formulated abstract laws been appealing Chinese rulers. Instead of caustic positive law enforced by force, the Confucian orthodoxy always emphasizes moral suasion as a supreme governing device, and non-intervention the ultimate state in politics. In other words, hegemony, instead of despotism (enlightened or otherwise), is the ideal in orthodox Chinese political thoughts. Even those with more critical perspectives agree that:

Coercive power in the form of massacres and judicial disembowelments was noticeably present, of course, in late imperial China and, *mutatis mutandis*, in its political inheritors. But it is the pervasive and dissolved ideologies of both popular and elite groups that appear most effectively to bind the Chinese, and to control and absorb novel intrusions into their hegemony. (Gates and Weller, 1987: p. 8)

Gramsci (1971), in his conception of hegemony, argues that hegemony rests not only on ideology--which is integrated, explicit, and consciously held--but also on piecemeal, often unarticulated set of ideas that grows out of daily experience--especially in language, "common sense," and popular religion. Anthropologists on Chinese folk religion has provided a picture in which popular "common sense" mirrors elite values not in a direct conformist way, but in an oppositional, often self-interested fashion.

In appearance, the Chinese folk pantheon mimics social power structures in a remarkably direct way that always intrigues outside observers. The gods are always organized into an imaginary bureaucracy with specifically defined official titles and charges for each god, and a highly complex system of paper work is associated with worship (e.g. A. Wolf, 1974; Martin, 1981; Overmeyer, 1980; Jordan, 1984; Gates, 1996). Yet, on close examination, relations between human worshippers and the supernatural are featured not by obedience, but by active manipulation of the latter by the former. Harrell (1985, 1987) and Sangren (1984) have both noted that "ling" (efficacy) is the most important criteria for people's ordering of supernatural powers. People typically worship the supernatural with a utilitarian attitude, thus the ends for

religious activities are decided with the worshipers' self-interests instead of preordained by a higher authority. Money and commodity exchange, which presuppose equal status of the trading partners, are central to even the most orthodox religious rituals. Petitions from the worshippers to the gods, for instance, are always accompanied with offerings of spiritual money as well as food. Serious, albeit respectful, haggling with the gods over price for a blessing is an integral part in the petition rituals. (Gates, 1996) Harrel (1987) also finds that, contrary to the common Western and Chinese elite notion of the fatalism of the peasantry, the popular Chinese concept of fate is perceived as a precondition for active intervention for the bearer's benefit, instead of a destiny to be followed. In the Chinese popular worldviews, a subject in the cosmetic as well as political order is not only a passive receiver of commands from higher authorities, but also an active participant in the construction of the orders.

In addition, almost all anthropological field workers on Taiwan find that practitioners of folk religion typically do not care about verbal or textual interpretations of the rituals; actions in the rituals, though following relatively uniform patterns, are often left unexplained. For instance, Emily Martin (1981a) has attempted to seek the meaning of one of the most salient symbol in Taiwanese pig offering ritual--a cleaver stuck to the head of the pig. The answers she got from almost all informants, including the ritual specialists, were always vague, such as "It looks pretty." This is in sharp contrast to the traditional elite religions--Buddhism and Taoism--and Confucian rituals (and modern Christianity, too). In all those religious and ritual traditions of the elite, meanings are always inscribed in texts, associated to a coherent cosmology, and interpreted and reinterpreted with long literary traditions. The elitist religions and rituals, which are held as the foremost ruling devices in the Confucian statecraft, are clearly meant to be vehicles to convey a clear, if not altogether fixed, set of values. Folk religion's abstinence from articulated interpretation, on the other hand, allows participants to construct their own private meanings. This diversity and elusiveness of meanings is exactly the strength of hegemonic order in enlisting the support of the dominated.

Sangren (1987a, 1987b) provides a detailed analysis of the symbolism in Chinese religious culture and cosmology. As well known in the West, the primary concept in Chinese symbolic structure is the dualism of yin and yang--heterodox and orthodox, feminine and masculine, chaos and order, humans and gods, and commoner and ruler. The relations between yin and yang are characterized by a closed-ended dialectics, with constant shift of power but eventual dominance of the yang order, instead of a constant subjugation of the yin by the yang. Active but contained heterodoxies, therefore, are healthy to a dynamic order dominated by the orthodoxy. Furthermore, in the last analysis, the yin order (heterodox, feminine, humans and commoners) is primary. Gates notes that, in the ritualistic use of money, the role of spirits are parallel to that of the moneylenders--non-producing dependents--while humans the petty capitalists--small merchants and craftsmen--the providers. (1996: 174-175)

Gates also argues that the commoners' conception of the world is drastically different from what the rulers intend to convey in their moral didacticism. There is an covert critique of the dominant order in folk ideologies.

The image of a trickle-down goodness from rulers and kin seniors so persistently purveyed to the populace may have been primarily effective in propping up the authorities' sense of themselves. If we read the evidence of the popular worldview as it is plainly and emphatically set forth in folk religion, everyone knew that welfare of all society rested on the work of household producers. They knew too that the ruling class was neither generous nor moral when they took the concrete and return only the abstract. (Gates, 1996: 176)

However, as in Burawoy's (1979) case of the machinists who are scornful toward the management, the Chinese commoners' rejection of the rulers' supremacy does not imply freedom from ruling class's hegemony. The inherently hegemonic symbolic ordering permeates throughout all cultural domains in China. The consent of masculinist subjects to the dominant orders of the state in traditional Chinese society, for instance, is based on the structural correspondence of men in the peasantry's patricorporation to officials in the state. Both fear the inevitable chaos. (Sangren, 1987b) This common fear of chaos, Weller (1994b) points out, is used again and again by Chinese rulers to obtain orthodox commoners' support in times of crisis. The most recent case is the Chinese government's call for purging "chaos" in the wake of the 1989

Tiananmen massacre.

Similar to the hegemony of state elite in the religious-political scene, Taiwan's industrial organizations also feature a high degree of capitalist hegemony against a clamorous and versatile background. Like the peasant patriarchs in late Imperial China, modern Taiwanese skilled worker's consent to managerial authority in the factory is likely to be based on his prospect for becoming a patriarch in his own family work shop. My dissertation study of the skilled workers both within and outside the factory is an attempt to find the continuity between the dominant and subjected values.

1.3.5.1 The Destabilizing of Traditional Hegemony

A hegemonic order always includes active but contained oppositions. The inevitably existing oppositions, however, cannot always be contained. From time to time, heterodox sects in China were used by rebellious peasants to articulate counter-hegemonic ideologies aiming at overthrowing the state. Overmeyer (1980) and Weller (1994) provide intriguing analysis of the revolutionary heterodoxies and their limitations. Heterodox cults often featured strict egalitarian norms (at least among men) and clearly stated dogma--in sharp contrast to the fuzziness of orthodox folk religion.⁹ In stable times, however, the subversive power of heterodoxies remain potential and subtle signs of popular resistance to the domination of the state. The popular cult of Mazu (Mátsó in Taiwanese language) in Taiwanese tradition and the burgeoning cult of ghost worship can illustrate the ambiguous subversive potentials of Taiwanese popular worldview.

Jordan (1972) and A. Wolf (1974) have suggested a correspondence between the three classes of the supernatural in Chinese folk pantheon to three social categories in a late-Imperial Chinese village. Gods are bureaucrats, ancestors are kin folks, and ghosts are strangers outside of

⁹ The last of such revolutionary sects in history is the Taiping Tianguo (Heavenly Kingdom of Peace) which, at its height in the mid-19th century, reigned over almost half of the Chinese heartland. The Taiping rebels borrowed their iconography from Christianity, enforced land reform, and advocated sexual equality. They were later crushed by the Qing dynasty with help from orthodox gentry-literati and the "true Christians" from Britain and the United States. See Weller, 1994b.

either kinship or official hierarchies. This thesis is well received among anthropologists on China. In Taiwan, the hitherto popular worship of orthodox female deities, especially Mazu, the sea goddess, among ethnic Taiwanese represents an ambiguity. She is a god (orthodox) and a woman (heterodox). Gates (1996) and Sangren (1983) suggest that the role of Mazu symbolizes the unifying power of women in domestic groups which is ill-represented in official discourse. Furthermore, she is a central symbol of the communal solidarity of ethnic Taiwanese, who see their society as at once peripheral and non-official (hence feminine) yet patriarchal (hence orthodox). Implicit in the symbol of Mazu is a politics that both maintains patriarchal tradition within the community, and opposes state officials from above. Martin (1981a), Sangren (1983) and Weller (1987) all suggest that folk religious rituals in Taiwan carry ambiguous but strong meaning of ethnic Taiwanese's resistance to Qing Dynasty before 1895, Japanese colonial rule before 1945, and the Mainlander-dominated Nationalist state since 1945. All these three states also actively tried to regulate the rituals and impose state-sanctioned interpretation to the religious iconography through edicts, official policy, and even TV programs. Yet, as Weller (1994a, 1994b) points out, the "oversaturated" symbolism of Chinese folk religion always implies multiple interpretation, and state control is doomed to be limited.

The male skilled worker, in the feminist critiques described in section 3.4 above, occupies a position very similar to that symbolized by the cult of Mazu. They are both faced with a two-fronted struggle to defend their manliness: against the dominant authority of the state or the capitalist, while trying to maintain the acquiescence of women and children in their charge. Like the machinists in Burawoy's (1979) story, the cult of Mazu accepts the authority's game at one level (machinists participate in the bonus competition; worshippers in Taiwan display Nationalist flag in rituals), subverts the game in another level (machinists "make out," and Taiwanese worshippers bend official interpretations wherever they can), but on the whole remains subordinated to the authority's rules.

The emergence of ghost worship since the 1980s, in turn, indicates a shift of people's

self-conception toward free-flowing agents seeking fortune outside existing hierarchies.

Historically, ghost worship is associated with marginal people, and, in the context of nineteenth-century Taiwan, with wage laborers unassociated any local kin corporations Yet it never enjoy great popularity until the economic boom of Taiwan in the late 1970s. Folk-religious activities in general have expanded vastly with Taiwan's industrialization, but the ghost cult in particular grows faster than any other cults. Citing official statistics, Weller (1987b) estimates that from 1956 to 1980, the total number of registered temples in Taiwan increased approximately 113 percent from 2,930 to 6,251, while temples per capita increased 18 percent over the same period, and the greatest "growth sector" is not in the communal temples presided by gods, but "private" temples associated with spiritual medium or ghosts. (149)

Michael Taussig, in his celebrated *Devil and Commodity Fetishism* (1980), argues that a burgeoning cult of devil among South American plantation workers implies a critical representation of commodity fetishism in capitalist economy. In this cult, money is baptized in place of baby, thus it acquired human property to self-increase at the expense of the baby's fate. Implied in this practice is simultaneously the critical view that capital valorizes at the expense of human life, and an uncomfortable acceptance of this situation. Weller (1994a, 1994b) applied a similar analysis to the cult of ghost in Taiwan. The ghost worship is distinct from worship of gods and ancestors by its individualistic and immoral nature. Individual worshippers enlist the magical power of the ghosts in exchange for symbolic money offerings. Although symbolic financial transaction between gods and worshippers is an integral part in Chinese Folk Religion (Gates, 1987, 1996), it is usually done in a collective manner and the requests usually have to be morally justifiable. In ghost worship, by contrast, the requests are highly individualistic and self-interested, sometimes at the expense of the worshipper's own family. The ghosts, therefore "celebrate the market and encourage people in it, yet they also condemn it as an amoral beast, red in tooth and claw." (Weller, 1994a: p. 163)

The rise of the ghost cult is but one of many changes occurring in Chinese folk religion in

Taiwan. Gates, for example, observes in the urban working-class population a decreasing interest in the ritual forms of community religion that require public participation, and the increasing commodification of even the orthodox temples. (1996: 235) These changes suggest a break down of Taiwan's traditional hegemonic order, in which each subject's self-interest is sought through existing hierarchies, and move toward a more individualistic and capitalist society. Yet it by no means follows that ghost worship and similar individualistic interpretations of the world are effective counter-hegemonic discourses. Resistance and accommodation is often hopelessly intertwined in popular worldviews. In addition, the individualization of popular values might also lead to another form of hegemonic domination, such as the individualistic hegemony in the "sports team" model in North American lean production.

1.3.6 Summary

Work skill as a reified categorization of people at the workplace is constructed through complex social, political, and cultural processes. The struggle over skill is often a gendered one, in which the predominantly male skilled workers construct their masculine identities as well as class identity or trade prerogatives. This struggle is also defined within specific cultural and historical contexts. Employers can accommodate to, and contain, the core workers' power by recognizing their skilled status, and thus establish hegemonic regimes of labor control. In the hegemonic regime, workers identify parts of their self-interest with that of the employers, and actively engage in practices that help to stabilize the regime.

Similarly, in Chinese traditions, the ruling elite rely heavily on the subjects' consent. The hegemony of the state is reproduced by the active engagement of the commoners (especially men) in practices that reaffirm the dominant values. Patriarchy in particular is central to this set of values shared by the ruler and commoners alike. Similar to male skilled workers' resistance to management control in the hegemonic factory regimes, folk religious practices are inherently ambivalent, and resistance and accommodation are often intertwined.

Industrial and traditional hegemonic regimes now coexist in the patriarchal family

workshops owned by male skilled workers, who need to construct, reaffirm, and reproduce their masculinist identities on a day-to-day basis and with technological as well as magical discourses and practices. However, just as industrial organization is shaped and defined within the context of culture, cultural traditions are also made and remade in a historical process which now includes the powerful forces of industrialization. Kinship, gender, and religion are all being transformed by industrial work experiences while they are shaping these experiences. A cultural perspective of labor process, therefore, has to account for not only the shaping of labor process by culture, but also the remaking of culture by the labor process. This is the task I shall tackle in the following chapters.

Chapter 2: The Goddess and Her Boys

Traditional Hegemony on a Taiwanese Naval Ship

The captain was upset. A journey was due to begin in two days, but the engineering gang was still tinkering in vain with the AC Generator No. 2. The lubricant oil of that 40-some-year-old machine could not circulate normally ever since the Executive Officer (XO) came down to the auxiliary engine room the previous night. Without this machine, the whole journey might be jeopardized. Senior engine men and their apprentices had skipped all official musters this morning, taking the lube oil pipes and pumps apart piece by piece and putting them back together. Yet the pressure gauge still showed a dangerously low reading.

The fundamental reason for the trouble, senior engine men unanimously agreed, was the very inappropriate appearance of the XO. Lieutenant-commander Xie had just taken up the post a few weeks ago. Having just finished training at a US naval school, he believed in carrying out his duty of maintaining discipline on board in a straightforward, by-the-book fashion. Checking on the condition of all hands on watch is a prescribed duty of his. Thus he ventured down the ladder shaft to the engine room around mid night without the company of any engineering officer, petty officer, or senior engine man. Nothing suspicious was found. The engine man on watch was awake and polite, and all machines appeared in good order. However, the next morning, the generator was broken.

The engine room is the realm of Mazu, the goddess of the sea. Her altar is located in the main engine room, and the engineering gang keeps daily and fortnightly worship dutifully. All upper-deck hands, especially the officers, are advised not to enter the engine rooms, as Mazu dislikes the appearance of strangers in her realm. Only in the company of senior members of the engineering gang do senior upper-deck officers, including the captain himself, go to the engine rooms for official inspections and other functions. The XO's action, therefore, was considered a serious violation of the norms.

Anxious to get the AC generator back on line, the captain ordered the XO to buy a chicken, fruits, incense, and candles as offerings to Mazu, having the engineering gang apologize for him at Mazu's altar. It worked! After the offering, the engine men found the problem by mid afternoon, and the journey was saved. Nobody, including the captain himself, thought to mention the engine men's obvious sabotage and collective blackmailing. Wise leadership, after all, knows where to set the boundary of its control.

This is one of the many memorable moments I experienced during my military service on the Taiwanese navy tank landing ship *CNS Chung-Chi* from 1990 to 1992. Around these years, the state in Taiwan changed from more than four decades of stringent martial-law regime, not unlike the imperial dynasties, to a Western-style parliamentary democracy. Clamorous competition among bourgeois politicians, instead of the bureaucratic rule, became the dominant political order. Freedom of speech, press, association and other liberal rights were now secured. The day-to-day social lives of most people, however, did not experience world-shattering transformation. As more sophisticated researchers on late-Imperial Chinese society have repeatedly pointed out, for centuries, a quasi-capitalist social formation had been steadily developing in many aspects, albeit in subordination to the state bureaucracy. "Petty capitalism" existed not only in the ever-growing commodity market, but also in various cultural realms such as folk religion. Open and disguised resistance on the part of the ruled subjects toward the state has not only been a constant affair, but also an integral part of the whole Chinese polity. Democratization, therefore, did not come as a complete novelty into Taiwanese society, but merely a change of place of the two major existing social orders--the subaltern came out on top.

However, the military, in relative isolation from the civilian society, underwent the changes much more slowly. In spite of the ongoing democratic movement in the street, the navy I served in was still organized in an anachronous late-Imperial Chinese fashion: with a bureaucracy ruling at a distance, and the working subjects' patricorporations--kinship corporations organizing itself with patriarchal orders-- keeping the rulers away from daily activities.

CNS Chung-Chi is not, of course, a Chinese village or trading town. It is a technological environment built at the height of twentieth-century technocracy—by the United States in World War II. Ships of this class, the Tank Landing Ship (LST), were built by the thousands during the war for the Pacific island-hopping campaign and the invasion of Europe. The ship's records show that it was launched in Seattle in 1942, and handed over to Taiwan in 1962. The gift was part of the U. S. support for the KMT's effort to retake Mainland China. But the great anti-Communist war it was supposed to participate in never took place. Instead, *CNS Chung-Chi* has served ever since in all kinds of missions: shipping, landing exercises, even patrol.

Through the years, the Taylorism embedded in the rules, regulations and artifacts on *CNS Chung-Chi* have been bent and altered everywhere. As previous labor-process literature shows, even in the Western workplace where despotic Taylorism is the apparent organizational principle, there can be a strong undercurrent of hegemonic order featuring a rebellious but contained heterodoxy of workers' autonomy. (Burawoy, 1974) If politics can be transmitted through artifacts, most of what is transmitted via the ship from the American into the Taiwanese context is this latter, more complex version of modern Western organization of work, instead of that envisioned by the rationalistic minds of the designers of the war machine half-a-century earlier. However, there are crucial differences between this Taiwanese hegemonic workplace and the Western ones. In Burawoy's machine shop, for example, individualistic competition in the "making out" game provides the main alternative to managerial control. The subaltern organization is, therefore, still capitalistic in spirit. Aboard *CNS Chung-Chi*, kinship-like seniority hierarchy is the primary feature of the subaltern social order in competition with the official rule. Market-like competition and exchange exist as secondary features. Thus the main political configuration is closer to traditional hegemony, in which parallel hierarchies of the rulers and the subjects compete and intertwine with one another, but more different from capitalist hegemony, in which the ruled subjects' atomized competition provides the strongest source of their consent to the ruling order.

This chapter is a retrospective ethnographical account of the cultural world of *CNS Chung-Chi* based on my own experience in my military service. The chief goal of this account, as in this entire thesis, is to broaden the analyses of hegemony in workplace relationships, which has been thoroughly studied within Western contexts by previous labor process researchers, to include multifaceted cultural-historical factors. Since no workplace is created out of a vacuum, human relations in such place are necessarily constructed with material gathered from a wider cultural repertoire. To examine this point, the anachronous cultural world of *CNS Chung-Chi* offers a unique opportunity. Under the transplanted Taylorist form, the real organizational principles of this community are mainly inherited from traditions in the Chinese societies, including Taiwan, for the past centuries. The two oppositional modes of production, and their corresponding social-cultural formations, that feature such Late Imperial Chinese formation—the state tributary system operated by the bureaucracy and the petty capitalism developing among the common folks—are translated into oppositional cultures of the officers and the seamen on this modern ship. These two groups, in the original institutional design, represent the two oppositional classes in the Western monopoly-capitalist workplace—management and workers. Although the antagonistic relationship between these two groups aboard *CNS Chung-Chi* is no less strong than that between Western corporate management and workers, the dynamics are drastically altered under the influence of cultural traditions.

The social construction of skill, the struggle over which is central to class struggle at the point of production, in the cultural world of Taiwanese naval ships like *CNS Chung-Chi* carries with it indelible markings of the traditions. Work skill often functions in two mutually contradictory ways. On one hand, it is an exclusionary device that marks certain work as exclusively belonging to a group—initiated tradesmen. Thus the patriarchal master-apprentice lineage monopolizes over a piece of labor process and fends off interventions from the management and competition from “unskilled,” usually female and young, workers. On the other hand, skill is considered an acquired property of one’s labor power. It is to be earned,

accumulated, and manipulated to achieve maximum benefit for the individual worker. For the “petty capitalist” seamen aboard this ship, the former sense was dominant and the latter more subdued, exactly like traditional petty capitalist seeing property primarily as a family inheritance and only secondarily as something to be manipulated in an open market. This is in stark contrast to the situation in a typical capitalist labor market, where the second sense of skill is dominant. The exclusionary power of skill is further strengthened with religious practices and ethnic identities that clearly delineated the boundaries between seamen and officers.

The military experience is instrumental in understanding the consciousness of male workers in Taiwan. Since military service is mandatory for all able-bodied men, it functions almost as a rite of passage. It marks the beginning of adulthood, and the norms and values experienced during this period of a man's lifetime are carried throughout his life in civilian society. In 1997 and 1998, I did a field work with machine workers in central Taiwan, which I shall discuss in the following chapters. During the field work, it became evident that experience in the military is one the favorite discussion topics of my male informants. A similar blend of mystic elements and common soldiers' degree of autonomy from the officers have left a deep impression in the mind and habits of almost every man going through the Taiwanese military.

into three ranks: commissioned officers, enlisted seamen, and the petty officers between the former two. The whole workforce is also divided into five functionally differentiated departments; those in the engineering department are called “lower-deck” hands while others “upper-deck.”

At first glance, the most visible sign of division between people in the military is the dress code. In almost every aspect, the Taiwanese navy follows the U. S. Navy, who helped establish the Kuomintang's fighting force before and after the Chinese Civil War in the 1940s. Uniforms of the Taiwanese navy sailors, therefore, are almost identical to the Americans. For daily work, officers wear khaki in summer and black in winter. Enlisted seamen below the rank of Petty Officer 1st Class (PO-1, equivalent to sergeant in the army) wear pale blue denim shirts and dark blue pants all year round; they are thus called "blue shirts" in the navy. However, one vital element of the dress code is different from that of the American navy: the blue shirts do not wear ranks. The third group is the petty officers at and above the rank of PO-1. They wear khaki and black like the officers, but wear no rank like the seamen. In daily conversation, the term “petty officer” would most likely be referring to these “khaki and black” ones, while the term “seamen” includes low-ranking blue-shirt petty officers. Corresponding to the difference in dress code, the organization of each of these three groups is different.

The absence of rank on the seamen's and petty officers' uniforms does not pose a problem for people to recognize who is in charge. In fact, it is a perfect reflection of the real organizing principle among them. Seniority, instead of official ranks, is the primary hierarchy for the seamen. Officers, by contrast, observe rank in every detail. Petty officers are all of the same rank. Each one of them is in charge of a section of his own, and there is no fixed hierarchical order among them.

The appearances of the groups are distinguishable not only in their uniforms, but also in the style they wear. The officers, with the help of stewards in their living quarters, frequently wash and iron their uniforms and maintain as tidy an appearance as possible. Low ranking officers such as the assistant engineer often cannot avoid soiling their clothes, having to work more closely to

the machines. Incidentally, the engineering officers, who are on a separate career path and are perceived to be lower in occupational prestige and career opportunity than the upper deck officers, are also more likely to have dirtier clothes. Therefore, tidiness corresponds with rank and prestige of the officers. Among the seamen, by contrast, untidiness is a sign of seniority and machismo. Newcomers are taught to recognize the senior seamen by their longer hair, non-military-issued and worn out pants, and so on. A new, clean uniform is a sure sign of low seniority. On upper decks, where people are visible in the open, blue uniforms are required. Under the main deck, however, the official uniforms are done away with whenever possible, as the temperature in the windowless living and working space below deck often exceeds 40°C. Shabby, dirty T-shirts and shorts are the normal dress, and the more uninhibited senior seamen often go naked. In fact, one of the enterprises that Lieutenant-commander Xie, the new Executive Officer, first engaged himself in was to catch and punish those engaging in the unseemly nakedness on board. The petty officers, again, maintain a combination of both the seamen and the officers' styles: no nakedness, but privately altered uniforms.

The ways people eat also reflect similarly oppositional sets of logic of the officers versus the seamen. All hands on board eat the same food, and the menu is prepared by a joint committee of representatives from the three ranks. This is a strict rule of the KMT's military in an effort to combat the corruption rampant during WWII and the Civil War era. However, the styles of eating are drastically different. The officers dine in their wardroom with the service of stewards. Seats are assigned according to rank, and when two officers are of the same rank, the more senior one sits closer to the captain. No one is to start eating until the highest-ranking officer at the table starts. The meals are served on china with naval insignia, and taken with good manners. An old naval tradition has it that when one eats whole fish on board, the fish cannot be turned--turned fish symbolizes a capsized ship. The officers always follow this rule. A captain's speech often follows the meal.

The seamen, by contrast, do not sit at tables. They queue up at the galley with their own

eating utensils—usually brightly colored plastic bowls—to receive their meal. Then they will go to the shady and breezy area at the stern anchor, squat by the side of the ship in random groups and eat. The seamen's mess at the stern of deck 2 (just below the main deck) is so hot that no one wants to sit there unless the ship is in heavy seas and the upper deck is being swept by waves. The naval regulations regard order at the galley queue as most important. It even requires that the master-at-arms (the petty officer working as chief of police) stand by the galley with a loaded pistol, presumably to prevent fighting for food. In fact, even though senior seamen cannot jump the line, they are still privileged over the juniors. As senior seamen always leave work earlier, and the most junior ones stay to clean the deck after work, those that stand in the front of the galley queue, thus getting better portions of the food, are always seniors. Whenever there is chicken, for instance, the seniors get drumsticks and the apprentices get the necks. The fish turning taboo is never observed by the seamen as they eat fish by hand and throw the bones overboard. The petty officers combine elements of both seamen's and officers' styles in eating. Like the officers, they have their own lounge and stewards, but the atmosphere at the PO's meal time is much more relaxed, without assigned seats and other formalities recognized in the officers' wardroom.

One other salient factor distinguishing the three groups is language. Among officers and petty officers, between ranks, and in official functions and ceremonies, the official language of Mandarin is spoken. Among seamen, however, the working language is Taiwanese (Fukien). These two languages, although linguistically related and sharing the same writing system, are as different from each other as English from Spanish. Within the engine room, almost all communications are in Taiwanese, with technical terms adopted from Japanese or English. This partly corresponds to the ethnic make up of the groups. Traditionally, the Mandarin-speaking Mainlanders on Taiwan (most of them are soldiers, government employees and their families) encourage their children to seek careers in the military and the government. The military academies, therefore, have a high proportion of Mainlander graduates filling the officer corps. On board *CNS Chung-Chi*, almost all officers were graduates of the naval academy; only the political

officer was from the Academy of Political Warfare, and his assistant and the ship's surgeon are draftees. The seamen, in turn, were overwhelmingly draftees from all walks of the society. Conscripted at 20, most of the seamen had working experience in civilian factories and companies where Taiwanese is commonly spoken. More than half of the petty officers on *CNS Chung-Chi* were aborigines who speak various tribal languages but use Mandarin as a common language. For racially discriminated and economically disadvantaged aborigines, going to junior military schools, and signing on for long term service as sergeants or petty officers, is one of the most viable career path for boys. As soon as they sign up at 15, they can receive not only free education and room and board, but also Private-level salaries and full medical benefits for their families. The non-Chinese ethnicity of the petty officers afford them an interesting mediating role between the officers and the seamen who culturally represent the antagonistic poles of officialdom and common folk within Chinese culture.

The real ethnic make up of different ranks are, of course, much more muddled than described above. By the early 1990s, when I did my service, the caste-like class/occupation/ethnicity division between native Taiwanese and Mainlanders described by Gates (1981) and others was disappearing, with many native Taiwanese serving in the state sector and in the military, and children of the first post-war generation of Mainlander officials and soldiers often taking up jobs in the private sector. In 1991, a native Taiwanese was appointed as the commander in chief of the navy. The language question became more of a matter of class than of ethnic origin. Children of native Taiwanese urban middle-class families often speak much better Mandarin than Taiwanese, while Mainlander and aborigine workers speak Taiwanese as fluently as any other workers. Aboard *CNS Chung-Chi*, the same applied. Non-Taiwanese-speaking draftees, Mainlanders, aborigines and Hakka¹⁰, had to learn Taiwanese to blend in with others, and Taiwanese officers seldom spoke their mother tongue in public. The

¹⁰ Hakka is an ethnic minority of Han people inhabiting mountainous areas of southern China and Taiwan. Currently, they constitute around 15% of Taiwan's population.

only time the officers spoke Taiwanese was when they had favors to ask from the seamen, such as an unusual request of overtime work.

These examples of the cultural distinctions between officers and seamen reflect the unity of opposition between the Chinese bureaucracy and general populace. (Gates, 1996; Sangren, 1984, 1987; Ahern, 1981) Overtly, the bureaucracy regards the realm of the folk as unruly, uncultured, and needing to be controlled. The subjects, in turn, behave themselves in ways as far away from the official ideal as possible.¹¹ In reality, however, each group has its own realm and refrains itself from infringing on the others'. In physical space, for instance, the main deck divides the ship into two separate spaces. Above the main deck, the officers' rules are more dominant, while below it seamen maintain great autonomy. A seaman foolish enough to openly disobey the officers' rules, regulations and orders will be punished, but often he will be stopped by his senior seamen before the officers can intervene. In turn, an officer infringing the autonomous space of the seamen, as in the case of the executive officers' raid on the engine room, will be met with seamen's collective resistance.

The bureaucracy of the officers, as for Imperial bureaucrats, values text-based, overt hierarchy that is manifested in appearance and conduct meticulously codified in great detail. No two persons are equal and all are expected to show that they know their places. In the realm of the folk, people are, in the first instance, all equal, just like all buyers and sellers on the commodity market are equal. They are, however, put into a hierarchical order, which is no less rigid than the official rank, on accounts of norms and practicality. While credentials sanctioned by higher authority form the basis for official rank in the military, experience accumulated through time and

¹¹ In the broader Chinese society, as Gates point out, "[I]ike partners in a bad marriage, the two modes (of production, petty-capitalist and tributary) polarized each other: extreme authoritarianism came to characterize Chinese officials, exaggerated commodification the general populace." (1996: 43) In the small and essentially non-market society of the *CNS Chung-Chi*, the folk stress the other feature of petty-capitalism, kinship hierarchy, in the form of seniority, instead of commodification. Commodification, however, is clearly present in the realm of the seamen, as I shall explain later.

labor is most often used by seamen to justify their seniority hierarchy. Skill is instrumental to the seniority structure of the seamen. On one hand, the autonomy of seamen from the officers is chiefly maintained through the seamen's monopoly of skills necessary to run the ship. On the other hand, each seaman can acquire such autonomy only through learning from his seniors, and through collective actions coordinated through the seniority system. I shall now turn to the "life history" of seamen on board to illustrate this point.

2.2 Advancing with Age in the Patricorporation

New navy recruits are first sent to boot camp for six weeks of basic training. The navy conscripts in numbered cohorts every fifteen days, and the batch number is the most important identification of seniority for seamen. I was a 415, which put me higher than 416 and lower than 414. One addresses his senior as "*xuezhang*," School Elder, and his junior by name. Seamen of the same batch call each other "*kang-the*," same batch; and one can expect his *kang-the* as the most reliable friends in the navy, and oftentimes the friendship extends way beyond the period of military service.

After basic training, and sometimes an additional three-month training at a technical school, a seaman will be assigned to a ship, and the ship's executive officer assigns him to a department according to his specialty. There were five functionally distinguished departments, or teams, on *CNS Chung-Chi*, and larger ships may have more. Each department is further divided into sections. Once in the department, the senior seamen, who are not necessarily high-ranking ones, take control. The new recruit will be assigned to a section and given a senior mentor. During the first few months in the team, he is an apprentice in every sense. He is not allowed to perform any task independently, but only as assistant to his mentor. All regular benefits such as leaves are suspended. In the engineering department where I was, apprentices have to keep generator watches every night along with a senior, while more senior engine men keep watches only every four days or so. The apprentices are also responsible for chores such as house cleaning, fetching

tools, and even making beds for the seniors. Regardless of the apprentice's previous training and experience, he is expected to learn the trade by watching and doing. Disobedience and laziness of apprentices are hardly ever reported to the officers for punishment according to naval regulations. Instead, light corporal punishment such as push-ups is frequently meted out by senior seamen--thirty push-ups for being late at the watch, for instance. Beating of junior by seniors, although rare, is the ultimate threat for the wayward apprentices.

Apprenticeship ends with the passing of a series of oral examinations, which take place around three months after apprenticeship starts. Before the apprentice can take the examinations, he needs the approval of his mentor. Nurturing the mentor-pupil relationship is therefore the first priority for ending the arduous apprenticeship. Topics of examination include essential work skills, which are examined by the senior seamen of the department, and on recitation of rules, regulations, and KMT's political slogans, which are examined by officers. The recitation part has written standards, and is easier for most literate people to pass. The part on work skill, however, is much more difficult and idiosyncratic to each job.

In the engineering department, for instance, one essential requirement for engine man's job is the ability to keep watch on the generators and keep a constant supply of electricity flowing to the whole ship. The engine man not only needs to know how to start and stop the diesel generators (in regular ways and for emergencies) and manually distribute electricity on the old-fashioned switchboard, as the official regulations specify. He also needs to know how to detect any sign of abnormality in the old engine, and determine the possible problem indicated by the sign. Besides reading the inaccurate gauges, this requires watching the exhaust smoke (white smoke: water in combustion chamber; black smoke: incomplete combustion; blue smoke: lube oil in combustion chamber), seeing, touching, and even tasting the lube oil on an hourly basis (milky or salty oil: water pipe leaks, stop engine; sludge in the oil: need timing; grains of metal in the oil: big problem, stop engine immediately . . .).

Above all, the most important source of information engine watch men rely on is vibration.

To know the difference between normal and abnormal vibrations, the only way is to listen to the noise and feel the vibration for a long time. This is one practical reason for the requiring apprentices to keep daily generator watch. This skill can only advance with time spent on board with the machines. Senior engine men often show extraordinary competence in this aspect. For example, one afternoon when I was in my apprenticeship, I was chatting with a senior of mine on the upper deck and enjoying the ocean breeze. The ship was sailing on a calm sea and vibrating regularly. Suddenly, the engine man broke the conversation and ran to the hatch to the auxiliary engine room, rushing down the ladder shaft. I followed closely. When we reached the gauge panel of generator DC-3, the cooling water temperature was reaching dangerous levels. The fresh water pump had stopped, and the engine man on watch was asleep. “How did you know?” asked I. “The vibration pitch changed,” he replied, “and A-Lâm (the unfortunate watch keeper) always sleeps on watch.” Detecting the change of pitch caused by the water pump in the noise of the generator engine is similar to detecting that a violin is half-a-pitch out of tune amidst a thundering symphony of Wagner. I myself never picked up this skill.

With such complex tasks, the standards for work skills in the apprentice’s examination are also complex, unclear, and leaving much discretion for the examining seniors. It is often up to negotiations between the mentor and the examining seniors. Not only work skills, but also other performance factors, including diligence at work and deference to the seniors, are evaluated in the negotiation. Sometimes, a polite but underachieved apprentice will be allowed to pass, but a snobbish but bright one will be rejected. In other words, the acceptance of the apprentice as a full member of the seamen’s community is based on both moral and work standards at the same time.

After one finally passes the examination, he is given a status similar to journeyman in a craft trade, entitled to basic rights and is sometimes assigned independent tasks. His subordination to the seniors, however, remains, albeit in a less harsh way. In daily work, the labor of a team is distributed by the most senior seamen of the team under the advice of the petty officer. The “journeymen” are expected to carry most of the work load. The more senior one is, the less

physically demanding his assigned tasks will be. After a seaman accumulates more than one year of seniority and shows enough competence in work, he might be given an apprentice. This is a great step in his advancement through the hierarchy. The pupil can now share some of his workload, especially the boring chores. In addition, he can now bargain with seniors about his daily job assignment on the ground that he has to spend time teaching the pupil. A seaman with a pupil is also less likely to be yelled at by seniors, as humiliating a person in front of his apprentice is considered undermining his authority, and threatening the whole hierarchy of seniority.

The next landmark in the seaman's progression through his service time is the day of exactly one year from his discharge, called "*phuah-tang*"—breaking the year. Taiwanese army draftees serve two years, but navy and air force draftees serve three years. A seaman after *phuah-tang* is, therefore, on the top third of the seniority hierarchy. If the manpower condition of his team allows, he will stop doing all manual work. After one passes the point of one hundred days from discharge—called "*phuat-pah*"—he is totally free from manual tasks and watch duties. Both *phuah-tang* and *phuat-pah* are celebrated with drinking parties, and the honored seaman has to hand out cigarettes to his team members and other close shipmates. A senior seaman performs mental labor such as diagnosing machine problems and devising methods for repair, and managerial tasks such as daily job assignments, assignment of leave time, watch time, and other personnel matters. Most importantly, a senior is responsible for bargaining with outsiders regarding the welfare of his team members. For the senior seaman, the community of *CNS Chung-Chi* resembles a marketplace where he trades his team's "property" and the services of his team members with others.

For instance, each team and section's tool chest and the machines and material under their control are considered its own collective property. Borrowing between teams and sections always has to be maintained by reciprocity principles. The tools of my damage-control section included heavy-duty pipe wrenches for pipe repair. If, say, the boatswain's men at Department 1 needed to use the pipe wrenches, I might demand in return an extra ration of deck paint, which is under their

control. Sometimes, services would be exchanged. If my apprentice had problems passing the Morse-code exam administered by the radio petty officer, I might negotiate for him to pass in exchange for a badly needed welding job on the radio room's door hinges, the skill and machines for which were also in my section's possession. The utilities section, manned by those who operate the steam boiler that supplies the cooking heat source for the galley, always has a special relationship with the cooks. The cooks often save leftover goodies for them, if the steam supply is steady and on time. In this way, the horizontal division of labor among different departments and sections become exchange relationships. Exchange between sections of the same department can be in more relaxed terms, while those with other departments are more seriously haggled over.

Trading with officers often takes the form of work for leaves. The Executive Officer authorizes leaves with signed vouchers. These vouchers work almost like money between officers and seamen. A big piece of work, disassembling an engine for instance, may require two days of leaves for every seaman participating in the project. It is these kinds of exchanges that are most seriously haggled over. Only senior members of the team can negotiate terms. If a junior team member performs a task or lends a tool to outsiders, be they seamen of other teams or officers, without permission from the seniors, he will be seriously reprimanded, even beaten. The seniors, in turn, have the moral responsibility to get the best deal for their team members. Failing to do so will give a senior seaman a bad reputation as incompetent and unworthy.

By now, it should be clear that the world of seamen of *CNS Chung-Chi* is really a microcosm of late Imperial Chinese folk society. The section is the household, where property and members' labor is appropriated by the patriarch, and the department the clan. The only differences are that there are no women in this patriarchy; a constant supply of new recruits substitutes for physical reproduction; and the progression through generations one would experience in a lifetime is condensed into a space of three years. Still, this stripped-down version of a patriarchal structure clearly manifests and reproduces the values of classical Chinese patriarchy: the centrality of the authoritarian father-son relationship, filial piety and parental

responsibility, and strong emphasis on intergenerational continuity. (Hsu, 1968) While blood links generations in a lineage together, skill is passed on through the virtual lineage of the seamen.

The position of a man in this patriarchy is by no means static. Quite the contrary: mobility up the seniority ladder is by default a matter of life, regardless of one's merits and fortunes. A senior seaman explained to me when I was an apprentice that, "The seniority system is a good one. Think of it this way. Your life in the navy can only go in one direction: better." On the other hand, under the certainty of patriarchal order, there are still degrees of uncertainty left for the actors' maneuvering. The quasi-commodity exchange relationships among "households" requires and encourages shrewd manipulation of assets at the household's disposal: personal ties, technical know-how, control over "properties," and so on. It is, therefore, not entirely similar to the Weberian conception of a "traditional" society (Weber, 1947: 341-358), but a combination of traditionalism and market exchange, with the former prevailing.

The skill attributed to a person is simultaneously a result of seniority—through long experience—and of personal advancement. A senior seaman is respected. But a senior seaman with good skills can both be respected and have an advantage in his trading with outsiders. Especially in dealing with officers, highly skilled seniors can more easily get good deals on the exchange of service for leave vouchers, while those with less command of their work can only rely on the threat of their team's collective actions. But collective action, such as the "divine intervention" blackmailing at the beginning of this chapter, is possible only when the controversy in question is of a collective nature. Individual benefits, more leave time for oneself for example, usually can only be won with an individual's skills. Thus apprentices are encouraged to become as skillful as possible. In this aspect, skill is conceived in a capitalist, individualistic way, in addition to the traditionalist conception, where it functions as a proxy for seniority.

The seniority hierarchy extends beyond the rank of blue-shirt seamen. The petty officers also have to go through the seniority ladder. A professional petty officer who enrolls in naval technical

schools at the age of 15 will, after graduation at 18, be given a rank of Petty Officer 2nd Class (PO-2) and assigned to a ship. At this time, he wears a blue uniform without rank, like all other seamen, and is treated exactly like a seaman. He has to undergo apprenticeship with other new recruits. His rank is so much ignored that a senior seaman yelling at or even beating up a junior PO-2 would not raise an eyebrow, although, by the regulations, such behavior actually amounts to striking the superior and is repeatedly prohibited by the orders of the fleet headquarters. Only after a PO-2 accumulates more than three years of seniority—thus being more senior than any draftee--will he be allowed to take examinations for promotion to PO-1. If he succeeds in the examination, he will be issued khaki and black uniforms, and move from the seamen's berth to the petty officers' berth on the other side of the ship. Thus, all petty officers in khaki and black enjoy authority among the seamen not only by virtue of their rank, but also because of their seniority and, consequently, their skills.

Seniority also works as a ruling hierarchy for midshipmen (students) in the naval academy, as junior officers often recount the horrendous, arbitrary punishment senior midshipmen can subject their juniors to. Once commissioned, officers' seniority becomes secondary. On board *CNS Chung-Chi*, officers call their seniors “*xuezhang*” (school elders), like seamen do, only in more intimate situations. In most circumstances, an officer is addressed by his job title--executive officer, chief engineer, etc--both by subordinates and superiors. Some job titles are habitually called by their nicknames. For example, the chief engineer is “*Lau Guei*,” old ghost; the executive officer “*Lau Er*,” old number two; and the gunnery officer “*A-Phau*,” the gun. However, an officer is never called by name, even in the most intimate situation, as if commissions have stripped officers of their private identities. Officers are regularly transferred from one ship to another. Their promotion is based on a number of criteria: accumulated mileage and hours at sea, seniority, merits, and, most importantly, examinations. In a typically Chinese bureaucratic fashion, written examination is regarded as the fairest and most objective apparatus to rank people. Seniority and personal ties are important in terms of getting a desirable position. However, unlike

the seamen who take these factors for granted, officers have to exercise their personal ties and authority from seniority discretely. Using these unofficial relationships is regarded as unlawful and corruptive by the bureaucracy, and the KMT regime is more serious in punishing corrupt officials, especially the lowly ones, than the imperial dynasties had been. Therefore, the primary social order and relationships among the seamen are secondary and subdued among the officers.

The seamen's seniority-based folk culture inevitably clashes with the dominant bureaucratic culture of the military. Open confrontations, however, are rare, as each culture has established its perimeters, as a result of decades of negotiation. I shall now turn to the ritual practices on board the ship to illustrate this situation of stalemate.

2.3 The State and Folk Rituals

Military forces of the modern world have almost always been full of pageantry. So is the Taiwanese navy. Many symbols, ceremonies and etiquette are directly inherited from Western navies: the sailor's nineteenth-century style big-lapel dress uniform, the colors flying at the stern, the gesture of saluting the colors at the gangway when boarding a ship and leaving, passing out orders with the boatswain's mate's pipe—a remnant of the age of sail--and so on. Unique to the Taiwanese navy, however, are the political rituals that the KMT regime practiced, and the folk religions practiced by the seamen.

2.3.1 Rituals of the State

Probably inspired by European Fascism of the 1930s, and partly borrowing from the Confucian idea of governing through rituals, the Kuomintang regime on Taiwan was obsessive in creating its political rituals. The flag ceremonies, for instance, were held every morning and afternoon in every military unit, government building, state-owned factory, and school from kindergarten to university. Starting in kindergarten, every child was drilled to follow military-style procedures: fall in, line up, stand at attention, sing the national anthem, salute and

hoist up the flag, three bows to the picture of Sun Yat-Sen (“The Father of the Nation”) and three bows to the picture of Chiang Kai-Shek, and so on. The head of the unit--kindergarten or school principal, commanding officer, or the equivalent—always gave a short but solemn patriotic speech in daily ceremonies, and longer ones in weekly assemblies. When the speaker mentioned Sun Yat-Sen, Chiang Kai-Shek, his son Chinag Ching-Kuo, or the current president, everyone stood attention or sat straight, until the speaker gave the order “At ease.” In every national holiday, every town and city would hold a large and long rally, with all school students required to participate. The rally was usually in the form of a military review. Sometimes the high school students would be drilled to perform Nazi-style goose-step parades.

These ritual details were so repeatedly performed by every one growing up in Taiwan, that any deviation from the prescribed motions would have to be interpreted as a sign of conscious rebellion. In fact, when I was in high school, one of the favorite form of rebellion that boys practiced was pretending to ignore the speaker’s mentioning of the name of the Leaders, and stand in attention only seconds later. In high school, such behavior was punished by the military instructors stationed at school.¹² In the military, loyalty, or at least the appearance of it, is a much more serious issue and handled by a specialized branch of the service.

The political officer on board *CNS Chung-Chi* was officially third in command. However, he did not report directly to the captain or to the fleet command. He reported, instead, to the Headquarters of Political Warfare, which had branches in every military unit. The political officer’s main duty was to ensure the morale, loyalty, and “purity of thoughts” of every man. In case of a possible defection, which happened in great numbers during the Civil War, he was authorized to shoot the captain on site. On board, he was responsible for establishing a network of

¹² Every high school, university and college in Taiwan contains a number of military officers who perform military instruction, maintain discipline, and monitor the loyalty of the faculty and students. Although their presence was one of the foremost targets of student protests in the 1980s, the student movement has failed to drive them out to this day.

informants among all ranks, recruit KMT party members, and regularly report on the “condition of thoughts” of members of the unit to ensure that no Communist, Taiwan-independentist, or liberal (the so-called “Three-in-One” enemies of the state) ideological contamination is taking place. However, in the late 1990s, these secret-police functions have become clearly out of date and, even during the early 1990s, I hardly ever heard of anyone persecuted for political reasons during my service. The more rigorously exercised duties of the political officer are maintaining the regular political rituals.

Every Thursday, the “*Jüguang*” Day, provided that no urgent missions interfered, had to be spent on day long political instruction.¹³ This included watching propaganda programs broadcast from the Political Warfare Headquarters’ TV station, reading propaganda textbooks and magazines, and group discussions on how important it is for the soldiers and citizens to respect the Leader and to resist the temptation of the Communists and their allies at home. Every Tuesday evening, the “*Jüguang*” Evening, all members of the unit had to write an essay on the patriotic topics provided by the Political Warfare Headquarters in its official magazine. Every month, there would be a ship-wide rally called “Assembly of Honor and Unity.” Officially, low ranking seamen were encouraged to air their grievances at the rally. In reality, everyone knew that it is never a good idea to humiliate superiors in public. The rally, therefore, was carefully scripted by the political officer, with selected individuals providing harmless “grievances” and officers giving swift solutions, and always ending with patriotic songs and slogan chanting.

Another of the political officers’ serious duties was to ensure that every seaman could recite a series of political slogans, such as “Ten Great Crimes of the Communist Bandits,” “Principles of Military Discipline,” and “Doctrines for the Youth.” The “Ten Great Crimes,” for instance,

¹³ The term “*Jüguang*” means “the light of Jü.” Jü is a city of the Kingdom of Yen in the Warring-States Era (406 - 223 B. C.). Yen was once almost overrun by the Kingdom of Qi and Jü is one of the only two cities left of the whole kingdom. The king of Yen eventually recovered his whole territory. The story of Jü, therefore, symbolizes the KMT’s aspiration to recover their Mainland territory one day.

included “destruction of family,” “oppression of religion,” “betrayal of the nation,” and so on. Recitation of these was one of the mandatory items for the new recruits’ apprenticeship examinations. From time to time, superior officers from the Political Warfare Department of the fleet command would come aboard, randomly select a seaman, and test him for these slogans. There were also fleet- and navy-wide contests revolving around the written examination on the political slogans. The results of these tests and contests were then counted as marking the quality of the commanding officer and the political officers’ performance. In addition, new and revised slogans were sometimes issued by the Political Warfare Headquarters, and all members had to recite the new ones. In mid-1991, when the “unofficial” talks between the Taiwanese and Chinese Governments began, an order was issued stating that from then on, we should not call the enemy “communist bandits” anymore. Instead, they were to be called “Chinese communists.” As a result, many slogans and song lyrics were revised, and the whole ship was thrown into a frantic series of recitation lessons.

The political rituals were highly text-based. Reading, reciting, and writing of the KMT’s political doctrines were the center of the activities, while the bodily motions in rituals remained necessary auxiliaries. In this regard, the KMT’s “religion of the state” was similar to Puritan Christianity. Yet unlike in Puritanism, for which unified faith is the center of all religious activities, the clergymen of KMT’s rituals, the political officers, had scant interest in making sure that all of the congregation shared unified beliefs and accepted the same interpretations of the texts. Instead, regular repetition of the texts was sufficient. One can certainly argue that this was a sign of cynicism, hypocrisy, of diminished faith, and of the collapse of the KMT’s fascist-style indoctrination. Yet, from another point of view, traditional Confucian ideals of ritual as a governing device never require total unification of minds. Instead, rituals, recitation included, are expected to induce the ruled subjects’ spontaneous following of a pattern. I shall discuss this point later. Now, let me turn to folk religion, which, in contrast to the state rituals, is almost totally text-free.

2.3.2 Rituals of the Folks

Like all South Chinese seagoing vessels, *CNS Chung-Chi* had an altar of Mazu, the sea goddess, on board. Yet unlike on civilian vessels, where the altar of Mazu is installed at the bridge, the altar of Mazu on a naval ship is located deep at the bottom of the ship, in the main engine room. This corresponds to the symbolic division of space of the ship: with the main deck as the division line, the structure above the main deck (interestingly called “superstructure”) being the domain of the officials, and the hull under the main deck belonging to the seamen’s folk culture. Thus, the national flag flies way up on the mast and the seat of the folk patron goddess lies at the bottom of the ship. The wooden altar contains a bag of incense ashes from the incense burner at the Mazu temple in Suau Naval Base in northeast Taiwan. That temple is considered the maiden home of all incarnations of Mazu on naval ships.

Currently, historians in Taiwan believe that Mazu was born around the year 960 to a fishing family in Putian, Fujian, Southeast China as Lin Moniang. She was a respected medicine woman and a fortuneteller of her community. She devoted her life to taking care of the community and never married, so fisherman in Putian venerated her as a grandmother-like figure. After her death around 1020-30, fishermen erected a temple to commemorate her selfless love, and the cult of Mazu began to spread along the coast. It was suspected that she was actually a practitioner of Manichaeism, a Persian matriarchal cult banned by the Tang dynasty in 843 for its ties with the first empress of China, who ruled by her own name, Wu Zetian, but still lived among the lower classes. In any case, the worship of Mazu had been banned by the throne unsuccessfully several times, and was finally legalized in 1112. She was later endowed with several titles by the emperors: Heavenly Concubine, Heavenly Queen, etc. Her story changed with time, too. One interesting phenomenon is that the farther a community is from the mainland, the more intimate her popular name is: Cantonese on the mainland call her Heavenly Queen, Taiwanese call her Mazu (Matsó, reverse of Tsóma, Great Grandmother), and the Chinese community in Thailand just calls her Maiden Lin. By the 1300s, her legend was significantly changed. She was said to be born to a magistrate’s family instead of a fisherman’s and she was believed to sacrifice herself at

a young age to save her brothers and father from drowning at sea (Cai, 1995). Sangren (1983) points out that this latter version of virginal purity allows Mazu to be free from the ritually polluting role of wife. Paradoxically, she still stands as a motherly figure, a virgin mother, to the worshippers, as evident in her Taiwanese title Matsó.

As Sangren summarizes the observations of earlier anthropological accounts, Mazu is not a celestial bureaucrat, in spite of the various titles endowed upon her by the throne. She can be directly approached by the humblest of her followers. And “[m]ore than any other religious symbol, Ma Tsu (Mazu) has come to stand for a level of cultural identity based on the shared historical experience of Taiwan’s settlers. Moreover, although this experience unites Taiwanese of diverse ethnic groups and localities (e.g., Hakkas, Chang-chou, and Chüan-chou people), it differentiates them from the more recent immigrants who followed Chiang Kai-shek to Taiwan after the defeat of the Nationalists on the Chinese mainland.” (Sangren, 1987: 91) The altar of Mazu thus stands unequivocally for the predominantly Taiwanese seamen’s identity vis-à-vis the predominantly Mainlander officers.

Mazu is not the only deity on board. In the auxiliary engine room, there is a plastic laminated icon of Guanyin on the wall, and generator watch keepers will offer one stick of incense at the beginning of every watch. Guanyin is another virgin-mother deity transformed from the Buddhist deity *Avalokitesvara Bohdhisattva*, the bohdhisattva of compassion. Similar to Mazu, she is also a merciful savior of people in distress, such as endangered sailors at sea. Yet in Taiwan’s civilian society, Mazu is often the territorial patron goddess presiding at the communal temple, but Guanyin’s temple is usually outside of the community and functions as a women’s sanctuary. On *CNS Chung-Chi*, she was regarded as a surrogate of Mazu and not as elaborately worshipped as Mazu. Other supernatural beings on board were the “Good Brothers,” collective spirits of wandering ghosts. The Good Brothers were worshipped at the drainage pump room—a damp, dark and eerie place away from human habitation, typical of the *yin* order. A Taoist charm was glued to the pillar of the pump room, and next to it there was a piece of metal welded to the pillar,

as an offering table, and a tube, as an incense holder. The utility men who maintain the drainage pump kept a pack of cigarettes and a lighter at the table for the Good Brothers. The senior utility man, A-Liong, often went to the pump room to give a stick of incense and share a smoke with the Good Brothers. People say that he received inspiration for lottery number from the ghosts. Such vulgar wishes, however, would never be presented to the righteous and motherly Mazu or Guanyin.

All upper deck hands, especially the upper deck officers, were generally prohibited from entering the engine rooms. Worship of Mazu therefore became the sole right and responsibility of the engineering gang. The most junior engineering apprentices were required to give three sticks of incense to Mazu's altar every morning. On every first and fifteenth day of the lunar month, the engineering team bought fruit, rice wine, and ritual paper money for a feast for Mazu. Every engine man would come to the altar and offer three sticks of incense. Sometimes the engineering officers and petty officers, if they were not Christians, would join the worship, too. Upper deck seamen were not allowed to come down for the worship, but they participated by donating to the fund for offerings, and sometimes individual seaman would ask an engine man to offer incense sticks for him. Upper deck officers who were not Christians often went to the Mazu temple at Suau when the ship called on that port. Aboard the ship, however, there were only two folk religious events every year that upper-deck officers were allowed to participate.

The first of such events was the feast for the Good Brothers on the 15th of the 7th lunar month—the Ghost Month. On that day, most civilian communities hold elaborate Rites of Universal Salvation to pacify the wandering ghosts. On *CNS Chung-Chi*, a more frugal feast took place at the stern anchor. The offerings included fruit, half-cooked and uncut chicken and pork, rice wine, and golden ritual money for Mazu, and cooked meat dishes, silver ritual money, beer and cigarette for the ghosts. As ghosts are closer to human, offerings for them are closer to human food, too, and they are served with full eating utensils including a cigarette lighter. In addition, it is a Taiwanese naval seamen's tradition to offer milk to the ghosts, as the ranks of them may

include dead American sailors who are known to like milk. The seamen would offer incense sticks to Mazu and the Good Brothers by the order of seniority, but the officers do so according to reverse order of rank. Thus, the captain was the last to make an offering. The petty officers, especially the aborigines who are mostly Christians, were usually given shore leaves on this day so that they didn't have to attend the ceremony. Symbolically, their mediating role was unnecessary during this occasion of ritual inversion.

Another folk religious event taking place on the upper deck was the worship of Mazu near the end of the lunar year. The 16th of the 12th lunar month, called *Weiya*, is the occasion that all Taiwanese employers hold a feast for their employees. On *CNS Chung-Chi*, there was always a banquet on the evening of this day. Before the banquet, the altar of Mazu would be carefully escorted to the quarterdeck, where daily muster usually took place, and worshipped by all officers and seamen. Christian aboriginal petty officers, again, were excused from this occasion. This time, all hands were mustered in formation for the worship, and the offering of incense was by the order of rank, with the captain offering the first three sticks of incense. Although religious practices were generally discouraged in the military on the ground of separation of state and religion, the year-end worship of Mazu was usually encouraged and participated in by the political officer. Officers usually called this worship "thanksgiving."

The presence of Mazu in the engine room places both seamen and machines in her charge. With years of wear and tear, the engines behaved very unpredictably. Sometimes even the most experienced engine man could not accurately grasp the problems that might develop in an old engine. Magical intervention from the goddess, to help in taming the machine, was therefore desirable. In the folklore engine men tell, the machines are like the Good Brothers, and they and the seamen are all Mazu's children. Working closely with the machines was at the same time a rational process of acquiring skills, and a magical process of fraternizing with the machines. Each machine has its own character, and mingling with it improves the chances that it will cooperate with the seamen. In this context, skills of operating and maintaining the machines are not abstract

knowledge, but a context-specific relationship, like friendship, that needs to be cultivated.

Personification of the machines is an addition to, rather than substitute for, rational analysis. And Mazu stands as a motherly mediator between the engine men and their unruly brothers, the personified machines.

Based on the conception of the machines as ghosts and Mazu as the mediating mother, a series of customs and folklore were maintained and circulated among the engine men. When the engine gang met with a bottleneck in their diagnosis and repair work on the engine, the senior engine men would spit and curse at the machine. If no solution was found after this, they would go to the altar of Mazu, offer a stick of incense, and ask for inspiration. In addition, popular folklore has it that sometimes when the engine man on watch dozes off, and a machine runs into trouble, Mazu will come to his dream and warn him about the coming peril. On the Ghost Day, in addition to offerings to nameless ghosts on the upper deck, engine men would also stick a piece of incense on each big machine, and pour a small cup of rice wine over it—gestures that are very similar to the treatment of ghosts.

Similar to the Brazilian culture in the analyses of DaMatta and Hess (1995), the traditional, relational folk culture of Taiwanese seamen was not replaced by the modern individualistic one embedded in the American machines. Nor did the folk culture openly resist Western modernity. Instead, the seamen's folk culture encompassed the modern system of knowledge and included it as one among many options in its cultural repertoire. Understanding the man-machine connection in magical, relational terms was not a substitute, but an addition to rational analyses. In this process of inclusion, the dominant hierarchy of the modern, rational and American over the traditional, magical and Taiwanese was turned upside down. The former became a constitutive part of the latter.

This operation of hierarchical inversion becomes more complex when the traditional hegemon—the tributary state represented on the ship by the officers—comes into the picture. Anthropologists have long argued that the three classes of the supernatural worshipped in Chinese

folk religion—gods, ancestors, and ghosts--represent three categories of people in a typical peasant community—officials, kin folk, and strangers. (A. P. Wolf, 1974) Mazu, a feminine (hence peripheral) but orthodox (hence patriarchal) deity has long been a symbolic rallying point of ethnic Taiwanese consciousness against the state authorities imposing upon it. In the folk community of *CNS Chung-Chi*, the pseudo-kinship of seamen consisted of constantly moving individuals occupying only temporary positions in the simulated lineage. Mazu, as a female deity, possesses mediating power among categories. Thus, she assumes the symbolic role of substitute for family ancestors for the seamen. Like ancestors, Mazu's blessing is particularistic. She blesses seamen, especially engine men who keep regular worship, as boys in her family, but treats outsiders such as officers less intimately. Thus, the two categories of gods and ancestors collapse into the role of Mazu. Machines, because of their foreign origin and unpredictability, fall naturally into the category of the ghosts—the hierarchical subordinate to Mazu. With the encompassment of modern technology into the folk culture, these ghosts, however, can be fraternized with and even adopted into the seamen's magical family.

Therefore, in the official world, the modern, technological and American are hierarchically superiors to the local and traditional, and they belong to the officers who are vested with managerial authorities. In the seamen's world, however, the hierarchy is inversed. The American machines/ghosts are subordinated to Mazu, the head of the seamen's magical family, and are bonded with the seamen in opposition to the official authorities.

The folk religious scene aboard the ship is not a faithful reproduction of that in civilian peasant society, but a reconfiguration using elements from the latter. The spirit of this reconfiguration nevertheless remains true to that of "petty capitalism"—a dialectical response to the state's tributary system. Late Imperial Chinese peasantry fell back on patriarchal kinship solidarity to confront the state's tributary political economic system and establish its own capitalist-like economy. Similarly, seamen of *CNS Chung-Chi* relied on the solidarity among men, machine, ghosts and the goddess to confront the officers' authority and to establish their own

autonomous sphere. Yet unlike the old peasantry, this seamen's magical alliance had little to do with blood ties. Instead, sufficiently close interaction could effectively enlist alien elements--be they men, machine, or spirits--into the alliance, just like strangers hired in the labor market can be incorporated into the workplace. This freedom to forge alliance among unrelated individuals makes the seamen more capitalistic than the "petty capitalist" peasants for whom only officially sanctioned kinship provided firm solidarity.

2.4 Taylorism as Rituals

Not everyone on board *CNS Chung-Chi* was happy with the state and folk rituals and the political orders they engendered. The more "enlightened" officers, such as the executive officer Lt.-Comdr. Xie, subscribed to the ideas of discipline and efficiency of the American navy, which were supposed to be imbedded in the artifacts and commanding structure of the ship. They regarded the Byzantine political rituals as a waste of time, and the religious practices and discourse of the seamen as superstitions. However, caught between two powerful forces--the political warfare institution and the seamen--which draw their strength from traditions, the officers of enlightenment had much less control of the ship's business as they may have desired. Open criticism of the political rituals was out of the question--if an officer wanted to keep his career. As to the seamen's myriad of traditions and customs, officers had to learn to respect them in order for the ship to run smoothly. The machines were on the side of the seamen, after all.

For most of their working hours, a Taiwanese navy ship's personnel are engaged in daily maintenance tasks. The navy prescribes these tasks in an elaborate Tayloristic system called Planned Maintenance System, or PMS, which is identical to that used by the U. S. Navy. The naval vessels in active service receive overhauls every two to three years. During the cycle between overhauls, every piece of equipment of the ship is maintained according to a cycle of quarterly, monthly, and weekly schedules. According to naval regulations, the cycle schedule is prepared by the department head (chief engineer at the engineering department, for instance)

according to the equipment's manual, and listed on a Maintenance Index Page (MIP). Officers or petty officers responsible for each section then prepare quarterly, monthly and weekly schedules according to the MIP. Every morning after the 0800 flag ceremony, the section leader will muster his men and issue work orders of the day according to the weekly schedule. Along with every assigned task, there is a Maintenance Requirement Card (MRC) that the officer gives to the man responsible for accomplishing the task. The MRC specifies tools, material, activities and skills required for the execution of the task and the total man-hours required for the task to be completed--the very last detail. Seamen, then, are supposed to follow the MRC step-by-step, and fill out a feedback form after finishing the task. In the afternoon, the officer collects the feedback form, writes his log, recording the man-hours and material spent, and compiles accounts accordingly. In this way, the PMS constructs a workplace similar to a Tayloristic factory, with middle management commanding and the workers executing to fulfill a master plan designed by the R&D. The higher up the commanding hierarchy, the more mental tasks are performed, while the foot soldiers only carry out orders and perform manual tasks.

In reality, when one talks about "doing PMS" aboard a ship such as *CNS Chung-Chi*, one would most certainly be talking about filling out the forms—and forging the records. The MIP, quarterly, monthly, weekly schedules, daily logs, feedback forms, material and man-hour accounts, and all other paper work required by PMS, is usually done by a mid-seniority seaman in each department who has more schooling and is better at doing paper work. He may also be assisted by a senior seaman who has little else to do. These papers will then be signed by the officers who are supposed to write them. "Doing PMS" is regarded as an independent task, just like tuning an engine or swabbing the deck, and it is done only for the purpose of preparing for random inspections by the fleet command.

The persons who really assign daily work at the 0800-hour muster are the most senior seamen of each department and section, with the advice of their petty officers. Everyday, they evaluate the situation at hand and decide what needs to be done. Some tasks are periodical, such

as changing engine oil; some are daily, such as polishing bronze parts. Many others arise unexpectedly. If an engine sounds funny, then the whole team may tune up its timing gears, as well as doing other work that can be done while the gear casings are opened. Each section keeps its own inventory of necessary parts and material, over which their seniors and petty officers haggle with the supply office to get as much of as possible.

An officer of a department will be informed about what kind of work his men will do on a given day, only after the seniors and petty officers have decided. If he has a different opinion about the work, he will tell the petty officers and the most senior seamen, but will hardly ever directly say so to the junior seamen. Especially when his opinion is a critical one and he wishes someone to be punished, he will always rely on the petty officer to carry out his desire. The senior seamen, in turn, use their officers as liaisons with the outside, to do things necessary for their work: get a special part from the supply depot ashore, secure an honor leave for a seaman who has done good work, and so on. Similarly, if the request is controversial, it will be done through the petty officers.

This condition of highly unorthodox working relationships is not uniform throughout the entire ship. Generally, the tasks involving more manual work and handling of material will be accompanied by more seamen's authority, while those with more mental work and manipulation of symbols will be more firmly controlled by the officers. The engine men are the most autonomous group of seamen on board, and the engineering officers most accommodating to their men. Sometimes, senior engine men will even send the assistant engineer to run errands for them.¹⁴ The radiomen, by contrast, are the most tightly controlled. Since their transmissions of words or Morse codes are always doubly logged both on board and by stations ashore, any

¹⁴ The most often occurring of such instances was the buying betel nuts. Betel nuts are a mild stimulant popular among the Taiwanese working class, but banned by the military on the ground that it is "vulgar" to chew them. Since officers are usually not searched when they pass the sentry at the gate of naval docks, the engineering officers regularly smuggle in betel nuts for their men as a reward for good work.

irregular transmission—omission, private message, etc.—is easily detected and dealt with by the officers. A radioman who misses messages is often ordered to shave his head as a punishment. To the horror of seamen in other departments, there are sometimes senior radiomen with shaved heads. This should never happen to senior engine men.

In addition, the age of a machine is also instrumental in regulating the degree of seamen's autonomy. The older a machine is, the more room there is for intervention of seamen's skills, and, consequently, more autonomy for seamen. By contrast, new machines tend to embed more deskilling designs and undermine seamen's autonomy. For example, the electronicmen working in the superstructure have similar work contents as the electricmen who work mostly in the hull. Both groups require knowledge and skills of maintaining electric circuits, and use similar tools. However, the electronic equipment is regularly updated, but the generator and switchboards have remained unchanged since the 1940s. New electronic equipment is often "modulized," i. e. built as a combination of several closed blocks. Thus, whenever there is a malfunction with the electronic equipment, the electronicmen can only determine by the book which module the problem is from, and change the whole module. Electricmen, by contrast, can take apart, repair, and reassemble almost any part of the circuits in their charge. As a result, electricmen are more autonomous and often talk about "my machines," while the electronicmen never refer to the radios, radar and so on in this way.

Different occupations, therefore, provide different levels of prestige for seamen and officers. Among seamen, the engine men are the most respected, followed by the deck hands, gunners' mates, cooks, and so on. Radiomen and other "pencil-pushing" jobs are considered miserable, and their holders weaklings. This does not, of course, apply to every individual. The hierarchy of prestige mostly appears in talk, such as verbal threats in an argument. A radioman threatening an engine man is considered imprudent, as the latter has strong backing. Conversely, a cook shouting at a clerk is easily taken for granted. Skill, autonomy, and machismo are intertwined in determining the seamen's occupational hierarchy. Among the officers, the hierarchy is in reverse.

Midshipmen entering the naval academy have to choose from two separate career paths: engineering or upper-deck. Engineering career provides more marketable skills in the civilian job market, but is a dead end in the navy. All but one of the admirals in Taiwanese navy are from the upper-deck path. Aboard a ship, engineers are considered the lower occupation, and upper deck officers the higher (although the chief engineer is ranked higher than all junior officers.) Among junior officers, the operations officer, head of the operations department which works in the superstructure, is the highest in the command chain. Association with material handling and unruly subordinates is deemed less respectable than command and control in the bureaucracy.

Despite the differences between occupations, day-to-day operations in all departments share the common feature of higher autonomy for seamen and lower control for officers, when compared with the original Tayloristic design of the ship. The officers' loose grasp on their officially prescribed authorities at work is accompanied with their insistence on the appearance of authority. The most important aspect of the daily life on board where officers exert their authority is appearance. The numerous inspections regarding the tidiness of the environment and seamen's clothing and hair length produce much more in the way of official punishments (usually deduction of leave time) than other disciplinary matters. Each official punishment is always posted on the ship's bulletin board.

In addition, from time to time, there are drills in which officers have to shake off their meekness in daily work and assume the role of commanders. One of the most dramatic of such drills that I have participated in is an annual drill called "*Jiacau*," Drill A. During the drill period, chief petty officers of every specialty from the fleet command will come to every section of the ship and referee the performance. The ship's *Jiacau* performance is held in competition against other ships. A good *Jiacau* score helps all officers of the ship in terms of their chances for promotion, and they will reward their seamen with extra leaves.

Jiacau is usually a dramatization of the numerous emergencies happening in the course of daily business. The auxiliary engine room's drills, for example, include a series of crisis

management dramas with titles such as “Lube Oil Pressure is Lost” and “Switch Panel on Fire.” Each drama takes two actors, one plays the engineer officer on watch and another the engine man on watch. Each has a long script to be learned by heart. During the performance, each one shouts out the script with all his might, with specific gestures and a loud stamp on the floor. The script for “Lube Oil Pressure is Lost” goes as follows:

Man: “Lube Oil Pressure is Lost at Generator DC-1, SIR!”

Officer: “Start Generator DC-2, NOW!”

M: “DC-2 started, SIR!”

O: “Transfer power load to DC-2 and stop DC-1!”

M: “Load transferred, DC-1 Stopped, SIR!”

O: “Rotate the pulley on DC-1, one, two, three...”

...

This is a scenario that only takes place during the *Jiacau*. In spite of the regulations, engineer officers never keep watch in the hot and noisy auxiliary room. In case the lube-oil pressure is lost, every engine man knows what to do, and never has anyone bothered to tell the officers, let alone in such an awkward fashion. The watch keeper will just do what is necessary and write down a line on the engine room journal. And maybe the assistant engineer will read the line when he signs the journal at 0800 hour next morning. In addition, the assistant engineer, who is very likely to be holding his first job after graduation, will have to be trained by a senior seaman to perform the *Jiacau*.

In sum, the Tayloristic organization of ships such as *CNS Chung-Chi* becomes hollowed out when the positions are filled with people accustomed to drastically different class relations. The original design of unilateral management control over direct workers is substituted by the officers’ token authority and the seamen’s active control over the labor process. Under the

influence of both cultural and material conditions, even the technical bureaucracy becomes as ceremonial as the political authority of the KMT regime.

Nevertheless, this does not mean that the ship is in the hands of the seamen. On the contrary, even without the active intervention of the officers, the ship as a whole carries out its orders and missions as its superior commands. In fact, abstinence from direct intervention and retreat into ceremonial roles helps the officers govern over the entire ship. This is not merely a result of the naval officers' reluctant compromise with the unruly seamen. It is an effective political strategy that can be found both in Chinese traditions and some factory regimes in the West such as lean production. I now turn to a discussion of this "politics of ritual."

2.5 Politics of Rituals

The cultural-political configuration of ships such as *CNS Chung-Chi* is clearly a structure of dual authorities. The official authority governs at a distance and the patriarchal folk authority of the seamen controls the everyday labor process. This phenomenon warrants a myriad of interpretations. Aside from the plausible one that this duality indicates the decadent withering of the KMT's authoritarian state, I believe a more fruitful approach is to see it as the orthodox Chinese political tradition at work.

As mentioned in Chapter 1, Confucian orthodoxy emphasizes moral suasion over caustic laws applied by force as the more desirable mode of governing. *Li*, a universal pattern to which all ruled subjects spontaneously subscribe, is preferable over *fa*, prescribed positive laws to which the subjects explicitly conform. This idea is certainly not an unchanging doctrine through out the milleniums since the time of Confucius. Yet in each historical context of the important developments of Confucian thought, the Confucians are always on the conservative side, siding with the earlier dominant social orders, against another school that did emphasize unilateral exercise of state power—the Legalists. In the feudal era preceding China's unification under the

Qin Dynasty (221 B. C.), Confucians upheld the decaying ducal powers and feudal order, while the Legalists advocated establishment of strong kingdoms by replacing hereditary landed gentry with non-hereditary administrators promoted from the rank of commoners by earned merit. At the beginning of the era that historians commonly call Late Imperial China, the Sung Dynasty (960-1274), the Neo-Confucian movement, which sought to syncretize traditional Confucian ethics and statecraft with Buddhist and Daoist cosmologies and metaphysics, were struggling against the Neo-Legalists represented by Wang Anshi, who attempted to crack down on the local powers of big landlords in order to strengthen the monarchy. In the recent past, the Qing Dynasty (1636-1911), which was established by non-Han Manchu people, saw a revival of Confucian thought among the Chinese gentry, whose authority was threatened by both an alien state and the rising commercial class. .

This latest Confucian revival movement in the Qing dynasty left an indelible mark on contemporary discourse on Confucianism. Championed by the threatened Han gentry, it featured textual purism through meticulous philological work, social conservatism, and ritualism, *Li Jiau*, emphasizing ritual as the most important device for social control. This revival was part of a general project to reclaim the gentry's moral leadership and hegemony over the rest of the community. As historian Chow Kai-Wing argues:

The institutional focus on gentry's reform centered upon the family, the lineage, and the state. The growth of the cult of female chastity, the ancestral cult in the form of lineage, the punctilious observance of hierarchical relationships, and the exaltation of the ritual authority of the Classics constituted a cultural reform movement aimed at re-establishing the gentry's dominance in the family as father and husbands, in the lineage as local leaders, and in their public capacity as officials, and in their intellectual capacity as ritual experts and guardians of the past. (Chow, 1994: 227)

The Confucians, especially the latest Qing Neo-Confucians, evoked the existing common sense of hierarchy as the basis for their construction of an ideal social order. Their epistemology tended to emphasize the opaqueness of reality and the incompleteness of human knowledge. In contrast, the Legalists regarded human inquiry as a possible way to discover the Laws of Nature, including the optimal laws for human behavior. Political projects such as Taylorist scientific

management, for the Confucians, are therefore doomed to be futile. Instead, stable order has to be established through the subjects' spontaneous following. But spontaneity is by nature unruly and unpredictable. Thus edification through rituals is needed to channel unruly spontaneity into desirable directions. In sum, from the neo-Confucian viewpoint, ritual is not only the expression of the ruling order, but also the prime device that holds----- the social order together. Values within the subjects' everyday particular relationships are selectively celebrated and connected to the universal pattern of history, the society and the cosmos. As long as this connection is in the hands of the righteous and learned elite, heterodoxies can be contained and incorporated into the orthodoxy.

In the 1960s, the KMT state mobilized a Chinese Cultural Revival Movement in response to the Cultural Revolution on the Mainland, and the Confucian ideas were again raised to the center of the official discourse. Similar to the mandarins of the Qing dynasty, the KMT regime advocated filial piety as the most precious morality that binds the subjects' patricorporations with the ruler. The KMT leaders were represented as fatherly figures and situated in a five-thousand-year-old lineage of righteous rulers. In the official discourse, loyalty to the ruler was simply an extension of gratitude to and respect for the patriarch in the family, which supposedly is fundamental to human values. By this token, the seamen's seniority structure, threatening as it may have been to the officers' command, was officially sanctioned as moral. In other words, there *is* unity between the folk and elite cultures.

However, as seen from my account of the class relations aboard *CNS Chung-Chi*, this unity was tenuous at best. Antagonisms, not unity, were visible between the officers and the seamen. The seamen were scornful toward the official political and technical rituals and text-prescribed ranks. Participating in official rituals enthusiastically, following official orders scrupulously, respecting ranks endowed by outside authorities, doing things by the book, and all other forms of conformity to official authorities were considered unmanly and undesirable, but also unavoidable to some extent. In response, the seamen held on to their unofficial authority in order to confirm

their manliness, the value of which was promoted by the officials. They bypassed the official authority whenever possible. In doing so, the seamen's culture and that of the officers became articulated in opposition to one another. Officers are clean; seamen are dirty. Official ceremonies are prim and every detail has prescribed meaning; folk ceremonies are rowdy and details are simply unexplained. Officers do things by the book; seamen do things by their own experience through their own bodily feelings. Officers' authority is justified with supposedly objective criteria (examinations and so on), and the seamen's rests on particularist interpersonal and human-machine relationships. Officers are ceremonial; seamen are practical . . .

Yet, in the end, the defiance of the folk culture against the bureaucratic authority simply reinforced an order in which every man has his own place, and puts himself in the subordinate position. The division of spheres between the officers and seamen was not exactly what the official regulations prescribed, but the boundaries were equally clear and untransgressible. In challenging the official authorities, the seamen strived to do better in *their own sphere* while leaving the rest to the officers. While the patriarchally organized seamen on their own initiative ensured that the ship ran smoothly, it was the officers who determine where the ship is going and what mission the ship is to accomplish. This mirrors the condition that prevailed in Late Imperial China as well as Taiwanese society before the democratization of the 1980s and '90s. Commoners thrived in their private affairs in an ever larger and more intense market economy, while the elite ruled public life at a safe distance through cultural hegemony. Yet, with the rapid rise of export-oriented capitalist manufacturing economy after the 1960s, and the subsequent political transition into bourgeois parliamentary democracy since the late 1980s, this condition broke down in Taiwan exactly during the time of my service aboard *CNS Chung-Chi*. In the following chapters, I shall take a closer look at the interactions between humans, machines and the spirits in post-democratization Taiwan.

2.6 Summary

When Western technology and capitalism came to Chinese society with the imperialist invasion in the 19th century, they faced not one totalitarian monolith of “oriental despotism,” as in the accounts of Wittfogel (1957) and others who celebrate the enlightening effects of imperialism. Nor is modern industrial capitalism openly embraced by a people who are so well prepared for such kind of economy by Confucian tradition that they are bound to prosper once the opportunities arrive, as in contemporary orientalist accounts of the “Pacific Century.” Instead, what we see in the case of *CNS Chung-Chi* is a situation in which autochthonous contradictions between the tributary state bureaucracy and the petty-capitalist commoners have been playing out for centuries. Once Western technology enters the scene, it is contested between the two rivaling classes, and eventually encompassed by the subaltern class. In this process, the authorities of state bureaucracy, along with elements of the imported technological system which aid bureaucratic authority, are shelved and hollowed out by the commoners who dominate over solid day-to-day operations.

In the society at large in Taiwan, this eventually culminated into the fall of the authoritarian KMT state. After countless mass street protests, the nearly forty-year-old martial law regime was lifted in 1986. In March 1990, just before I went into the military service, the Taiwanese democratic movement reached its peak at a widely supported massive student protest, which I took part in. The ethnographic material presented in this chapter was collected exactly during the period of profound transformation of political institutions in Taiwan. In the years to come, the thought-control secret police apparatuses would crumble, and the clamorous and competitive elected officials would replace the stringent late-Imperial-Chinese-style bureaucracy as the primary power holders. Folk culture as well as the Taiwanese language would become no longer concealed below deck, but openly celebrated even by the state authorities.

Yet before this last epochal event happens, the political configuration of late-Imperial China is relatively stable, and the ruling class hegemony is effective in spite of many tensions. In this

traditional hegemony, the dominance of the ruler over the subjects is justified by association with the internal hierarchies of the subjects, chiefly the domination of the family patriarch over women and junior family members.

This political configuration is reproduced in almost complete form within the labor process of seamen aboard *CNS Chung-Chi*. Work skills, which are both transmitted through seniority hierarchy and forcefully justifying such hierarchy, are crucial in maintaining the patriarchal organization of the seamen. Through the monopoly and transmission of work skill, senior seamen established themselves as hierarchical superior to their juniors, and defied the control of the officers. At the same time, by relying on their internal hierarchy to defy the officers, seamen also created a world in which every man has his place, and thus acknowledged the leadership of the officers on another level. Thus, for working man in this traditional hegemony, work skill is simultaneously liberating and restrictive. Yet, the identity of skill with manliness is a powerful political lesson many Taiwanese men have learned when they go through the rites of passage of the military and experience the trench warfare with the state authority. They will carry this set of cultural outlook long after they leave the service and enter the job market.

Chapter 3: The Factory as a Village

The 23rd of the 3rd lunar month, the birthday of Mazu, is probably the largest and most eminent religious event in Taiwan today. As a Taiwanese saying has it: “Third Month sees craziness for Mazu.” All Mazu temples in every city, township and village around the island held festivals and processions in her honor. The most prominent among all festivals is a pilgrimage of Mazu followers in the Taichung area to her Taiwanese maiden home, the reputed first Mazu temple on the island. For years, the destination has been Chautian Palace in Beigang, but in the mid-1980s, as a result of inter-temple disputes, the committee of the leading temple of the pilgrimage changed it to Fengtian Palace in Xingang, which has long been competing for the position of the maiden home temple. Yet the pilgrims’ enthusiasm has not been dampened a single bit. In 1998, temple authorities estimated that there were at least 300,000 pilgrims from the Taichung area (where I was doing my field work) who walked for seven days to pay their homage to all Mazu temples along their way to the final destination of the rural town of Xingang. More than one million pilgrims on chartered buses from other areas swarmed into town to join the Taichung-area pilgrims, and many more spectators followed. Local temples, civic organizations and companies raised money to hire bands, folk dancing troupes, and floats to accompany the pilgrims’ and local gods’ procession into Xingang. I followed the crowd into Xingang in an attempt to witness this most important cultural event of the area, which is one of the most important of the nation as well.

It was a scene full of heat and noise and “saturated symbolism,” as Robert Weller (1994) describes the Taiwanese folk religious scenes. Processions piled up for tens of kilometers outside of the town. Those parading through the town’s temple square included, one after another, traditional and brass bands playing folk and popular tunes, dragons, lion dancers, martial artists, floats with animated legendary figures or live singing girls, sedan chairs of various gods, and large numbers of the gods’ escorts dressed in Qing-dynasty soldiers’ uniforms. The PA loudspeakers constantly blasted out seemingly out-of-place messages about lost children seeking

their parents, or safety warnings to the spectators on top of the temple towers. From time to time, long strings of firecrackers exploded, saturating the space with saltpeter smoke, while the security staff tried their best to hold back the spectators lest they get hurt. Inside the crowded temple, pilgrims offered their incense individually and lined up at a desk to let the clerk stamp their pilgrim flags, certifying their arrival. The flag will be put at their domestic altar for the coming year. Throughout the whole town, make-shift kitchens were set up to feed whoever needed to be fed, townsfolk offered food and drink to passers by at their doors, and temporary toilets and showers were erected for the pilgrims. The procession into town started around noon, and the town grew more and more crowded every minute. After dark, fireworks exploded continuously all the way along the pilgrim's path. The leading figure of the pilgrimage, the Mazu from the town of Dajia in Taichung County, was expected to arrive at her maiden home around seven o'clock PM, but the procession and the crowd was so huge that her sedan chair could not break through and reach the temple door until near midnight.

At first glance, this was a typical Chinese folk religious event—an utterly decentered ritual of inversion, with details, stories and symbols everywhere without particularly visible relationships to each other. An overwhelming outburst of joyous chaos, instead of solemn observance of ceremony, is the form of celebration both of the goddess herself and of the vitality of the people. Yet some details have changed, compared to similar events in the 1970s which American anthropologists on Taiwan observed. (e.g. Martin, 1981a, 1981b; Overmeyer, 1980; Sangren, 1987, 1988; Weller 1987a, 1987b, 1994b) In Sangren's account, for instance, at the apex of the ceremony:

A Taoist reads a memorial listing the participants' names and the village they represent. The memorial is then burned and thereby communicated directly to the deity. Subsequently, the branch image of the deity is first passed over the temple's main censer, restoring its efficacy, and then passed hand-to-hand along a line of the pilgrims and onto the bus." (1987: 91)

The center of the ceremony was the ritual specialist's often obscure textual communication to heaven, accompanied with the participants' bodily movement which is not very tightly

coordinated. The obscurity and incoherence of the ritual allowed for a necessary vagueness of meanings of symbolism, fluid and multiple readings (ethnic resistance on one level and patriotism on the other, for instance) and avoidance of open confrontation with the state's ritual authorities. In 1998, however, every pilgrim group lined up in formation in front of the gate of Fengtian Palace, with their temple committee in front dressed in identical suits and ties, bowed, kneeled, and kowtowed in unison by the command of a lay master of ceremony. The collective nature of the ceremony, which had been carefully concealed and disguised so as to lessen its threat to the state in the past, is now openly displayed.

In the past, the governments of the Qing Dynasty, Japanese colonial authority, and the KMT regime had always discouraged such lavish religious spectacles. (Cf. Martin, 1981b: 77-91) In 1998, the person standing at the end of the chain that passed the image of Dajia Mazu hand-to-hand into Fengtian Palace on the night of the 23rd was the Taiwan Provincial Governor Song Chuyu—a KMT party member and a Mainlander. The next morning, when the Dajia Mazu was escorted by the same route out of the temple, the person who took the honor of standing at the beginning of the line was the Vice President of the Republic, Lian Zhan. The governments had always tried to co-opt the folk religion by condescending gestures such as endowing official titles and giving honorary plaques to the gods at the same time of their containment actions. Yet never before had the heads of state put themselves at the rank of the commoners and played the role of devout followers of Mazu. Needless to say, the Taiwanese government in 1998 did not issue any statement advocating frugality and reducing the scale of religious ceremony as it always did during the martial-law years. Instead, the Counsel for Cultural Reconstruction, the central government's administration for cultural affairs, had allotted funds to sponsor the Mazu pilgrimage and many other popular folk religious events--to make them even more spectacular. In this post-authoritarian era, folk tradition ceases to be a threat to the state. Instead, the state actively seeks to incorporate the vernacular culture and the Taiwanese identity into the legitimation of its rule.

As we shall see later in this chapter, corresponding to this transition of the folk culture from subaltern to prominent in the larger society, the role of work skill in Taiwanese civilian factories is substantially different from what it is in the late-Imperial Chinese cultural contexts such as that of *CNS Chung-Chi* in Chapter 2. On the naval ship, work skill is intertwined with folk religion, Taiwanese identity and patriarchy, and serves as an integral part of Taiwanese seamen's resistance to the officers who are vested with powers from both the traditional Imperial state and the modern U. S. technocracy. In the civilian factories, no such glaring demarcation between the ruler and the ruled exists. The contradictions between the employer and the wage laborer become much subtler, with the two sides sharing essentially the same culture, language and religion.

Contrary to the Weberian thesis that the rise of capitalism is inevitably accompanied with rationalization and the disenchantment of the world, folk religion in today's capitalist and bourgeois-democratic Taiwan is more prosperous than ever. And it is not only does the new Taiwanese state incorporating folk religion; the high-tech industries, which sprouted in the 1980s and have become the fastest growing sector of Taiwan's economy, also actively seek blessings from the folk deities. One of the most noted of such cases is the leader of Taiwan's computer industry—Acer Computer. In every factory or branch office of this multinational corporation, there is an altar of the Earth Mother, who is the patron goddess of the CEO Shi Zhenrung's mother's hometown, Puli. Every year, on the birthday of the Earth Mother, high-ranking executives of Acer escort her branch images from the U. S., Japan, Mexico, Singapore, Germany, and all company facilities in Taiwan back to the Puli Earth Mother temple for spiritual renewal. This event is always featured in the major newspapers. (e.g. United Daily, 11/16/1997: 16) In 1998, in response to the difficulties brought about by the Asian Economic Crisis, more than sixty Acer executive pilgrims appealed to the Earth Mother for blessing and guidance. (World Journal, 10/27/1998: A6) In the history of Acer Computer, celestial blessings have been repeatedly invoked to solve crises. In March 1984, the start-up company was broken into and robbed of more than 70,000 precious 8088 CPUs and 46k memory chips. In addition to reporting the theft to the

police, Shi Zhenrui's mother brought an image of the celestial police detective *Ba Ye* (the Eighth Lord) from the Chenghuang Temple of Lugang to the corporate headquarters to help in solving the burglary.¹⁵ Three weeks later, the case was solved and almost all of the stolen computer chips were recovered. (China Times, 3/20/1984: 5; 4/20/1984: 5) To this day, a plaque given by Acer to commemorate this modern day miracle is still displayed in the Lugang Chenghuang Temple.

In such a cultural atmosphere, it is not surprising at all that, when I started my field work on the machining industry in the Taichung area, I found folk religious symbols, practices, and discourses interwoven with up-to-date technology. Without the restraint of a hostile state authority, such as the officers in the case of the naval ship *CNS Chung-Chi*, the altar of folk patron god in the factory is no longer concealed and located beside the production machinery, but prominently displaced in the front office, presiding over the property along with business owners and managers. What is novel in my findings, though, is the ways in which religion, human relations and labor processes interact and are reconfigured. The local folk traditions, which had been subordinate to the imperial tributary mode of production for ages, is now coming to the forefront of the landscape of Taiwanese society at large as well as the workplace. At the same time, while the folk society is making its ascent, it is transforming itself in all realms from the petty capitalist mode, in which patriarchal family relations dominates over and intertwines with market relations, into full-fledged capitalism. The changes in folk religion are one of the most visible examples.

Around the Taichung metropolitan area, there are carcasses of old textile mills, shoe factories and so on which had been built in the 1960s and '70s and closed down in the late 1980s, when such labor-intensive production moved en masse to Mainland China and Southeast Asia. On

¹⁵ Chenghuang temple is the office of celestial magistrate at province, prefecture, county or city level, which corresponds to the Imperial local administration. The presiding deity Chenghuang is a celestial magistrate and usually accompanied by a full staff of clerks and police officers.

the wall of the old factory buildings that remain, there is often a slogan painted in big characters: “The factory is your family; the factory is your school.” This is a slogan that the KMT regime’s labor administrators had promoted. In the earlier years of export-oriented industrialization, the traditionalist images of patriarchal family and authoritarian teacher-pupil relations were conjured up to affirm the employers’ authority over workers. Many of those workers in the export processing zone were school-age young girls who, if they had been born to more prosperous families, would still have been still under the paternal guidance of parents and teachers. (Arrigo (1980; 1985) and Kung (1983) offered vivid pictures and analysis of this paternal labor regime.) If Chinese folk religion is practiced in such workplaces rife with patriarchal tradition, one would reckon, it should be similar to domestic rituals that reinforce the patriarchal lineage.

However, as I immersed myself deeper into the cultural world of contemporary factories, the image I saw was not the one of factory-as-family that the KMT regime promoted and progressive scholars criticized. Workers and managers alike do perceive the factory with cultural images borrowed from traditions. Yet, they use images of another level of traditional social organization to understand the factory: the village. The Late Imperial Chinese folk society was dominated by two kinds of relationships. Inside the family, strict, unnegotiable patriarchal hierarchy was the ruling principle, framing every member into a set of unilateral obligations of paternal responsibility and filial piety. Between families, at the village level and beyond, volatile market exchanges on land tenure and ownership, labor power, and other commodities made all patriarchal families equal trading partners in principle—although their fortunes and powers might vary. This latter relationship is most salient in the contemporary factories I examined. In other words, patriarchy does exist in the contemporary factory, but it exists in the form of multiple, mutually competing lineages, instead of a unified one.

The deity installed at the machine factories’ altars, now located in prominent places, is always Tudi Gong, the Earth God or Locality God. The Chinese folk pantheon closely simulates the imperial bureaucracy. On top of the orthodox hierarchy is the Jade Emperor, served by a court

of ministers, generals, princes and other notables. Lower down the ladder, in every province, prefecture, county and city, there are Chenghuangs—the celestial magistrates—and their staff of functionaries and police officers. Tudi Gong, the lowest in this bureaucracy, is often described as the chief of local police station, and governs over a hamlet or neighborhood. In a typical village, the center of the village sits the public temple presided by the local patron god—usually Mazu in Taiwan, who are vested with the power, but not necessarily a member, of the celestial bureaucracy. Several shrines of Tudi Gong are erected at the road entrances to the village, outlying hamlets, the irrigation works and other significant sites. Unlike ancestors who are invariably worshiped exclusively by a kinship unit, these deities in the category of gods are worshiped by a territorial unit composed of multiple lineages, and the honor of taking care of the local gods is either periodically rotated or competed among the families of the locality. The fact that the company patron god is the Tudi Gong, therefore, indicates that workers and management regard such entities as similar to a hamlet or small village. Although the small size of the Taiwanese machine companies does not yet qualify them to be treated in folk rituals as large, independent villages with a full set of village ritual institutions like the naval ship *CNS Chung-Chi* does, they are not treated as a simple household either. In this view, the control over daily affairs of the factory does not rest on the hands of the managerial hierarchy as surely as the patriarch's control over a traditional household. Instead, it is contested by multiple lineal or quasi-lineal units or even individuals.

The perception of the company as a village is reflected in social relations in the labor process and the social construction of skill in Taiwanese machine companies. Compared to a typical Western factory, or to the ideal organization of work that Taiwanese factory managers upheld, the real labor processes are, in their social aspect, much more skilled—i.e. controlled by direct workers. However, compared to the Late Imperial Chinese model preserved in the case of *CNS Chung-Chi* in the last chapter, skill is more individualized and less imbedded in the kinship-like master-apprentice hierarchy. Machine workers, especially the male ones, in these

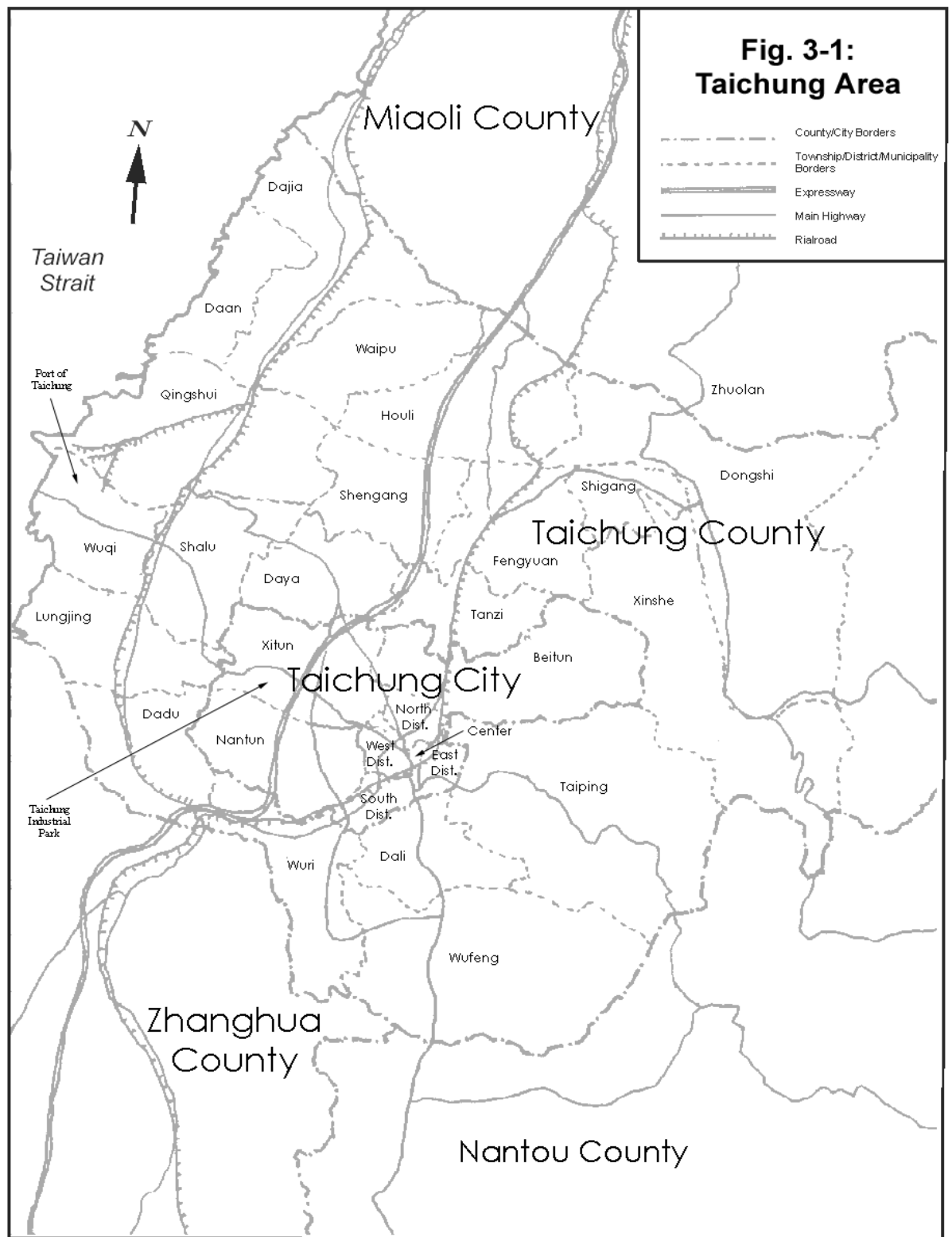
companies play much more active roles than their Western counterparts. Not only do they typically control their own labor process as many Western skilled workers do. They also participate in many activities that are considered management prerogatives in the West, such as coordination of work and handling relationships with business associates and customers.

In the two cases that I will explore in this chapter, the first one—a plastic-mold maker DY Enterprise—is organized in exactly such a fashion and vastly different from typical modern Western capitalist enterprises. At DY, detailed vertical division of labor—hallmark of capitalist labor process and foundation for the command hierarchy in the workplace—is replaced by horizontal division of labor between craftsman-like workers, each having a full range of technical and business skills. In the second case—a gear maker TW Gear—under the appearance of modern corporate structure, the same village-like organizational principle still operates in daily work. Most salient in the shop floor politics is the competition between kinship-like factions called “armies of sons and brothers.” As the strong patriarchal flavor of this term implies, leadership in these factions simulates that of the patriarch over a family. The teacher-pupil hierarchy that transmits work skill is one of the most important foundations for such leadership, but not the only one. Personal ties and rapport in the “army” are constantly cultivated and reinforced by the leadership.

The sharpest contrast between the social construction of skill in the Western workplace and that in the village-like Taiwanese machine companies is the centrality of personal skills for workers in all positions in the latter context. In the absence of strong corporate bureaucracy, handling of complex human relations at work becomes a part of every worker’s job. Cultivation of personal ties is essential to success in these tasks. In addition, the web of personal ties a male worker weaves in his wage employment career, including one’s own “army of sons and brothers,” serves as valuable resources when he advances into the next stage in the ideal career ladder of Taiwanese male skilled worker—self-employed entrepreneur.

Wage employment in factories like those described in this chapter, is often regarded by

working-class Taiwanese men as a transitory period between inexperienced youth and full manhood in the form of self-employment in one's own family business. With the cost of the hardship one endured as a hired hand, he accumulates necessary technical and personal skills, valuable personal connections, as well as financial resources in preparation for his rise toward the final resting-place of a family patriarch. In this view, the class distinctions between wage laborers, entrepreneurs, and capitalists are not inherently contradictory, but a matter of seniority. However, many of my observations suggest that this "transitory" view of wage employment, although still prevalent and resilient, is fading away, giving rise to a primordial working class consciousness.



3.1 Two Factories in the Land of the “Black Hands”

Founded in the early 1900s by the Japanese colonial authority as a railroad transportation center, the city of Taichung is the newest big city in Taiwan, and now has a population of approximately two million within the metropolitan area, including the adjacent suburbs. Among all metropolises in Taiwan, Taichung is famous for its constant invention of indigenous novelties in food and entertainment trends. This can partly be attributed to the newness of the city. Yet city folks often attribute this to the vibrant nightlife maintained by the patronage of the city's huge and fluid class of small entrepreneurs. Taipei has the central government, trading companies and corporate headquarters; Hsinchu has the geek-infested microelectronic plants in the Science-Based Industrial Park, Tainan as the first city in Taiwan has the old merchant houses; and Kaohsiung has gigantic petrochemical and steel complexes owned by the state and a handful of monopolies. Yet Taichung has “one million bosses.” Throw a stone from the top of a tall building in downtown Taichung, a cliché goes, and you will hit a boss, a future boss, or a former boss every time. Folklore aside, the Taichung area does have a larger presence of small- and medium-sized privately owned factories and fewer state-owned and large-scale industries than other cities.

Especially visible in the economic landscape of this area is the machine industry. As Table 3-1 shows, the proportion of machine industry in the industries in both Taichung City proper and Taichung County, which includes the city's suburbs and many other rural townships, has consistently been fairly large during the past decade of drastic industrial restructuring in Taiwan. Statistics on factory registration never faithfully represent the real scale of any major industry in Taiwan because many small workshops and factories do not register with the government in order to avoid taxation and regulations. The numbers nevertheless show a general pattern. About 30% of the city's factories, and one quarter of the county's, are in the machine business. This figure does not yet include industries in such categories as plastic products, iron and steel foundries, and precision instrument manufacturing, great proportions of which are related to the machine

industry and also employing many machinists.

Table 3-1 Factory Registration

	City of Taichung			County of Taichung		
	Machinery Manufacturing and Repair	Total	Proportion	Machinery Manufacturing and Repair	Total	Proportion
1987	1434	4732	30.30%	2298	11299	20.34%
1988	1550	5042	30.74%	2629	12446	21.12%
1989	1502	4897	30.67%	2899	13332	21.74%
1990	1388	4452	31.18%	2899	12981	22.33%
1991	1335	4303	31.02%	3081	13498	22.83%
1992	1297	4236	30.62%	3316	14182	23.38%
1993	1312	4366	30.05%	3349	14865	22.53%
1994	1278	4323	29.56%	3344	14318	23.36%
1995	1253	4212	29.75%	3457	14577	23.72%
1996	1229	4144	29.66%	3428	14221	24.11%

Source: *Zhunghua Mingua 85 Nian Taichung Shi Tungji Yaulan*. [Statistical Yearbook of the City of Taichung, 1997.] Taichung: Taichung City Government. and *Zhunghua Mingua 85 Nian Taichung Xian Tungji Yaulan*. [Statistical Yearbook of the County of Taichung, 1997.] Fengyuan: Taichung County Government.

The machine industry in Taichung is inseparable from the legacy of Japanese colonialism. According to the trade organization Taiwan Association of Machine Industry (TAMI, 1995), the machine industry in the Taichung area originated in the Japanese era, especially after 1940, when Japan started a rigorous industrialization project in Taiwan as part of their war effort. TAMI praises the Japanese military arsenal Toyo Iron Works in South Taichung and the 61st Airplane Works in Gangshan, southern Taiwan, as “the cradles of Taiwan’s machine industry.” (43) Most of the celebrated first-generation machinists did their apprenticeship either in these two factories or in the sugar mills owned by big Japanese *zaibatsu* such as Sumitomo and Mitsui. Although the colonial government had established engineering colleges and industrial vocational schools in Taiwan during the late 1930s, most of the admitted students were Japanese, and Taiwanese machinists had scarce opportunity to receive formal technical education. (42-44) To this day, founders of most of Taiwan’s established machine companies often proudly refer to themselves

as “black hands”—those who learned from doing and rose from the ranks. Machine industry and the machining trade are also amicably called by insiders *O-chú-gài*, “the Black Hand’s World,” in Taiwanese language.

The collective achievement of the “Black Hands” is enormous. According to the Ministry of Economic Affairs, Taiwan’s exports of machinery and machine parts in 1997 totaled US\$ 31.85 billion and consisted of 26.1% of the country’s total exports. (MOEA, 1998) A large part of these exports are production machinery for the Taiwanese-owned factories overseas in Mainland China and Southeast Asia. In some areas, the cheaper machines made in Taiwan has taken over large proportion of low-end markets discarded by the Japanese and German machine makers in the 1970s and 1980s. For instance, Taiwan has become the sixth largest producer and the fifth largest exporter of machine tool in the world. (Hung, 1997) Despite its economic successes, Taiwan’s machine industry remains a collection of small firms. The largest machine tool maker, Victor Taichung Machinery, has only 870 employees in December 1996--a tiny figure compared to leading firms in other industries such as petrochemical or textile whose workforce can easily amount to several thousand. And 58.2% of machine tool manufacturing firms in 1996 have less than ten employees. And the employer and employees alike still often portray themselves as rugged, self-made “Black Hands” who create wealth through their own hard work instead of shrewd manipulations of money and knowledge. Mr. Huang Mingzhe, a senior machinist and owner of a small milling machine company, explained the “Black Hand” nature of machine industry in the following manner:

More than any other industry, the machine trade depends on solid experience. Machines and parts are solid. You can see them, touch them, measure them with rules and gauges. Granted that many people are now using computers and so on, but still high-tech is only extensions of our own senses in the machining trade. Therefore, a black-hand like me with little schooling but lots of solid experience through apprenticeship and decades of hands-on work can pretty much figure out the tricks (*mê-kak*) of machines. Yet other industries are different. I don’t think hands-on experience counts as much in, say, electronics or chemical industries. You need to go to universities and get a degree to know what is going on with the electrons. And only people with lots of money to invest in expensive machines and manpower can afford to do business in electronics. In addition, in commerce and many other industries, you need a lot of connections with the government or the big companies to do really well. In the machine industry, hard work is everything. (971006)

In this light, it can be seen that the concentration of small ethnic-Taiwanese businesses in the machine industry is more than a coincidence. The nature of work in the machine industry makes it offer better opportunities for people having little money, formal education or official connections, which was the case for most ethnic Taiwanese in the immediate post-war years. The ethnic-Taiwanese and folk culture of the “Black Hands” dominates the machine industry. In every factory I visited, Taiwanese language, not the official Mandarin, is the working language, senior workers dress dirty and juniors dress clean—exactly like the case of *CNS Chung-Chi*’s seamen--and folk religious rituals are practiced dutifully in the factory.

Geographically, the railroad practically divides downtown Taichung into two worlds: one dominated by the hard working black hands and the other by commerce. North and west of the railroad, bustling commercial districts with glamorous department stores, fashion boutiques, high-rise office buildings and nightspots line the major thoroughfares, and old Japanese colonial officials’ residences and modern apartment buildings stand side-by-side on the back streets. South and east of the railroad, around the site of the old Toyo Iron Works, the sugar mill, and the former Japanese barrack, thousands of mainly family-size machine workshops extend all the way into the suburbs, cranking and humming day and night. Most of these workshops are located on the first floors of two- or three-story townhouses, with the owners’ family living on top of the workshops. East of the railroad station, the largest public market in town, the Jianguo Market looks commonplace from outside, with food stalls and stores all around. Yet having walked into the back alley, one will find hundreds of small shops selling everything machine shops can possibly need: from lathe cutting tools to electronic controllers. High-pressure hydraulic hoses and standard-sized spur gears are displayed at the stalls as readily as noodles and rice cakes.

The more successful of the machine factories, however, do not stay in the cramped East and South Taichung. In 1980, the Industrial Development Bureau of the Ministry of Economic Affairs opened its Taichung Industrial Park on the slope of Dadu Hill to the west of the city. This 586 hectares of land is accompanied by a one-stop service center providing business registration,

banking, and postal service, a government-sponsored metal industrial technology research center providing technical assistance, waste-water treatment plant, subsidized workers' housing, shopping center, and so on. Furthermore, the industrial park has good road access to the expressway and the Port of Taichung. As of 1997, more than 630 factories, including machine plants, plastic plants, textile mills, shoe factories, food processing plants, and warehouses, have already occupied all of the available plots.¹⁶ The near-by Xitun District used to be a quiet rural area as late as the early 1980s, and now it is filled with high-rise apartment complexes that house the large workforce. Other established factories and small workshops move south and east from the old districts, and transform the adjacent rural townships into one big clamorous industrial zone.

The two medium-sized factories I worked with were both established in the 1970s, but are located on two opposite sides of the metropolis and seemingly represent two drastically different social positions of firms of this size. One is DY Enterprise in Wufeng Township, the far Southeast of the Southeastern industrial suburbs of Taichung. Another is TW Gears, located in the Taichung Industrial Park. The former is an independent company that subcontracts plastic parts and plastic injection mold work from various clients; the latter is a subsidiary of the largest machine-tool maker in Taiwan, Victor Taichung Machinery (VTM). Machining work done by DY mainly consists of one-of-a-kind injection mold production and it employs a core of steady,

¹⁶ One story about relocation to the industrial park is recounted several time to me by various informants. Xu Fu, the founder and chairman of the Har Lin Industry—a widely respected firm in the plastic injection trade—established his plant at the western fringe of the old down town after he left his career at the 61st Airplane Works of the Japanese Navy. In the early eighties, because of the westward development of the commercial district and the intensification of land speculation, land value of his plant site rose to hundreds of millions of NT dollars. The old Mr. Xu had no choice but to sell his old factory and move into the Industrial Park, making a huge financial gain from the move. The ambivalent Mr. Xu told his friends: "Damn it! Forty years of my labor as a Black Hand has brought me less money than this goddamned piece of land makes overnight!" Apparently, people who tell this story are wary of the rampant, large-scale, speculation that dwarfs their own hard-earned money.

older, and (conventionally defined) high-skilled workers; TW is engaged in routine production of medium-size batches of similar same products--gears, and its workforce consists of a more fluid succession of younger “low-skilled” workers. Most machinists in Taichung area categorize people in the trade into two mutually exclusive groups according the kinds of work they do--*óat sit-á*, “live” jobs like those done at DY, and *tsuan-mûn sit-á*, “specialize” jobs like those done at TW. These two companies, therefore, are regarded in the trade as of two drastically different kinds.

I owe my initial entry into the field to DY’s owner and president Mr. Lin Lisheng who is a close friend of my family. Mr. Lin is a well-cultured heir from an old local landlord family. In addition to his excellent taste in fine food and classical music, the appearance of his factory also reveals his cultural background. Although small, with only 50-some employees, DY enterprise’s mold and plastic plant is spaciouly housed in Japanese-era tile-roofed building, accompanied by a garden and a tennis court. When I approached him with a request to do my fieldwork, he hesitated, stating that his plant is not really on the cutting edge of the business and not exciting for research. Instead, he introduced me to his cousin, Mr. Lin Liguó, who was the plant manager of TW, believing that TW with its more established position can offer me a better understanding of Taiwan’s machine industry. In contrast to the idyllic DY, TW is a more business-like establishment. Not only is it bigger and busier—with every inch of its factory grounds filled with production equipment and activities--TW is also subjected to frequent management reforms designed by consultants hired by the corporate headquarters. I decided to work on both sites for comparison. Surprisingly, in spite of their vastly different appearances, the two factories have much more in common than their managers apparently think.

3.2 DY Enterprise: The Amalgamated Craftsmen

Mr. Lin Lisheng graduated from the National Taiwan Normal University in the early 1960s, majoring in Industrial Education. After several years of teaching at Xinmin Industrial Vocational

School in Taichung, he founded the DY Enterprise with money from his family and former colleagues, while manning the operation with a handful of employees from his former students.¹⁷ Although Mr. Lin is not a machinist himself, his position of a former teacher binds him with his employees in teacher-pupil relationships just as solid as a master machinist have with their apprentices. Many former students and former employees in the local machining trade still respectfully refer to him as “Teacher Lin.” In addition, the style in which DY is managed made it a good training ground for entrepreneurs for many years. This further strengthened Mr. Lin’s leadership and reputation as a teacher.

In the mid-1970s, he moved his plant from southern Taichung to Wufeng Township. Gradually, DY Enterprise established a stable clientele of local and Japanese small and medium-size businesses. By 1997 and 1998, DY had a plastic injection mold shop equipped with twelve general-use machine tools, such as milling machines, lathes, grinding machines and one CNC machine center, and an injection shop with ten injection molders.¹⁸ Each shop employed 8 to 10 people, working only one shift from 7:30 AM to 5:00 PM, instead of running 24 hours a day as most smaller shops do. Quality assurance, warehouse, packaging, and a sub-assembly shop employed some 10-15 more workers. In addition, DY had a small design and research team and an office staff of 10 and 6 salespersons. Most of the office workers were competent in all four

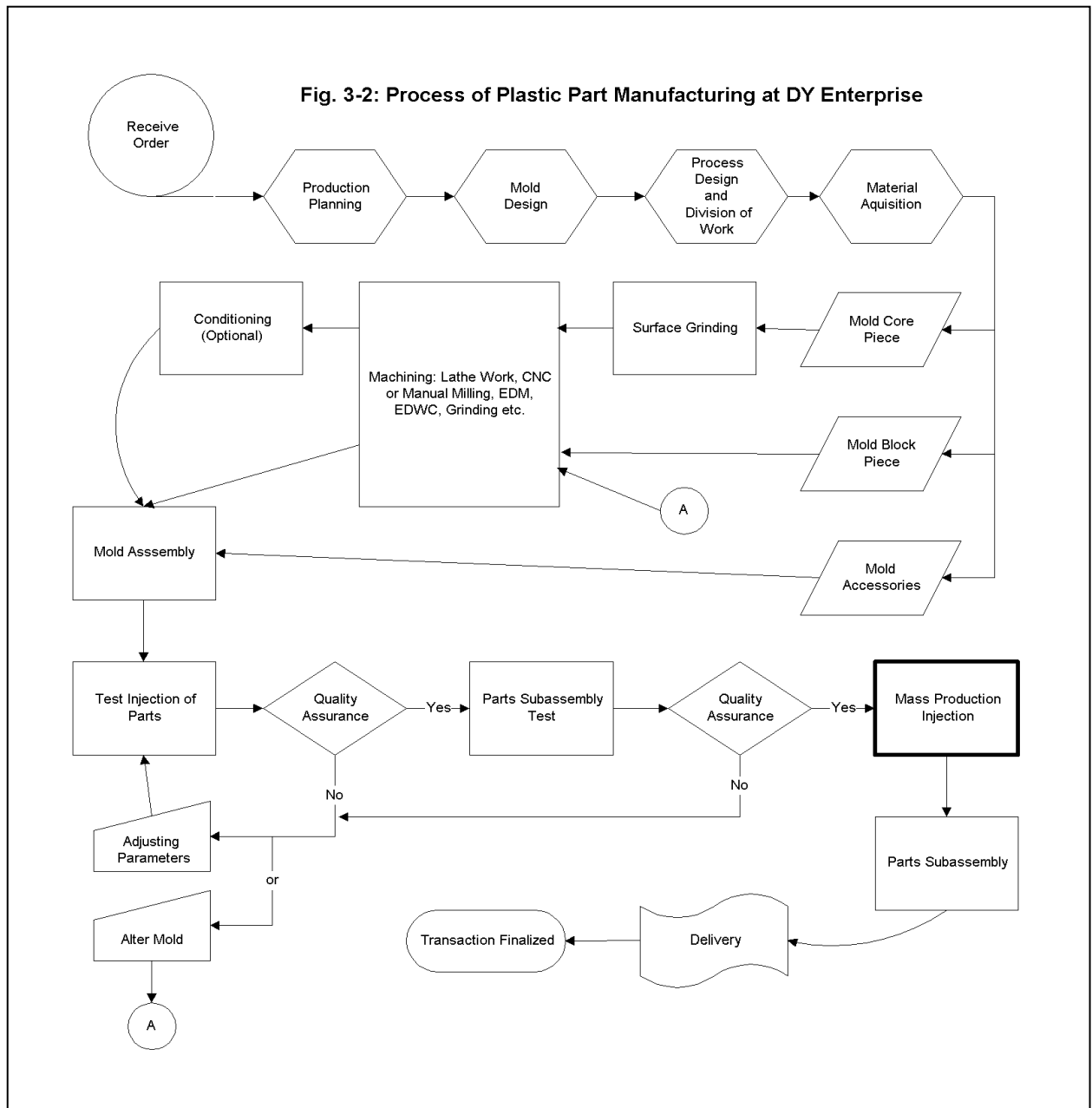
¹⁷ Accurate estimations of the size of capital, sales, profits and other vital figures of DY and other privately owned businesses are unavailable. For tax reasons, informants often tell me not to ask about these figures as a condition for interviews. I can only roughly estimate these numbers from very limited information the informants disclose. For example, although DY has only registered NT\$ 50 million of capital equipment with the Industrial Development Bureau, its current production equipment, according to the information provided by Mr. Lin Lisheng, must have a value between NT\$ 100 million to 150 million.

¹⁸ Computer numerical control (CNC) machine center is essentially a computer-guided milling machine with an automatic tool change device. It can perform multiple cuts in one setting, with a program code that is either written line by line or generated with a CAD/CAM (computer-aided design/computer-aided manufacturing) program. Since its introduction to Taiwan’s machine industry in the mid-1980s, it has become the workhorse for shops doing tool-and-die making or small- to medium-batch production.

business languages used in Taiwan: Mandarin, Taiwanese, Japanese and English.

The sexual segregation of work was obvious. All shop-floor technicians, salespersons, and most of the design team were male, while the office staff and the “low-skilled” assembly workers were mostly female. On the other hand, the class and stratum distinctions between management and workers and between production and office workers are more obscured. From the company president down, all workers were issued blue denim short –sleeve uniforms with the company’s logo on the breast pockets. The managers wear uniforms more often, and the president himself put on suit and ties only when he went out for formal meetings. Lower-ranking workers sometimes wore their own clothes, but even those were mostly inconspicuous casual street clothes—polo shirts and slacks for men, for instance. Business suits are totally absent even among office workers and salespersons. Contrary to the bureaucratic military, the civilian factory conceals hierarchy in its appearance.

The main products proudly displayed in the glass cases in the company’s conference room were precision high-strength plastic parts. In the previous decade, one of DY’s production foci had been making parts and components for lawn mowers, leaf blowers and other gardening implements bearing the brand name of a small Japanese company. With this experience, the company was now seeking to develop more in the way of design and manufacturing of the kind of small internal combustion engines used in those machines. In early 1998, DY acquired a contract to make air-cushioned shoe soles for Nike. As a result, it planed to expand its production facility and hire more workers—possibly migrant laborers from Thailand.



From appearances, DY could be viewed as a small but fully equipped and vertically integrated company, capable of turning out plastic parts from concepts and raw material. Figure 3-1 illustrates the work process of DY's plastic part manufacturing. Almost every step can be done in-house by DY's own employees, with its own equipment.

However, Mr. Lin cautioned me not to be deceived by the neat appearance of his company. The real business was much more muddled with complex human relations. First of all, the various

departments did not always function as sequences in a chain. The mold shop did not only build molds for in-house use, but also for many outside customers. The injection shop also used molds built by outside contractors, and sometimes did injection jobs for other companies. The design shop sometimes drew drafts and wrote CNC program codes for other companies. And the job of the business office was not only to seek customers and subcontractors for DY's production, but also to act as a distributor for its big customer--the Japanese garden implement company. Even within each shop, the various machines were not organized as a straightforward production line. The mold shop, for instance, contracted out a lot of the machining processes to outside contractors, and sometimes subcontracted processes from other mold shops. In addition, the sub-assembly room located at the back of the factory with a workforce of seven women assemblers was an operation of another company independent of DY. DY simply "leased" this workforce from outside for the duration of a project.

The real division of labor in DY was not vertical, but horizontal—on a project-by-project or "customer-oriented" basis as the workers called it. Every salesperson was responsible for a set of customers, and every senior production or office worker also had his or her own circle of acquaintances as clients and subcontractors. The production schedule for an order acquired by the company was planned by the person responsible for that customer in conjunction with senior workers in other departments, and approved by managers. In good times, the orders at hand almost always exceeded the company's own capacity. Therefore, production planning involved not only filling every possible space in the company's own time, labor force, and machine capacities, but also seeking out available capacities of allied companies and workshops. Other companies in the business also did the same thing, and DY took in orders which overflowed from its business partners' capacities too, as a matter of reciprocity. The business ties, at least between local companies of comparable sizes, were never one way.

Even by the formal procedure of the company, each project at DY involved rearrangement of the work organization and a series of maneuvering of personal connections. For example, if a

salesperson acquired an order for a batch of plastic part from his customer, he would enlist the support of several coworkers from different departments for the project. The mold technician in the project would, in turn, seek an array of his acquainted subcontractors to perform the various machining processes on the mold. An injection machine operator in cooperation would try out the mold, together with the mold technician and a representative from the customer. The salesperson would serve as a liaison between the in-house technicians and the customer. After the trial succeeded, a production planning person would schedule the injection and subassembly operation, in cooperation with the injection machine operator. This step often included subcontracting part of the job to other injection shops or hiring temporary workers to do the subassembly. After the order is filled and passed the quality assurance, the salesperson, who often doubles as customer service representative, would arrange for the shipment to the customer as well as the means of payment. Yet each one of the core employees might play the role of the salesperson, if one of his or her acquainted clients decide to buy from DY. He or she might also come to manage some subcontracting relationships if DY need the service of one of his or her acquaintances. In addition, whoever got the order from his or her customer was responsible for seeing the whole production through various stages. Chapter 5 of this thesis provides further discussion of DY's project management in the context of its conflict with the lineal model used by most Western corporations.

In this business situation, every senior worker at DY, including women officer workers, worked almost like an independent craftsman, responsible for the whole process--from receiving orders to delivery of products. Yet, different from a typical craftsman, he or she did not perform all or even most of the labor necessary to make the product. Instead, the senior workers actively enlisted and coordinated the labor of a circle of coworkers and business associates into the process. This circle was reorganized constantly with shifting orders and products. Maintenance of interpersonal relationships, therefore, was as vital to successful work as an individual's technical skills. As a result, the company appeared less as a command-and-control machine and more as an

amalgamation of craftsmen and a mutual support mechanism for every craftsman's own work.

Development of work skills was one of the most important concerns of workers and managers alike. DY's business associates, subcontractors and former employees credited it with its excellent environment to nurture diverse skills. Take for example the making of an injection-mold technician. DY did not hire often, as its turnover rate was fairly low. Many of the mold apprentices were graduates of the Xinmin Vocational School, hired through the recommendation of Mr. Lin's former colleagues at the school. New recruits were generally well-trained in conventional metal-working skills, such as bench work, lathe work, and milling. The mold-shop foreman would assign a new worker a mentor, and let him work on mold machining and assembly jobs. After months of "breaking in" on the job, he would be encouraged to study more in-depth knowledge about injection molds as well as the operation of all machines on the shop floor. The company kept a small but well-selected library of technical books, manuals, and notes compiled through the years by its own workers. As the new worker participated more and more in mold testing and altering jobs in cooperation with the injection shop, he would learn from the injection workers the intricacies of plastic work. The complex combinations of temperature, pressure and plastic mixes all had to be taken into account in the design and production of molds. Through working with the design staff, he also learned how to best utilize the computer technologies at hand. Finally, after his skills were recognized by his mentor and the foreman, he would be given "a job of his own" and would take responsibility for the production of a mold from concept to its final installation for mass production. His apprenticeship ended at this moment, upon which his colleagues would start calling him "*sai-hu*," master. Then, his assignments would gradually upgrade from the simplest mold to the more complex ones.

Training of core employees who stay for more than three years took on another dimension after apprenticeship: from specific work skills pertaining to each job, to a comprehensive mastering of the whole business. DY's president Mr. Lin stated that there were six major areas of skills that he hoped his managers and workers could develop on the job: work skills, interpersonal

relationships, foreign languages (English and Japanese), work ethics, administration, and product development. In other words, he expected every core employee to become capable of handling all aspects of a project, regardless of his or her job title.

This ideal was not very far removed from reality, at least among the senior employees. During my interviews with five of DY's senior employees, the two shop-floor foremen could explain well to me not only the technical intricacies of their own work, but also estimation of product profitability, market prospects and administration procedures such as accounting and production planning. They also understood both English and Japanese terms of the trade, in spite of their limited formal education. The injection shop foreman, Mr. Zhang, had only junior-high-school level education, but he had compiled an English-Japanese-Chinese technical dictionary with the help of his colleagues. Furthermore, salespersons and office workers also had good understanding of the shop floor technologies. Additionally, the sexual segregation of work did not prevent women workers from acquisition of technical knowledge. An office worker, Mrs. Li in the production planning section, could clearly explain to me the processes of mold building and injection, and the common problems shop-floor workers might encounter in their work as well as the business situations of the customers she was in charge of. Such comprehensive knowledge came less from formally designed training and more from daily work experience.

The most important channel for exchange and enrichment of knowledge was business transactions with various associates and clients. In the case of the injection-mold maker, in order to build a mold, he often had to haul the work piece around town to an array of independent workshops, and visit the contractors from time to time to inquire about the progress of the jobs. A visit to a workshop was never a short and businesslike session. Instead, the workshop owners always served tea, and clients from various factories could meet and chat about issues ranging from the newest technology, lore of the trade, politics, to family matters. DY's chief mold maker, Hung Chengdian, said:

Running around outside (*tsáo gua-kháo*, visiting various workplaces) prevents us workers from becoming dull and ignorant. We improve ourselves by seeing how other people and all

kinds of machines work. School can only teach you so much. You can of course learn by doing, but that too can only let you know a little compared to the vast knowledge this business requires. Every apprentice should be given a chance to run around by himself. (970913)

Not everyone working for DY was exposed to such ample learning opportunities, only a group of 20 to 30 core workers, out of a total of some 40. They included the shop-floor technicians and the white-collar workers, but not warehouse or subassembly workers who were usually temporary. They were remarkably uniform in terms of social background and age. Most of them were from local working-class or farm families, graduates of vocational schools or junior colleges, with ages ranging from 25 to 40.¹⁹ Some processes in DY's production of plastic parts, such as the parts subassembly, packaging and material handling at the warehouse, were regarded as low in technical, administrative or human skill requirements. Workers on these jobs were generally older men and women or young teenage work-study students; their jobs were considered temporary. In addition, as previously mentioned, the subassembly process was contracted out even though the work site was within DY's facility. The company president, Mr. Lin, explained that, in the mid 1980s, he once believed that he should establish a full production line, and he hired as many as 90 employees. However, partly due to the fear that a large workforce would bring about the problem of unionizing, but mostly because he could not afford to maintain a large overhead cost in the face of a fluctuating market, he decided to cut down to an absolute minimum workforce, and to contract out whenever possible. With this bare-bone structure, he believed, he could afford to establish good relationships with every one of the core workers, as well as meeting the market demand in the most efficient way.

The comprehensiveness of the core workers' range of skills and participation in work processes inevitably raises a question. If every core worker was capable of managing the whole work process, why did he or she remain at the status of wage employment instead of taking the

¹⁹ The president's own daughter is a member of the production planning staff and his son, with a master's degree in mechanical engineering, works as a salesperson. Yet, according to the president himself and other workers, they do not receive any special treatment at work.

business into his or her own hands? One answer to this question is that many employees actually did go out and establish their own workshops or companies. The president himself, like many other Taiwanese small employers, encouraged such moves. Maintaining relationships between equal business partners is much easier than ruling over ambitious subordinates. The demand for the company to remain lean also required constant outflow of personnel. Former employees often remained on good terms with their former employer and coworkers, and even subcontracted work from the company. This outward movement of workers is instrumental in establishing the “federation of enterprises” that Piore and Sable praise in their model of flexible specialization. (1984) However, employer’s desire and economic necessity do not fully explain the situation. Many workers did choose to remain in wage employment. How do they resolve the apparent paradox of their skillfulness and subordination is a more interesting question, one that requires an understanding of the capitalist hegemony in contemporary Taiwan. I shall further explore this issue later in this chapter.

The company president Lin Lisheng’s leadership over the amalgamation of autonomous craftsmen under him is in interesting contrast to commonsense understanding of the social structures in typical capitalist enterprises. Rather than a despot wielding absolute property rights, he is more like a “village headman.” While he owned the company’s property, had the unquestionable authority to hire and fire, extract profits from his employees’ work, and was always addressed by the honorary title *Dongshi Zhang*, Chairman of the Board, he seldom interfered with the daily production and business activities of his employees. Each core employee managed his or her own projects with his or her customers, albeit with the cooperation of coworkers and with the company’s production capacity as the most essential resources for the projects. The role of the boss, thus, resembles that of a landlord and village headman. He provided essential means for the workers’ autonomous productive labor, and arbitrated between workers whenever they have problem coordinating with each other. This latter role of arbitrator was further strengthened by the fact that most of the core employees were taught either by Mr.

Lin himself or by his colleagues in the vocational school and thus bonded with him in a teacher-pupil hierarchy.

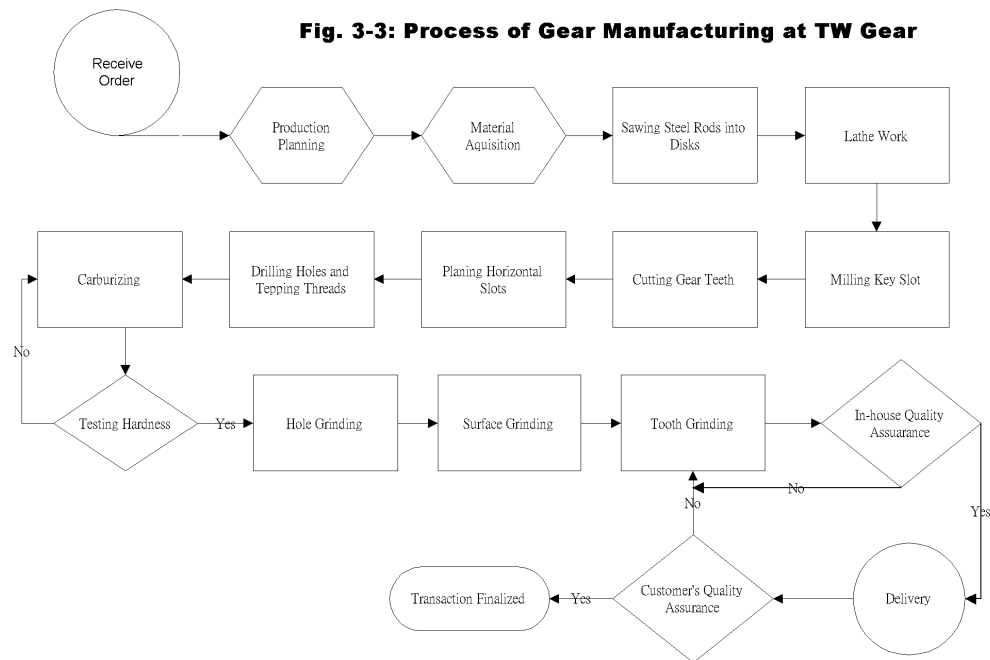
DY Enterprise's resemblance to an amalgamation of independent craftsmen might well be a result of the centrality of craftsmanship in its production, especially in the one-of-a-kind mold making. The machining trade in the Taichung area often classifies machining jobs into two kinds: *óat sit-á*, the "live" jobs, and *tsuan-mûn sit-á*, the specialized or "dead" jobs. Mold, tool and die making, and prototype production belong to the former, and large-batch parts production belongs to the latter. The "live" job workers are considered more skillful and therefore more autonomous. From Mr. Lin's reluctance to present his company as representative of Taiwan's machine industry, one can discern his understanding that the high autonomy of his workers is unique in his kind of business. The companies doing more specialized jobs may have more "modernized," i.e. Fordist, management systems. However, the case of TW Gear, to which I will now turn, indicates otherwise.

3.3 TW Gear: Village in a Corporation

TW Gear Industry Inc. was established in 1971 with only one milling machine and two workers. It was acquired by the largest machine tool maker in Taiwan, Victor Taichung Machinery (VTM), in 1986 and became a subsidiary of this famous indigenous firm. After the change of ownership, it moved from South Taichung to its current facility in the Industrial Park. As of 1997, its posted capital size was approximately US\$ 4.7 million and its sales were estimated at around NT\$180 million (around US\$ 5.6 million at the exchange rate prevailing at that time). These as well as many other figures and innovative management projects were publicized because the parent corporation is a publicly traded company and TW's own management was looking forward to going public by itself in order to catch the then rising tide in Taiwan's stock market. It advertised a product line including spur gears, sprockets, helical gears, timing belt pulleys, and motorcycle and ship gearboxes. Yet TW's main business was in the

machine tool industry. Company management estimated that it produced about 80% of the total gear supply for Taiwan's machine tool makers and its regular customers numbered over one hundred. In TW's history, the major competition came from Japanese gear makers. Even the parent corporation still buys gears from Japan to this day. Yet one competitive advantage TW held firmly was that it could customize and alter its products through close interaction with local customers.

Dwelling mainly in the machine tool business, TW held precision as its utmost concern in production. Machine tools are at the technological "upstream" and set the highest possible quality standard for the rest of the machine industry. No machine part can have a degree of precision higher than that of the machine tools used to make it. Previous fieldwork in Taiwan's machine tool industry (Lin, 1996) points out that the machine tool makers depend heavily on manual skills, such as that of adjustment in assembly and "scrapping" (achieving higher surface smoothness by manually chipping off excess material on the surface of a work piece). In TW's production, the final grinding of gear teeth was regarded as the most important gate-keeping step to correct the imperfections occurring in previous processes and achieve the desired precision. Figure 3-2 illustrates the process of gear manufacturing at TW.



Another great concern of TW's management was flexibility or "agility" of production. Being on the upstream of the industry made high flexibility an absolute necessity. Demand for TW's gears depend on market demand for machine tools, which in turn largely depends on demand for production machinery, with the latter further depending on the shifting and fluctuating demand for manufactured products of all kinds. Therefore, contrary to the common sense that incorporation into the corporate structure would necessarily bring a workplace's labor process into the corporate bureaucracy (Burawoy, 1984), TW's business conditions remained virtually identical to that of smaller independent suppliers. Similar to the case of DY, TW took orders from a wide array of customers in addition to its parent company, and subcontracted processes to a myriad of outside firms. During the 1997-1998 period, most of TW's orders consisted of small batches ranging from 30 to 50 gears each. As a result, the production line was being constantly reconfigured on a project-by-project basis.

The combined requirements for high precision and flexibility virtually made every job a skilled trade. In 1997-1998, TW had around 60 employees, 46 of them were shop floor workers working in two shifts. The shop floor workers consisted of 10 work-study students from the

Taichung Vocational Training Center--a high-school -level and continuing-education school established by the Ministry of Economic Affairs (MOEA)--in the Industrial Park, and around 15 migrant workers from Thailand. Usually teenage and migrant workers are regarded as low-skilled and suitable only for routine operations. The government regulations on employment of migrant workers even specifically indicate that they can only be hired on low-skill positions that are deemed undesirable by local workers. Yet at TW, although the teenage and migrant workers were all nominally working on routine production, the real content of their work required as much knowledge and skill as that of any independent craftsmen.

3.3.1 The Village of Precision

My account of the labor process at TW is centered on its gear grinding section. As mentioned above, gear grinding is used as a gate-keeping process to achieve precision. It was therefore regarded by the management as the center of the company: the most capital- and skill-intensive part of the factory. All other processes could be contracted out, but grinding was always done in-house. In addition, as TW's plant manager indicated, the shop floor personnel held such a strategic position that the quantity of the company's products was practically determined at the shop floor, rather than by the sales or production planning departments, as it would have appeared according to the formal structure. (971014)

The social center of the gear grinding section was a small room in the center of the shop floor that houses the computerized gear profile measurement machines. This was the only air-conditioned space on the hot and stuffy floor and was favored by the workers as the gathering place for a little relaxed chat when their machines were running by themselves between loading and unloading. Computer printouts of the profiles of the gears they were grinding were the focus of most of the talks. A printout shows the actual profile and surface roughness of the gear tooth and superimposes them against the blueprint stored in the system. The Thai worker Buraskorn, a perpetually cheerful character on the shop floor, liked to wave his printouts to coworkers and

happily announced “Beautiful! Beautiful!” with his limited Mandarin. The measuring machine operator Fu Yuwen, a work-study girl, in turn, liked to thumb her nose and reply “Ugly! So Ugly!” and everybody around would have a good laugh. Sexual segregation of work at TW, as in most Taiwanese machine factories, is strict. The “dirty” machining jobs are definitely in male territory, and the only woman on the shop floor is the measuring machine operator, whose job is relatively “clean.”

The beauty of a precisely made gear is not easily appreciated by untrained eyes. The shop foreman, Zhang Lianxing, taught me to take notice of the uniformity of coloring on the surface for hints. Yet I could only identify the crudest defects this way. Computer printouts help greatly in finer visualization of the aesthetics of precision, as a deviation on the scale of a micrometer (μ) makes much difference when viewed on the magnified curves. Cruder gears can be examined with a hand-held micrometer caliper, and the most commonly used unit, as in the rest of Taiwan’s machining trade, is “tiau”-- 10^{-2} mm--indicated by the smallest division line on the caliper. Yet the ultimate test of the precision of gears is not assessed by means of the measurement of scales. As Zhang Lianxing explained:

In the production of most precise gears, we have to attach a computer printout with every gear. However, the customers, those machine-tool assemblers, don’t really care about the printouts. If we have an argument with them about the precision of our gears, they will simply put two gears together and run them at the designed speed, and listen to the noise together with us. If you can hear the noise at, say, five paces away, they will most certainly send the gears back. Of course we often argue that we cannot hear the noise during the test. So we use a decibel reader to determine the loudness. In addition, the quality of noise is important. If it sounds smooth and pleasing, it’s OK even if the decibel reader reads a little bit high. I tell you . . . Sometimes, it is really heart wrenching to see your gear being scrutinized this way. (971014)

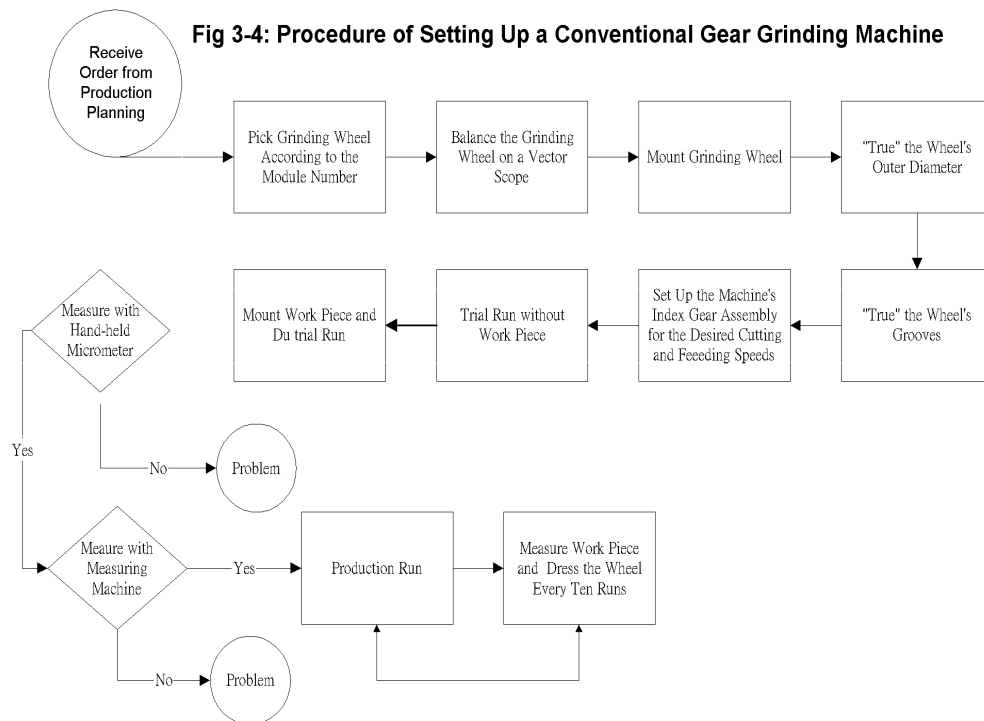
Pride in the beauty of their product is not the only reason why grinding machine operators pay much attention to precision. The wage system at TW was another important factor. Shop floor workers typically worked 12 to 14 hours on the day shift and 10 to 12 hours on the night shift. The Labor Standard Law of Taiwan specifies that work hours beyond the regular 8 receive time-and-a-half of hourly pay and those beyond 10 receive double pay; night shift work also

receives special bonuses. At TW, in addition to overtime pay, another important part of the wage came from production bonuses which were determined by how well each worker met the production quota in terms of number of gear teeth per month; a larger gear with more teeth, for example, takes more time to process and was assessed accordingly. A worker's take-home pay consisted of a legal minimum wage plus adjustment by seniority (and a "leadership bonus" for foremen), overtime pay, and production quota. Among the determinants of one's pay, the only one which allowed for active pursuit of higher wages was the production quota, as one could only work so much overtime and could not change seniority or job title. However, as in the analysis of Parker and Slaughter on the American workplace (1995), TW's shop floor workers took quality much more seriously, despite the economic incentive for speed and quantity. The management, in turn, stressed more on quantity and often asked workers to stop nitpicking on the quality of the gears as long as the customers accepted the shipment.

Before engaging in the grinding process of each batch, the operator had to set up the machine and do trial runs and inspections until he got the desired precision. Setting up the machine was an arduous task involving many steps. In some situations, for instance when the fixture that holds work pieces was somewhat worn out and off-center, it might take a whole workday for the operator to try every possible combination of the parameters on the machine to get a successful product. Yet set-up time is not counted into the bonus system. Therefore, large-batch jobs were always consider "juicy" jobs and small batches an annoyance. In addition, even though a gear might pass the in-house quality assurance, if the customer sent it back, the operator still could not get the quota for that gear until it was successfully altered by him and accepted by the customer. Altering bad gears was an especially painful job. The returned gears were almost always in small batches of one and two. In addition, it usually took even longer than the first time to find the proper set up for these one or two gears, with the operator getting no production bonus for this job. Therefore, defective gears sent back by the customer were not only an embarrassment, but also a significant set back in the operator's pursuit of higher pay.

Although the production of a gear involves many people who might well be employed in many different factories and workshops, it is the grinding machine operator who is held personally responsible for the precision of the product. Yet, in reality these operators did treat their products in an almost identical fashion to the way independent craftsmen do, both in concept and in actual social interaction. They interacted directly with the customers and haggled over the quality of the products. While TW did have four in-house quality assurance workers, their main work was collecting statistical data on product quality to construct a bigger picture, while playing an intermediate role between unsatisfied customers and the grinding machine operators.

The operators' concept of individual responsibility for product quality is expressed in their highly individualized work practices. In 1995, the corporate headquarters hired a team of industrial engineers from a nearby university to design a "flexible manufacturing system" (FMS) for TW Gear. The most important feature of the FMS design was the new layout of the shop floor. Machines were now arranged into a U shape instead of a straight line. Along with the benefit of shortening routes for moving material, the FMS design report stated that the U-shape layout allowed each individual operator to work simultaneously on two to three machines. This was argued to be crucial to the productivity of the company, as there was often a 5 to 20 minute slack period between loading and unloading a work piece on the grinding machine. However, the projected effects of the U-shape design were never realized. During my fieldwork in late 1997 and early 1998, each worker still operated "his own" machine, and the shop foreman and managers hardly ever interfered with the work process of the operators.



TW had 11 gear grinding machines. One was a Japanese-made numerical-control (NC) machine, two were CNC machines made in Germany and Switzerland, and the rest were old Japanese-made conventional machines, ranging in age from 15 to 40 years. New workers were always assigned to old machines, while the NC and CNC ones were operated by the most senior workers and the shop foreman. The shop foreman explained that one has to learn the basics with the old machine, with the new machines being merely more accurate and convenient. Figure 3-3 shows the procedures of setting up a production run on a conventional gear-grinding machine.²⁰

Every step in the setup involved a set of manual, mechanical and mathematical skills. To balance the wheel, for instance, the worker would mount the 15-kg swirl-shaped grinding wheel

²⁰ Evidence of the individualization of the grinding work was seen in the alteration of machines. An old grinding machine on the floor had a servomotor and a complex switch box attached to it. According to the workers, it was the design of a previous foreman to automate the machine. Yet when that foreman left the company, nobody could figure out how to operate the apparatus, and the machine was now used manually only.

on a vector scope, let the machine rotate the wheel, and read a curve on a CRT screen. If the curve did not fall into a designated circle, he would knock on the balancing blocks of the wheel to balance it. On which block, in what direction, and how hard one needed to knock to get the desired curve on the screen was almost entirely a matter of personal experience. Another step, setting up the index gear assembly, required both mathematical and manual skills. The conventional machine relies on a series of gears to synchronize the movement of a work piece and the grinding wheel. The worker has to first determine the feed and cutting speeds of the wheel and the speed of the work piece's vertical movement according to the type of material, the number of teeth, and other factors. He then calculates the needed combination of index gears in the machine's gear assembly, takes out the previous set of gears, and puts in the appropriate gears. The calculation is difficult enough. When I tried to learn the setting up myself, it took me one full workday just to learn the formulas for gear combination. Yet the most difficult part is manually installing the transmission gears. A slight misalignment of the gear assembly could cause a slight error in the combination of cutting and feeding speed, which would then result in up to two *tiaus* of imperfection on the gear tooth surface, which will show up in the computer printout as an embarrassing bulge on the contour. Experienced operators could correct the problem by several knocks with a bronze mallet at the appropriate place on the index gears. All eight operators I interviewed regarded this as the trickiest part of their jobs, and they each took six months to one year to become confident in installing the index gears.

The combination of all the intricate steps makes the gear-grinding operation too complex for any contemporary industrial engineer or manager to accurately depict, analyze, and deskill. The production-planning department of TW did set a standard work time for each order of gears. This was calculated according to the number of teeth and the thickness of the gear, with other factors such as whether the gear was of special shape added in. In other words, it only accounted for the actual cutting time of a gear, but totally neglected the hopelessly unpredictable setup time. This phenomenon might be predictable in light of the general tendency of Taiwanese industrial

managers to refrain from direct intervention. More surprising, however, was that even the shop foreman did not like to intervene into other workers' jobs. This was in spite of the fact that Mr. Zhang Lianxing himself had twenty years of experience in gear grinding, 15 years of which was at TW, and knew more than anybody else the tricks of operating every gear grinding machine on the shop floor.

Although everyone on the shop floor, including the plant manager and the general manager who often came strolling up and down the aisle, called Mr. Zhang "*lâu-sai*" ("Old Master" or "Old Teacher"), he did very little of the actual training of the new operators. He was in charge of the newest and most accurate grinding machine himself, and spent most of his working day doing the grinding jobs that required accuracy beyond other operators' capacities. More inexperienced operators did need a lot of coaching and help in solving setup problems. This was mainly provided by the operators' direct seniors, and the foreman himself was the last one to be called upon for help. Mr. Zhang disliked solving the precision problems. As he put it, there were too many steps that might go wrong with the operator's actions or with the machine itself in the long setup process. And unless one was directly involved in the process from the very beginning, figuring out the exact problem with a setup was "like fishing for a needle in the ocean." Therefore, when a problem could not be easily solved, the teacher would often perform the whole setup procedures all over again with the pupil. This time-consuming teaching task was not accounted for by the bonus system. In fact, it prevented the teacher from doing his own bonus-earning work. Thus, the relations of teaching and learning on the shop floor were regarded as a matter of moral obligation of mutual help, which should surpass material incentives.

At least partly due to the importance of this moral foundation, workers organized themselves into groups with strong personal ties. These groups did not only function as the crucial mechanism for learning work skills and problem solving. In a larger context, they were also instrumental in the careers of the machinists.

3.3.2 The “Army of Sons and Brothers”

Unlike at DY, where every core worker, male or female, clerical or production, is treated as an autonomous crafts/businessperson, TW has clear factional politics on many levels. Workers on the day shift of the gear grinding section clearly divided themselves into two groups. The first group consisted of three Taiwanese workers: Lin Zhengyi, Chen Mingdung and Hu Xingrung. They grew up together in the village right next to the Industrial Park, and had been classmates from grade school to junior high school. After having graduated from vocational schools in 1993, they wandered through all kinds of construction and industrial jobs. Typical of young Taiwanese male workers before military service, they never stayed long on their low-wage jobs. Jobs were plentiful, as long as one did not ask for a living wage, and their families considered their wages merely pocket money—no need to contribute to the household budget. After military service, however, the now adult men were expected to settle down, earn enough money to pay part of the household expenses, and save for marriage.

Lin Zhengyi came to TW in 1994 and stayed on, as his early marriage prevented him from taking the risk of changing jobs. Chen Mingdung and Hu Xingrung teamed up and wandered from factory to factory together for another two years, and finally came to TW when they heard from Lin that TW’s grinding jobs offered the opportunity to obtain solid skills and stable careers. Both of them were trained by their classmate. Lin Zhengyi himself, in turn, had learned from the foreman, Zhang Lianxing. This group therefore regarded Zhang as their leader. Yet he was a somewhat detached leader, not only because he intervened infrequently in the group members’ work, but also because he rarely attended their after-work gatherings.

Another group consisted of four Thai workers ranging in age from 22 to 32. They all came from rural areas in Thailand, and were recruited through job placement agencies. At the time of my study, Wilai, the most senior of them had nearly three years of experience in the gear grinding section and was the leader of the group. Under the harsh regulations of the Taiwanese

government, migrant workers were treated almost like indentured servants.²¹ They were confined to company barracks after work, and allowed to go out only on Sundays. Even on Sundays, the Thai workers rarely went out in town because the hostile attitude of the Taiwanese public toward migrant workers made the outings unpleasant. Instead, Thai workers at TW simply spent most of their free time working to the maximum possible overtime. While Taiwanese workers also tended to do a lot of overtime, Thai workers did it consistently. Every day, the day shift worked from 7:15 AM to 10:00 PM, until the night shift took over, and the night shift worked until the day shift took over the next morning.

Yet another factor in the factional organization of the shop floor was the presence of the plant manager. The plant manager Lin Liguó had a plant-wide faction of his own. In the gear-grinding section, those who are considered Mr. Lin's men were mainly the young work-study apprentices from the Vocational Training Center, as he was also a graduate from the Center himself. Yet Mr. Lin also competed with Foreman Zhang for popularity among the Taiwanese and Thai operators. Like a senior worker, he wore a sleeveless T-shirt, chewed betel nuts, and swore while he talked. He also frequently asked workers about their work, although in a friendly instead of an inquisitive way. More than once, I witnessed Mr. Lin quarreling with Mr. Zhang in front of others. Yet the quarrels were hardly about work. Mr. Lin sometimes commented that his title of manager was worthless as Mr. Zhang made more money than he did. Mr. Zhang would become furious and pointed out that his NT\$ 70,000 monthly take-home pay was earned through hard work, and the "soft" managers only sat in the air-conditioned office and didn't know a damn thing about grinding. No matter what the reality was, such quarrels indicated that, more than anything else, leadership on the shop floor was legitimized with hard work. Associated with

²¹ Taiwanese businesses started hiring foreign migrant workers around 1986. This was gradually legalized by the government between 1989 and 1992, and regulated with a strict quota system. As of 1998, there were approximately 300,000 migrant workers. Being a relatively novel phenomenon in Taiwan, there has been few social studies on migrant workers. The most notable in-depth studies on this issue so far are two master theses, by Li (1995) and Wu (1997).

hard work was also masculinity and skillfulness. Official hierarchy by itself could not justify leadership.

The interpersonal relationship within groups, similar to that in the family, was more hierarchical than reciprocal, and the dominant hierarchy was seniority, which, in this context, is in the form of teacher-pupil hierarchy. Under the company's bonus system, to teach and to help a junior was a sacrifice of one's income. The junior operators felt that they owed their ability to make any money in the factory to the teachers who made such sacrifices for them. They could not really give anything substantial in return other than deference. The seniors, in turn, saw their helping the junior in terms similar to paternal obligations. Their seniors had done the same to them, and they had to take their turn and hand the skills down. Among the Thai workers, who were on three-year non-renewable contracts, such a quasi-lineage organization appeared very similar to that in the Taiwanese military, mentioned in the previous chapter.

Relations between the two groups were at the same time competitive and cooperative in that they competed for 'juicy' jobs, but also needed to help each other out in order complete some tasks. Although the Taiwanese group had the benefit of more frequent and easier communication with the foremen, the management, and the customers, the Thai group, with their longer working hours and little distraction from work, had established considerably closer affinity with their machines. Thus, when the Taiwanese workers could not solve a problem, and the foreman was too busy to intervene, they would appeal to the Thai workers, especially Wilai the leader, for help. In return, Taiwanese workers would put in some good words to the production planning staff, and helping the Thai workers get a decent share of juicy jobs.

Due to such working relations on the shop floor, the anticipated ethnic tension between Taiwanese and Thai workers was curiously absent. From the numerous horrendous news reports about the conditions of migrant workers in Taiwan, I had expected to see at least some degree of bigotry on the part of the Taiwanese workers. However, during my four-month fieldwork at TW, such bigotry was scarce. While some managers did show contempt for Thai workers by yelling at

them and whimsically ordering them to do chores outside of their responsibilities, Taiwanese workers almost always called their Thai colleagues “*sai-hu*,” master, a respectful term for skilled workers.²² While this phenomenon alone does not refute any report of Taiwanese racism, it at least indicates that skill hierarchy can out-rank ethnic hierarchy.

On the company level, the particularist groups on the shop floor became factions across all ranks of managers and workers in the factory. The two most notable factions were headed respectively by the general manager and the plant manager. When TW merged with VTM in 1986, the former owner and founder of TW, Mr. Chen Chauzung, was appointed as the general manager of the company and maintained substantial control over the company’s business. The corporate headquarters, however, hired a number of middle managers unrelated to Mr. Chen in order to check his personal influence. The plant manager, Mr. Lin Liguu, was the most influential one of the middle managers as he was in charge of 46 direct producers out of the total of some 60 company employees.

The competition between these two prominent figures on the shop floor was evident, but their approaches to power were quite different. Their “clans” also occupied somewhat different positions. While Mr. Lin had good control over the shop floor, Mr. Chen had better handling of the white-collar staff and outside contractors. The plant manager dressed and acted as close to shop floor workers as possible in daily work. In turn, the general manager, although of “Black Hand” origin himself, always wore a clean, white shirt while he walked the floor, and gave orders only in regard to the cleanliness of the plant—similar to an officer in the military. Mr. Chen also had personal financial investment in several of TW’s important contractors. One such contractor, TX Metal Inc.(TXM)--actually located inside TW’s building and almost exclusively handling

²² The only bit of hostility I could detect on the part of the workers was the following. Once a senior Taiwanese worker told me that he was worried that with such efficiency in learning, the Thai workers would eventually learn everything the Taiwanese knew and replace all the Taiwanese workers. Yet he did so only after dragging me outside of the shop floor. Apparently, he considered such a remark inappropriate in front of his colleagues.

TW's lathe work--was headed by Mr. Chen's relative and had his personal investment in its capital. In November 1997, TW opened a new product line of lathe cutting tool handles, and installed two CNC machine centers on the fringe of the shop floor. Mr. Chen's close associate, the head of TW's production technology section, Chen Qingzhi, handled this project. He took a CNC programming training course himself, did the programming and setup himself, and hired a migrant worker from Mainland China through the plant managers' friends to operate the two machines. Corresponding to this change, the company redrew its organizational chart, and put the cutting tool manufacturing in the "Second Manufacturing Department," and the rest of the plant in the First Manufacturing Department. In the shop-floor talks, this move was clearly intended to reduce the influence of Mr. Lin on production, by steering around his faction, while strengthening Mr. Chen's.

Mr. Chen's careful maneuver against Mr. Lin was not without good reasons. In February 1998, Mr. Lin left TW and established his own company, importing gears from Taiwanese factories in Thailand. Along with him, twelve middle managers and senior workers quit and went to the new company. In an extensive interview with me before his resignation from TW, Mr. Lin explained his move to be in accord with the ideals of Taiwanese businessmen. His view was echoed by other unrelated informants in the trade. "Raising your *zidibing* (literally, "army of sons and brothers") is the key to success," said Mr. Lin. (971119) By this he was referring to a close-knit group that would follow the leader from one company to another. The "army of sons and brothers" are recruited through one's own circles of relatives, schoolmates and students, and friends. In his case, the majority of them were from the Vocational Training Center, which he regarded as an alma mater.

Mr. Lin Liguó believed that a working man has to go through three stages in his career life. After exploring various possibilities, he first settles down in one career at 25. From 25 to 35, he learns all the skills and knowledge necessary for the trade, while preparing his "army of sons and brothers." The decade between age 35 to 45 should be the period in which one establishes his

own business. The established man defends his position from age 45 to 55, and then hands it over to his younger sons and brothers. He himself, being at the mid 40s, was already a little bit late in the ideal career path. Yet he had prepared himself through previously working for ten years in a Japanese company and five years at TW, becoming acquainted with all the branches of the business, and accumulating a substantial army of sons and brothers. He was now ready to launch toward the next step.

Raising one's army of sons and brothers is a complex, full-time task. Similar to his cousin, Mr. Lin Lishang, Lin Liguó had a comprehensive training program for his loyal subordinates. Beside exposing those whom he considered sons and brothers to multifaceted learning opportunities, he was also responsible for acquiring reasonable wages and prospects for advancement for them, giving them "spiritual encouragement," and socializing extensively after work with them. To achieve the last task, he regularly took his army of sons and brothers out for singing at karaoke bars or for bowling games. Only after years of painstaking cultivation of such relationships could he be assured that when he moved out of the company, his own army would follow.

To some extent, the army of sons and brothers is similar to the patriarchal clan in a traditional village, but it is different in important respects. The faction leader thinks and acts like a patriarch. He takes the paternal responsibility for the welfare of his junior clansmen, and aims at wielding the whole clan into a single force which can confront the versatile market collectively. There is no boundary between the group's economic and other activities, and the connections among members are ideally as holistic as possible. Yet, unlike a traditional clan, in which members are bound by real or assumed blood ties and their loyalty is taken for granted, the army of sons and brothers in today's Taiwanese industry has a more tenuous foundation for membership. Thus the ties of members with such clan-like hierarchy need to be constantly reinforced. The "petty-capitalist" patriarchy is reproduced within this modern corporate setting, but with addition of some more uncertainties featured in modern capitalist market relations.

3.4 Earth God of the Company

Both DY's and TW's social organizations were closer to a traditional village than a family. At DY, Mr. Lin Lisheng's ownership of the whole company did not make him a family patriarch for all employees. Instead, his role was more akin to a local landlord and village headman, with the employees being analogous to tenant farmers. He controlled vital resources—money, productive assets, etc.--for the direct workers' production, while the latter worked independently. At TW, the corporate owner was far away and the control over business was contested. The competing factions organized themselves and maneuvered against each other in a manner not unlike that of traditional clans. In both cases, the organizations and ideologies borrowed from the traditions were in the form of multiple lineages, instead of a single, homogenous one. Corresponding to this village-like social formation of the factory, the patron god installed at the factories was Tudi Gong, the earth god or locality god, who is traditionally worshiped collectively by a hamlet or neighborhood, instead of one single family.

Tudi Gong has long been an object of fascination for ethnographers of Chinese societies. As the lowest functionary of the celestial bureaucracy, Tudi Gong presides over the community of the smallest territorial unit. He holds the title of Fude Zhengshen (Fortunate, Virtuous, Upright God) and is in the form of a white-bearded old man, often accompanied by his matronly wife at their small shrine under the hamlet's biggest tree. Human petitions to the celestial bureaucracy usually start with Tudi Gong, and community people report to him both large and small things—planting, harvest, birth, death, marriage, boys leaving for military service, etc. His amicable appearance is deceiving, however. Contradictions between the local community and the imperial bureaucracy play out in the ambivalent relationships between humans and Tudi Gong. His position is often described as resembling that of the chief of the local police station, who has two functions: “to police the [ghosts] and to spy on the affairs of his human charges, keep record of their activities, and report regularly to his superiors.” (Wolf, 1974: 139) As in a bureaucracy, Tudi Gong inhabits an office which can be occupied by different incumbents. The spiritual

categorization of Tudi Gong is dubious. Dominant interpretation has it that the office is filled by men “who did good deeds while they were alive.” (Martin, 1981: 93) On the other hand, he is often categorized with ghosts, as common folks regard policemen, who represent the most powerful machine of violence—the state, as being the same as bandits, who also provide protection for a fee. Such a bully-like figure is nevertheless shelved into passivity by the worshippers and converted into an amicable, smiling old man sitting stately in his little shrine, and adorned with the title “Fortunate, Virtuous, Righteous God.” (Gates, 1996: 166)

Unfortunately, perhaps because of the ethnographers’ tendency to seek in their work the image of a traditional China, the role of Tudi Gong in modern industrial Chinese societies has received virtually no attention thus far. One of the most surprising facts that I found during my field work is the prevalence of the worship of Tudi Gong throughout the industries in the Taichung area and the extent to which this god was disassociated from local communities.

Both DY and TW had altars for Tudi Gong: DY’s was located in the main office and TW’s at the entrance of the shop floor. Yet, unlike in the traditional village, where the establishment of an office for Tudi Gong duly follows the procedures of the celestial bureaucracy, DY’s and TW’s Tudi Gong were both simply bought at stores selling ritual supplies, and initiated by the store owners who doubled as lay Taoist ritual specialists. This practice was common to all the companies I visited. In addition, none of the companies who had their own Tudi Gong participated in the annual rites at local Tudi Gong shrines. The traditional territorial meaning of Tudi Gong seemed to be ignored.

When I asked about the reason behind the apparent departure of the treatment of the company Tudi Gong from the traditional territorial Tudi Gong, neither Mr. Lin Lisheng of DY and Mr. Lin Liguu of TW could offer any answer. Nor could they talk about the origin of company Tudi Gong. They both stated that this has always been the way business deal with folk rituals in their premise from time immemorial, and only ritual specialists know the “theory,” that is, clear meanings, behind the practices. Neither could older workers in either factory provide

coherent interpretations. Zhang Xingping, the injection shop foreman at DY describe himself as a “firm believer of the efficacy of Tudi Gong.” Yet even he could not help me on the meanings and origins of the modern ritual of company Tudi Gong. Instead, he suggested that I seek a ritual specialist for answer. (970914) As so numerous ethnographers on Taiwan have reported, most followers of Chinese folk religion prefer to leave the meanings implicit even when they rigorously engage in the practices. This way, there are always possibilities of multiple levels of readings and interpretations suitable for different occasions and different individuals. (Martin, 1981b; Weller, 1987a, 1987b; Gates, 1981)

From previous anthropological interpretations, one can deduce a hypothesis that the companies regarded themselves as independent territorial units outside of the locale, and thus is entitled to an independent Tudi Gong. This explanation is feasible as, even in traditional villages, territorial units corresponding to the parishes of Tudi Gong are also often defined by economic and technological factors, such as irrigation projects. (Sangren, 1987) This hypothesis explains the fact that once a company acquires a Tudi Gong of its own, its owner and workers stop going to the local Tudi Gong shrines for worship. In addition, this corresponds to the village-like social relations inside the firm. Yet further study is needed to examine this hypothesis.

The only explicit explanation about the spiritual origin of company Tudi Gong came from Lin Kunsheng, the owner of another independent workshop, HJ Precision, and it is astonishingly capitalistic:

Perhaps this Tudi Gong is no different from all other wandering souls. When *lau-su* (Old Teacher, referring to the lay ritual specialist) came to initiate the image, he recited some mantra and pointed at the image. At that moment, a soul was trapped in the image and became our Tudi Gong. He took responsibility for caring for this piece of property in return for our respect and regular offerings. He will reside here as long as we take proper care of him. (980314)

In other words, the company’s Tudi Gong is like a spiritual hired hand, employed from an open labor market and working for the company’s fortune exactly like other employees. This is not so radical a shift as it might seem, because the ambivalent role of Tudi Gong, as a ghost

(wandering individual outside hierarchy) and as a god (office holder in the hierarchy) has already been present in the folk tradition in the first place. The capitalistic conception merely takes what was a subaltern meaning in the tradition and puts it in the forefront. Whether the capitalistic Tudi Gong still possesses the quality of being celestial policeman, like he is in the traditional village, to be both protective and inquisitive is still left unexplained. Yet, he does have the protective power of a patron deity similar to that of Mazu on the ship. Zhang Lianxing explains that the main effects of the worship of Tudi Gong are that: “machines will be docile, bad lucks will be kept away, and disputes [among coworkers] will be softened.” (970914)

Similar to the village Tudi Gong, the company Tudi Gong also receives worship and offerings on the 2nd and 16th of every lunar month, from every “household” of the community. However, unlike the fortnightly worship of Mazu on the ship, which takes place on the 1st and 15th of the lunar month, worship of Tudi Gong in the machine companies was not participated in by everyone. At DY, all core workers—shop floor technicians and white-collar workers—and managers offered incense at the ritual, but the peripheral and temporary workers did not. At TW, only the managers and foremen, who were also considered faction leaders, offered incense; all other workers simply ignored the ritual. This coincided with the fact that worship of communal gods such as Tudi Gong in the traditional village is usually done by household units instead of individuals. Each core worker at DY functioned as an independent “household,” while at TW the household metaphor was translated into larger factions headed by foremen and managers.

Another aspect of the worship of Tudi Gong in machine companies that coincides with the traditions is that Mr. Chen Chaozung and Mr. Lin Ligu, leader of the two major contending factions at TW, competed in the rituals. On the afternoon of the worship days, the secretaries at the office would prepare the offerings and incense for the ritual. Then, if the two leaders appeared simultaneously at the ritual, Mr. Lin would yield the privilege of offering the first incense to his superior. Yet in four out of six such rituals that I observed, Mr. Lin dropped all other business at hand and came to the altar ahead of Mr. Chen, so that he could offer the first incense. In the

traditional village, the honorary position of the heads of worship at communal temples, called *Luzhu* (*Lô-tsú*), lord of censer, always shifts from one household to another. For most low-level temples, such as the Tudi Gong shrines, such shifts are on a rotation basis. Larger temples, however, often have a bidding system by which powerful clans compete for the honor. In this regard, the factional competition at TW was carried over from the realm of production to the realm of ritual.

3.5 The Class Demarcation

“I estimate that I myself have created no less than three million dollars worth of profits for the boss through the years. Of course I don’t get that much wages back, but it’s all right. I take pride in this fact. I make money for the boss; the boss spends the money I make. Anyone can spend money, but making money is not so easy.”

--Zhang Xingping, Injection Shop Foreman of DY (970914)

In late Imperial China, the state bureaucracy operated the tributary system and extracts surplus from direct producers in the form of taxes, levies, and rents. The tribute-paying commoners, in turn, organize their productive labor in a petty-capitalist mode—encompassing the bureaucracy’s hierarchical order in the patriarchal hierarchy inside the households, but engage in market exchange between patriarchal households. The contradiction between these two great classes defines the primary site of class struggles in that era. Such struggles lingered and are reflected in Taiwanese folk culture to this day. The last chapter explores one of the sites where the state-commoner contradiction still lived. In the civilian factories in post-authoritarian Taiwan such as DY and TW, the shadow of the Imperial bureaucracy was now hardly traceable—except in the form of the company Tudi Gong in his mandarin hat. But even the Tudi Gong was now susceptible for being degraded from a celestial policeman to a spiritual security guard.

In the absence of the mandarins, hierarchy among people disappeared from plain view. In the factory, managers wear workers’ uniform or T-shirts, and workers perform much managerial functions. Both groups spoke the same language and engage in the same rituals. Does this mean the elimination of class distinctions? Yet how can this be true in a capitalist enterprise where exploitation of the direct producer by the property owner is the rule?

Earlier studies on Taiwan often indicated that this appearance of equality among the commoners was at least partially true among men. While there had always been exploitation in wage employment, for individual workers, especially the male ones, such a state of subordination was transient. They would eventually take things into their own hands in due time, just as every young man would inevitably escape from the oppression of his senior by simply growing old and becoming a patriarch himself. Wage employment, according to such a view, is merely a transitory experience by which workers accumulate sufficient money, skills, and connections to open their own family business. Indeed, Gates (1996) argues:

The newness of large-scale industry in Taiwan, the pattern of individual movements into and then out of the wage-labor work force, and the relative ease with which families can establish small businesses makes the distinction between petty capitalist and proletarian an extremely permeable one. It remains more an analytical device than a sharp line of objective demarcation; subjectively, there is little that could be described as class consciousness to separate the two. For some purposes, it is appropriate to lump those who labor on their own or others' small capital as "working class." (226)

And this is exactly what she does in her ethnography about the 1970s Taiwanese petty capitalist class *Chinese Working Class Lives: Getting By in Taiwan* (1987). For her, the petty capitalists *are* the working class in various stages of their lives. If this characterization of Taiwanese workers as "transitory proletariat" is correct, the acquiescence of workers toward capitalist authorities is easily understandable. While workers may be fully aware of the fact that they are exploited by the employers, they also realize that they are gaining the essentials for their future career as independent petty capitalists. In this situation, the acquiescence of workers toward employers' authority can be explained with a two-fold rationale. On one hand, the benefits from wage employment are mutual. The employer gets the surplus value, and the workers gain tickets to the trade in return for being temporarily exploited. On the other hand, since the worker will eventually become a boss himself, he had better not rock the boat, because he will have to rule over other workers one day. Class is reduced to a matter of seniority.

However, in my field work, while finding numerous traces of such a conservative ideology, I also found among workers anxiety, resignation and many other novel attitudes toward the fate of

wage employment, such as Mr. Zhang Xingping's cited above. When I asked the question: "Do you plan to open your own business in the future?" the answers I got were always full of complex emotions. On one hand, owning one's own family business was undoubtedly still an ideal for most male workers. On the other hand, in the 1990s, many workers simply cannot envision themselves on the path of "upward" class mobility any more. Thus, Mr. Zhang Xingping gave me his words of wisdom. Mr. Zhang Lianxing, TW's foreman, replied, irritatedly, "Can't you see I chose the wrong specialty? If I were a lathe worker, I could easily buy a lathe for myself. But when can I ever save enough money to buy a CNC gear grinder?" Mr. Hung Chengdian, DY's mold shop foreman, said in a sad, self-depreciating tone, "I am a useless man. I'd rather not taking any risk."

Not all workers had given up aspirations of becoming independent shop owners. In the following chapter, I will describe a series of cases of small workshops. Most of those workshops were founded later than 1990. Some had tried and failed. At TW, a famous case was a Mr. Lin Mausheng, a senior machinist in his late thirties. He left TW in 1993 after ten years of service and opened a workshop in partnership with his high-school classmates. Yet, fatefully, his shop went bankrupt three years later, and he came back to TW. Because of this gap in tenure, after his return he was still a shop floor operator, while other people with comparable seniority had already been promoted to foremen. He was regarded by fellow workers as a courageous man despite his ill fate. Becoming truly independent is, after all, what a real man is supposed to do, within the petty-bourgeois ideology of the machinist. At DY, the owner Lin Lisheng stated that he always encouraged ambitious employees to go out and open their own businesses. He would even consider financing the start-up companies in order to maintain good relationships. Yet he would hesitate to take back former employees. As an old saying goes, "a good horse does not eat the grass in its beaten path." Courageous though it may be, but a failed adventure out of the working class does have its costs.

When asked about future prospects, younger workers below the age of 30 at TW and DY

almost invariably replied, very straightforwardly, that they “did not have any plan for the future.” That is to say, they did not plan to open their own business in the future. Some, especially unmarried men, simply did not feel any need for explanation. Life is short, play hard, period. Such resignation toward class mobility resembles that of the English street boys Paul Willis (1981) describes. Some workers would provide rational analysis: the threshold for entering the employer class was too high, the business situation was hostile to new companies, etc. Some actually constructed patriarchal accounts for staying at wage employment, and contradicted the conventional patriarchal ideal that a man should have his own business. Lin Zhengyi, the senior gear grinder at TW, said:

I am a responsible man now. I have mouths to feed. My wife will give birth to our first child soon. If I stay put, I can always fulfill my duty and give my child what he or she needs. If I become headstrong and go for my own fantasy of becoming a boss, who will feed my child when I fail? (971001)

Many older workers also gave similar explanations. However, they often could not help but add a woeful tone, as if family responsibilities prevented themselves from their pursuit of manliness. Such emotion was especially strong when they compared themselves to their more successful vocational-school classmates. One reason most frequently given for not attempting to open one’s own workshop was not ideological but political-economical. As Taiwanese capitalists intensified overseas investment in the 1990s, the ability to extract profit from overseas operations became an important factor that separated larger companies from small ones. I will explore this issue more in the next chapter. Sufficient to say here is that many workers saw this new criteria as a determining factor which breaks the conventional ideal of rising from the ranks of the “Black Hands” into the capitalist class. “Those who are big now, they have had their time. Time has changed. Unlike in the 1970s, Black Hands who have only their own labor to use don’t become boss now,” said Hung Chengdian, the mold shop foreman at DY. (970924)

Especially in the subjective aspect, the condition Gates describes, in which there is no real demarcation between proletarian and petty capitalist, was a thing of the past for my informants in the late 1990s. They started to perceive their position in the proletariat as permanent, instead of

merely a temporary sojourn. Although they still held numerous attitudes and behaviors of petty capitalists that corresponded to their objective condition of formal subsumption under capital, a set of distinctive attitudes of the “permanent proletariat” was growing.

First of all, corresponding to the diminishing opportunity for class mobility, there was a growing undercurrent of resignation from actively pursuing work skills among the working class youth. Although even the youngest work-study students at TW still showed strong enthusiasm in learning the craft of making a perfect gear, senior workers and managers in both plants often complained about the dwindling spirit of craftsmanship among young people. Recruitment was a serious problem for both companies. When I asked about the criteria for hiring new workers, managers almost always put “interest in metal working” as the most important one. Lin Liguao said, “What I have here might be the best workers of the younger generation. I don’t care whether they know much about metalworking or even whether they are hardworking at all. I would be grateful only if I can find young men who are interested.” (971119) In other words, as far as the managers are concerned, the young workers I observed at their companies were exceptions among their peers.

Even so, older workers still often complained that the younger workers were not as diligent in learning as they themselves had been in their youth. While the contempt of the old to the young might well be common to age hierarchies of all time, it was not entirely the case for senior workers at DY and TW. Zhang Xingping said, “I can fully understand why young men want to take it easy. I would do that, too, if I were they. When I was young, I believed ‘a skill at your hand allows you to make a living anywhere’ (a Chinese proverb). Today, young people believe they are not going anywhere. Naturally they don’t have to worry. One job is as good as another.” (970914) Different attitudes between generations, in Zhang’s analysis, actually reflect different class identities between petty capitalists and the proletariat. How this change of class identity will play out in the future changes of labor process remains to be seen.

The workers’ primordial class consciousness was undoubtedly built on the foundation of the

trade consciousness of the “Black Hands.” Central to this consciousness is the value of hard work and technical proficiency, both of which were possessed by the “Black Hand” who had-turned into employers. Similar to the Veblenesque technocrats, the “black hand” workers often see the leisure class as their opposite, but the hard-working employers as their own kind. The material basis for this outlook lies in the fact that, for the past two generations, employers in the trade have been largely risen from the ranks. This is further strengthened by the ethnic/class solidarity of the native Taiwanese in the civil society in opposition to the state sector dominated by the Mainlanders.

However, as the age-old contradiction between the state and the commoners is dissolved with the democratization in Taiwan, the class differentiation and contradiction within the rank of commoners is intensifying. Consequently, the patriarchal ideology that binds skilled male workers and the employers together into a seniority hierarchy is under increasing tension. Yet, each year, there are still numerous skilled men striving to leave the ranks of wage employment seeking to realize the dream of independence. Their stories will be the topic of the next chapter.

3.6 Summary

With the absent of a tributary state authority, Taiwanese civilian enterprises such as DY and TW are now free to organize themselves according to the petty capitalist principles long rooted in the folk society. The configurations of labor process at DY and TW are very different from typical Western capitalist corporations. Workers are highly skilled and autonomous even in the ostensibly routine production jobs. CNC machining technology, which had profound deskilling consequences in the West, hardly changes the distribution of skills and power at the DY and TW’s shop floor. Both companies’ real organizations of work are highly petty capitalist and mimic the social organization of a village. This fact is mirrored in the practice of folk rituals in the companies.

However, without its dialectical opposition—the tributary state--petty capitalism starts to transform itself into something else. Patriarchal hierarchy among workers and managers, though still exist, is gradually imbued with more and more versatile, individualistic, and competitive elements characteristic in a genuine capitalist mode of production. Skill, in these factories, is perceived both in its patriarchal sense as a proxy for seniority, and in its capitalistic sense as an acquired and accumulated value of individual's labor power. The hitherto immutable teacher-pupil hierarchy that is so crucial to skill in traditional hegemony is now also often seen as indebtedness of the pupil to the student—a view based on the principle of reciprocity. Indeed, interpersonal reciprocity has now replaced hierarchy as the dominant social relations, with which workers are organized into kinship-like factions—the “army of sons and brothers.”

In the two cases, DY, with sole ownership of one capitalist, is organized into one “army of sons and brothers,” while TW, as part of a large corporation, is organized in the form of competing “armies sons and brothers.” These forms of social organization of work are also reflected in the ritual practices at the workplace. Yet in neither cases is the internal hierarchies of the “armies” as stable as in real petty capitalist patriarchal kinship, in which appropriation of women and junior kinsmen's is the patriarch's unquestionable right. Instead, they have to be constantly reinforced with personal ties. As a consequence, interpersonal skill becomes the most skill, even surpassing the importance of technical skills.

For Taiwanese men, wage employment in factories such as DY and TW is often regarded a transitory period that will eventually lead to the establishment of one's own family business. Previous researchers use this common perception as evidence that there is no clear class demarcation between Taiwanese petty-capitalist and working class. However, while this perception of class mobility is still strong and motivates workers' active pursuit of skill and personal connections, more and more workers are sensing that the class demarcation is becoming more and more rigid. In the following chapter, I will explore more on the class differentiation within the rank of Taiwanese skilled workers by examining the conditions of self-employed

craftsmen.

Chapter 4: Family Men in Industrial Suburbia

At 4:30 PM of the big moving day, machine shop owner Ruan Dongyi was apparently exhausted--staring with glazed-over eyes at the forklift drivers who were fumbling around with one of his 20-ton CNC machine centers, trying to relocate it into his new workshop. He had worked almost 48 hours straight to pack up his machinery before the move began at 7:00 AM. Even his helper, A-Lam, had worked overtime until midnight, despite the fact that his newborn son at home had a fever. Ruan's father and younger brother also dropped their daily work and came to help out.

The move from the ancestral home in Dali to the new site in a new small industrial zone in Wufeng had ended up being one little disaster after another. The forklift driver who got the job a week earlier from Ruan, at a discount rate, turned out to be inexperienced. His forklift weighed only 15 tons and could only drag the heavier machine on the pavement instead of lifting it. After ruining the thin pavement in front of the Ruan family's old farm shack, the contractor had no alternative but to call in another forklift driver and share half of the moving fee with him. It took further hours of trial and error, and a number of bumps, before the two forklifts working in tandem could get Ruan's three machine centers out of the narrow back alley and loaded onto tractor-trailers. A sizable crowd from the neighborhood came out to watch the spectacle, which made Mr. Ruan somewhat embarrassed with the clumsiness of the movers. Adding further to the sense of frustration was the fact that his younger brother A-Guan, also a forklift driver, angrily stormed out at around 2 PM after an argument with the contractors.

The elder Mrs. Ruan, Dongyi's mother, came home early from her work at a plastic factory and became very upset about the tension between her two sons. She murmured something to her husband, squatting helplessly on the side, and came to greet me and A-Lam.

"These two brothers used to be so good with each other when they were kids. I don't know what happened. Boys today are impossible. They don't even ask each other before doing

anything.”

“Ah! *Obasan*²³, you should take a look at my family. It’s even worse. My younger brother had become such an asshole after he got married. I don’t give a damn about his plumbing, he doesn’t care about my machining work either,” said A-Lam, trying to console the elder woman.

“There is really no excuse. A-Guan knows the forklift business. Dongyi should have had him go out to find a contractor. He may have a bad temper, but he has a good heart. You see, he drops two-day’s work and helped his elder brother move since yesterday.”

After handing her son a cup of strong tea, the elder Mrs. Ruan went to the kitchen at the back of the workshop and happily received her baby grandson from the hands of Dongyi’s wife. She tied him onto her back with a piece of cloth and started helping her daughter-in-law prepare the food for the worship at the door. Early this morning, the elder Mrs. Ruan said, both of them had gone to the Tudi Gong temples in both the old and new neighborhoods to report the move. They had also paid respect to the “Lord of the Plot,” a spirit even lowlier than Tudi Gong who governs only this small plot of land, by worshipping inwardly at the door of the new building. At the old home, where four generations of the Ruan family—including Dongyi’s paternal grandmother--lived together, Dongyi’s mother was always in charge of the worship. “Now,” she said to me while pointing at the younger Mrs. Ruan, “the young people have formed an independent household. I can’t come here all the time. It’s her turn to keep up with the worship.”

The two Mrs. Ruans set up the table and the offerings at the door, as they did on every 2nd and 16th of the lunar month. The only addition was a bowl of dumpling soup—the symbol of family togetherness, which was in question under the tension between the Ruan brothers. The worship was supposed to take place at the end of the moving day. Yet it was getting dark outside, but the forklifts were still struggling with the heavy machinery. The roaring machines under the blue fluorescent light of the workshop made the scene even bleaker.

²³ Taiwanese-Japanese respectful term for elder women.

Suddenly, just before sunset, A-Guam charged into the workshop on his tiny 2-ton forklift, smiling, with a cigarette dangling from his mouth. He quickly picked up a stack of metal parts waiting to be machined, and started organizing the shop floor. The elder Mrs. Ruan was happy now. Smiling, she lit a bunch of incense, and started praying. Her daughter-in-law and sons joined her in worship. After everyone stuck their incense in the censer, the two women began burning ritual money at the door. In the warm light of the flame, neighboring machinists and families came to greet the newcomers. The two Mrs. Ruans invited everyone to have a bowl of dumpling soup with them.

This chapter is an exploration of the conditions of the self-employed entrepreneurs—the ideal “proper resting-place” of Taiwanese male skilled workers. Many male workers in vast different workplaces in Taiwan identify themselves with these entrepreneurs, and construct their worldviews accordingly. We have seen two such examples in previous chapters. In the navy, seamen organize themselves into kinship-like seniority hierarchies and progressively rising in the hierarchies to the status analogous to owner-operators of family firms. In the factories, each skill worker controls his autonomous labor process and seeking to build his own “army of sons and brother” in the way independent family business owners organize his kin folks. In both cases, the interactions between these pseudo-kinship units resemble the market exchange relations between independent family firms in the village. The family man in the industrial suburbia casts his shadow everywhere in Taiwanese workplace. However, in real life, neither the village nor the family remains the same as in the ideal.

The family drama of the Ruans is by no means unique. Shared by many family workshop owners, and very likely a great proportion of the tens of thousands of machinists in the Taichung area, are the hardships of self employment, which accompany the aspiration to rise from the rank of the “Black Hands,” and the interwoven webs of family and work relationships. As in the bigger factories, small workshops keep regular worship of Tudi Gong. The dispersion of workshops from old neighborhoods to the outer rim of the metropolis was also a common sight in the

constant urban sprawls in Taiwan. During my one-year fieldwork in the area, beginning in the summer of 1997, two of the five small workshops that I visited regularly moved outward and further into the countryside. My study of the relationship between skill and patriarchy in contemporary Taiwan reveals the decline in patriarchal family ties as well as a growing sense of disillusion among the small shop owners about the independence of self-employment. Upon closer inspection, it became evident that a common dream of Taiwanese machinists—becoming patriarch in an independent family workshop—is receding as a genuine possibility in the 1990s. The entrepreneur machinists now could not appropriate their kin's labor as patriarchs are previously entitled to; they often do not sell their own products on the market, but their own labor power to bigger firms; and they have become so dependent on the big firms that sometimes they found themselves no different from wage laborers.

This chapter is centered on five small machine shops; table 4-1 lists their main features. Their workforce ranged from two to ten; their level of technology varied from artisan-like conventional lathe work, to large-batch parts processing with CNC machine centers, to precision wire-cutting with an electronic discharge machining (EDM). A crucial difference among them was whether the main business was in one-of-a-kind mold and die work (the “live” jobs) or in the specialized jobs of parts processing. Yet all of these workshops were new, with young owners in their thirties who had become self-employed only in the 1990s. In addition, all of them performed only specialized tasks within the manufacturing processes of other bigger firms' products, instead of making the products themselves. Thus these independent machinists all depended on orders from larger firms for their survival. As a result, among the “ten thousand bosses” in the Taichung area, these machine shop owners differed greatly from more affluent business people in their daily work life. Instead of wheeling and dealing in the open market, they were, spatially, firmly bound to their workshops.

This pattern of spatial confinement at work is the starting point of my exploration of the work and life of the independent machinists in the following sections. I will then examine various

aspects of their interactions with technology, family, and other groups of people, and evaluate their ambivalent class positions and identities in the changing Taiwanese society. I will start with a hierarchical differentiation between these machinists who mainly sell their specialized labor power and the merchants who organized their labor into the production of commodities. A closer look at the price-setting system of their piece rate and the influence of skill, technology, and types of work on the piece rate reveals the close similarity of the conditions of many of these entrepreneurs to that of wage laborers. These machinists' family ties, while still important in providing financial resources, cease to be sources of cheap, reliable labor powers. Reciprocal personal relations have replaced kinship hierarchy as the most important source of business connections. In the patterns of participation in ritual and civic activities, small workshop owners has become more passive, and differentiated from the more active richer merchants and factory owners. Finally, I will examine these entrepreneur machinists' awareness of this growing trend of class differentiation. In short, this chapter presents a picture in which the male skilled workers are partially proletarianized in their social relations even when they still keep ownership of their own means of production and control over their own labor process.

Table 4-1: Five Core Cases in Examination

Company Name²⁴	Owner-operator	Main Business	Workforce	Location	Established Date
SY Industry	Ruan Dungyi	CNC milling parts	Owner + 1 machinist	Dali => Wufeng	1991
HQ Industry	Cheng Wenbin, Li Baoxi, Yau Zhiliang	CNC milling, molds and dies	3 partners + 3 machinists	Wufeng	1994
CR Grinding	Li Changrui	shape grinding, molds and dies	Owner +1 machinist +1 apprentice	Dali => Taiping	1992
CY Lathe Work	Lai Hungzheng	conventional lathe work, molds and dies	Owner + 1 younger brother + 1 machinist	East District, Taichung	1995
HJ Precision	Lin Kunsheng	EDWC ²⁵ molds and dies and parts	Owner and wife +8 employees	East District, Taichung	1992

4.1 The Stationary and the Mobile, the Process and the Product

²⁴ Although virtually all these workshops were owned by single individuals (with the exception of HQ, which was owned by three equal partners), they were all registered as companies, in order to separate business liabilities from individual properties. Nominally, each one of these companies had a board of directors, and the owner was often addressed as *Dongshizhang*, chairman of the board. Smaller workshop owners, however, would find it embarrassing to be identified in this way. The three partners at HQ totally refused to be called by anything but their own personal names, for fear that job titles would undermine the equality of their partnership.

²⁵ Electrical discharge machining (EDM) was developed during WWII. It removes material from a metal work piece with the sparks that occur between an electrode and the work piece. Many machine shops, especially those making molds and dies, use EDM to make cuts that are hard to perform with conventional machining. Electrical discharge wire cutting, or EDWC, uses a thin wire guided with CNC mechanisms as an EDM electrode, and can make intricate cuts even on hardened metals. It was developed in the 1970s and is often used in making punch dies.

After I visited Ruan Dongyi's workshop a few times, he asked me: "You look like a smart guy. Why don't you start a business and make some products?" (971012) His friendly suggestion was partly in response to my self-introductory claim that I was earning a meager wage at a local university as a teaching adjunct. In addition, said he, "you've really got the opportunity to make it." By this he did not mean my engineering degree. The Black-Hand trade of Taiwan could hardly be impressed by any academic credentials, which often turned out to be of little use on the shop floor. The opportunity he pointed out to me was the fact that I was visiting various workshops everyday, gradually coming to grasp the landscape of a segment of the industry, and building up a circle of friends who could feasibly become my subcontractors once I found a market niche for myself. My behavior pattern further suited the image of the mobile "product people," with my dressing in clean shirts and trousers—a sharp contrast to the stationary shop owners' dirty T-shirts and short pants.

Every workshop, no matter how small and cramped with machinery and stockpiles of materials, had a distinct space for receiving guests. Larger shops had a front office, with one or two desks, some living room furniture, a tea-making kit, and an altar for the company Tudi Gong. Smaller shops would have at least a couple of chairs or benches around the owners' desk and a water boiler for tea. Throughout the workday, customers came and went, often staying for an hour or two drinking tea and talking. The shop owner would sit down for some conversation when the machines are running by themselves, and get up to unload and load the machine or to adjust the settings from time to time. Sometimes, the helpers would also sit down and join the guest. Yet, for most of the time the guests were the ones who did the talking.

Most of the customers of the small shops had mechanical backgrounds themselves. Some of them were senior employees of the type of bigger factories, such as DY and TW, described in the last chapter. They could be either sales-purchasing personnel or autonomous technicians, like the mold makers of DY who were in charge of independent projects. In addition, many customers were older machinists who had accumulated enough capital and connections to start producing

their own products. When they made the move from the subcontracting processes to making products, they typically sold most of their own production equipment, putting out all manufacturing jobs to small shops, retaining only their business offices. For example, a Mr. Zhan Xuechang, customer of SY and other neighboring shops, made packaging machines, which he sold to Europe and the Middle East through trading companies. He had had a milling machine shop for ten years in the late 1970s and early 1980s, but now had only several benches for assembly work in his shop in Dali. He hauled the work pieces around town to different shops for machining himself, and hired ten temporary women workers at his shop to put the parts together into finished machines under the supervision of a hired foreman. A Mr. Lin Yiren, customer of HQ, CY and CR, made inkjet printer cartridges. He used to be an independent injection mold maker, but now all he had were an office in his house, a car and a cellular phone. Even the assembly jobs were subcontracted to other shops. In general, these mobile merchants were senior to the stationary shop owners in the trade. They were deferred to for their seniority as well as their vital patronage for the stationary workshop owners.

For the stationary shop owners talks with the mobile merchants were their main source of outside information. The most favorite topics of the work shop talks were those surrounding work and the machine technologies: Someone had just bought a new machine. A big company was going under. Another was opening a new product line. Yet another big company's purchasing manager was implementing a new policy, abandoning his long-time business associates, and shamelessly seeking the lowest bidders. An ingenious machinist in the trade had assembled a new machine that can read 3-D profiles of models with a conventional milling machine, a used PC, and a set of laser range readers, which was much cheaper than the patented American machines Such detailed business and technological news was circulated more through word of mouth than through the business press, which usually only reported about the most glamorous large firms. The mobile merchants in the machining trade quickly spread the news along with their orders and work pieces, and the stationary shop owners and helpers were on the receiving

end of both information and materials.

The shop owners themselves usually worked exceedingly long hours and seldom had time to venture out of their workshops. The following story told by a customer of Ruan Dongyi is typical of what I observed.

A German businessman came to Taiwan to visit his suppliers. He had put in an order for some bronze parts through a trading company and was pretty satisfied with the quality of the first batches of products he received. He was, however, astonished by the messy work-environment of the suppliers when the people from the trading company took him to one after another workshop in East Taichung. At one family workshop, he saw a big stockpile of expensive bronze ingots stacked on the sidewalk outside the shop's door; there was simply no room for these inside. He asked his local host: "Aren't you afraid of burglary? These ingots must be worth tens of thousands. Or do you move the stockpile inside everyday when they close?" The shop owner replied, "No, we don't move them in, because we are never closed." (980112)

Previous studies on Taiwanese family workshops have repeatedly pointed out that heavy exploitation of family members as well as hired laborers is rampant in this type of firm, in all sectors. They usually pay non-kin employees lower wages than bigger factories do. Sometimes junior family members receive no wages at all. (Gates, 1996, Ka, 1993) One would think that with the unusually long and intense work hours, the workforce could be kept at bay only through highly personalistic ties such as kinship hierarchy. However, among the machine shops I visited during my fieldwork, the situation was very different. Although the intensity and length of work remained the same, employment of family members was rare, unlike previous studies indicate. Among the five core cases, only CY hired the owners' younger brother, and HJ's owners' wife worked at its computer lab. Outside of these core cases, the only family members employed at the workshop were usually the owners' wives, working part time as bookkeepers. Most of the helping hands were hired either through non-kin ties, such as former classmates or coworkers, or on the open labor market. Personal attachment was apparently much weaker in such relationships. The small workshops had to compete for labor power with not only the bigger factories but also other

sectors, such as the service industries, which had much less demanding working conditions. As a result, they had to pay workers market-standard living wages (ranging from NT\$ 15,000 for pre-military-service teenager to NT\$ 30,000+ for married and skilled machinist), and forced overtime was impossible, as workers could easily change jobs.

As a result, in all five cases, employees usually worked only a regular eight hour day shift; longer hours or night shift would cost the shop owners overtime pay. The owners themselves therefore had to fill in the rest of the workday themselves. SY's Ruan Dungyi ran his shop 24 hours. At night, he programmed the machine to work on larger jobs that required longer cutting times, and got up from bed every two hours or so to change workpieces. "Just like tending a new-born baby," as he put it. For a time after he first opened the shop in 1991, his wife worked at the shop with him. After she had a serious hand injury on the job, they both thought it more prudent not to risk it again. HQ's three partners usually worked from 7 in the morning to 10 at night, except on Sundays when they took half-a-day off. CR's Li Changrui and CY' Lai Hungzheng both worked the nightshift themselves. Regular employees did the jobs that required less precision by day. They themselves started working on the high-precision pieces after the employees went home at 5 PM, continuing until midnight. As Lai put it cheerfully, "This is so I can avoid watching the primetime soap operas on TV." The only exception was the bigger firm HJ Precision. It had a regular nightshift of three employees. The owner Lin Kunsheng also worked at night, while Mrs. Lin worked the dayshift when their children were off to school.

Ruan Dongyi longed for his earlier time as an employee in various machine shops. Except for a few occasions--a friend's wedding, a big customer's banquet, and so on--he almost never went out of his home workshop. He stayed at home even during the Chinese New Year holidays, when most of the nation's businesses are closed for five days and virtually everyone goes out for some fun. His employee, A-Lam, by contrast, had a much more colorful social life. He often went out with friends and relatives to restaurants or bowling halls in the evening. Even during the daytime, when the workshop needed some supplies such as cutting tools for the machine centers,

it would be A-Lam who went to the mechanical bazaar at Jianguo Market to bring back the supplies on his scooter. He therefore knew the parts vendors at the bazaar and employees of similar workshops much better than his boss did. Ruan would not leave the workshop for fear that customers would drop by unexpectedly. And they did. Making appointments is a rare practice and customers who brought parts to Ruan's shop for processing frequently came to urge him to work faster or just to check out the status of their jobs. In addition, new customers might come any time and bring new jobs. The only time I saw Ruan Dongyi go out was during December 1997, when the Asian Economic Crisis began to impact on the machine market of Taiwan. He put on a clean shirt and went out to visit several long-time customers, looking for jobs when he anticipated that he would run out of jobs in a few weeks. He described the situation as very awkward and disagreeable.

Thus, for shop owners like Ruan Dongyi, when they ended their wage-employment career and settled down with their own shop, they literally became firmly bound to the house. For their families, such men were very reliable, good husbands or sons-in-law in the old-fashioned sense. Unlike the rambling merchants, the machinists never went out, so there was no chance that they could have extramarital affairs. The term "*laoshi*"-- honest, down-to-earth, industrious, but conservative and prudish—was often applied to them both by the machinists themselves and others, in contrast to the volatility and ambition of both the mobile merchants and the up-coming young people, who rambled from one job to another seeking opportunities. Yet, people who were "*laoshi*" were also called "*bô-lo-iong lêng*" in Taiwanese, roughly translated as "useless people" but with less negative connotation as this English phrase. Domesticated and housebound, the family workshop owners were perceived as having a reduced manliness as compared to the men who roamed the streets.

The pattern of symbolic values of the machinists and hands-on workers that I described in the previous two chapters—dirty : clean :: skilled : unskilled :: senior : junior :: masculine : feminine—is valid inside the workshops of these machinists, but not so in a larger context when

the machinists come into interaction with another group. As compare to the mobile merchants, the stationary machinists, although dirty and skilled, are regarded as less masculine, more subordinate. In addition, since many of the mobile merchants were established machinists who had been independent shop owners in the past, their supremacy was also perceived by other machinists to correspond to their seniority.

The degree of houseboundness of the shop owners varied with the size of the firm and the nature of its work. The smaller the shop, the more housebound was its owner. Those doing work closer to the whole product, and “live” work, would have freer owners than those doing segmented processes and specialized work. For instance, HQ has equipment almost identical to SY (three CNC machine centers), but has a larger workforce of six, doing mainly mold-and-die jobs. Although it also subcontracted part of the whole process of making molds and dies from larger firms, it could afford to free up one of the three partners from time to time to go outside, bringing work pieces to other workshops or visiting customers to coordinate jobs. Yet both the owners of CR and CY, whose operation employed three workers and doing segments of the production of commodities, were every bit as housebound as Ruan Dongyi.

The now widespread phenomenon of machinists being bound to their own shops was actually quite new in the accounts of the machinists. The government statistics show that from the 1950s to the 1990s, the largest proportion of the workforce in the machine industry has always been in firms with ten to thirty employees.²⁶ However, this figure could not take into account that smaller shops tend not to register at all. The experience and observation of the informants were often contradicted with the steady picture that the official figures suggest. Li Changrui of CR Grinding, for instance, stated that one generation earlier, the norm of the industry was that the shop owner managed only the business side, and a hired master machinists dealt with all

²⁶ Directorate General of Budget, Accounting and Statistics, Executive Yuan, ROC, *Yearbook of Man*

Power Survey Statistics, Taiwan Area, ROC, 1996. (Taipei: DGBAS 1997): 209. And TAMI (1995): 61.

production matters on the shop floor. (980512) Senior machinist Huang Mingzhe concurred with Li's observation. All the shops he had worked in from the late 1950s to the 1970s had more than ten people, and the bosses were always outside the actual work process. (971012) While the actual historical evolution of the sizes of firms needs further investigation, it is at least safe to say that the houseboundness of the machinists, which visibly set them apart from the merchants, appeared new and unnatural to most of my informants. Although the form evoked an image of the land-bound family farmer of the bygone years (and the machinists might also see themselves through this image), the housebound machinists were products of a recent historical process of class differentiation in the machining trade. They had not transferred patterns of peasant patriarchy into this new industrial setting.

4.2 Labor, Capital and Skill

Similar to Ruan Dongyi's SY Industry, HQ was located in a rather nondescript shack. The three partners made the workplace atmosphere as family-like as possible. They kept a dog on the shop floor, and on the more relaxed Saturdays or Sundays, their wives would bring their young children in to play with the dog and the men. Yet in the circle of business associates, the three young bosses at HQ were reputed as among the most technologically sophisticated machinists. HQ and SY had a comparable capital size of around US\$ 0.5 million and almost identical equipment: three CNC machine centers. Yet HQ was able to sustain three times the workforce with almost three-times the revenue of SY's. Its owners also had a much less difficult time when bargaining with the customers. The two firms differed from each other mainly in the nature of their focal business. While SY did specialized jobs of parts processing, HQ did the "live" jobs of mold making. The differences between these two types of workshops in autonomy-control over their work are almost identical to those between skilled tool-and-die makers and assembly-line operators in modern Taylorist factories. Correspondingly, their revenues were determined differently. The specialized job rates are more rigid, and the rate for "live" jobs has more

bargaining leeways.

4.2.1 The Fair Rate

All putting-out machining jobs in the Taichung area are paid by piece rate, with the rate varying from one case to another. Personal relationships sometimes outweigh market imperatives when the merchants stick to old suppliers, instead of the lowest bidders, or give relatively higher rates to friends and relatives. The small workshops are also willing to work for lower rates for old customers, should those buyers have difficulties. Rushed work requires higher rates. In addition, most of the rates are paid with post-dated checks—a common practice of Taiwanese business to gain short-term credit from each other; the longer the term, the lower the financial credibility of buyer and the higher the rate charged. There is rarely a written contract between “subcontractors” and the merchants. Requiring one’s business associate to sign a negotiated contract would suggest a lack of trust, an implicit insult. Yet the personal appearance of transactions and the multifaceted determinants of piece rate does not mean that the machinists and businesspeople work according to whim, nepotism or tradition. Objective market considerations are strongly observed. Under tighter market conditions after November 1997, many job rates became heatedly renegotiated, and often a yardstick for a “fair rate” would be invoked during the bargaining. Shop owners would protest against any rate under the fair standard as “*boe-kùe-kang*,” literally “can’t pass the day” or unsustainable. As this phrase implies with its emphasis on the daily expenses of the workshop, time is all important in determining fair rate.

How the fair rate for batch parts processing was decided illustrates the importance of time. The standard cutting time was calculated according to the size and complexity of the job. Cutting time plus the set-up and programming time, divided by the batch quantity, is the total work time per piece. This total work time, usually measured to the minute, would then be multiplied by labor cost and capital cost per unit time to determine the basic rate. This basic rate would then be added with a profit mark-up of 5 to 20 percent. Expendable material costs such as that of the

cutting tools, lubricant liquids, or job-specific jigs and fixtures were not tallied in the function, as the customer generally paid for them. Thus:

$$\text{Fair rate } R = R_B \times (1 + \text{mark-up } \%)$$

$$\text{Basic rate } R_B = (C_L + C_C) \times T_W$$

Labor cost per minute: $C_L = \text{monthly salary of one skilled machinist} / (30 [\text{days}] \times 8 [\text{hrs.}] \times 60 [\text{mins.}])$

$$\text{Capital cost per minute: } C_C = \text{monthly mortgage payment of the machine} / (30 \times 8 \times 60)$$

Work time (minute) $T_W = \text{cutting time per piece} + (\text{set-up time} + \text{programming time}) / \text{quantity}$

This formula was widely used, and sometimes customer and shop owner would literally pull out paper, pencil and calculator or abacus and work out their solutions. There are several interesting points about this formula. First, the labor cost was always calculated according to the market price of a skilled machinist's wage, approximately NT \$ 35 thousand a month in 1997-1998. The shop owner himself is regarded as just another senior machinist in this respect. Second, capital costs are represented simply by monthly mortgage payment on a given machine. Housing, utilities, and other miscellaneous costs were unaccounted for and absorbed by the shop owner because these expenses were typically inseparable from the expenses of the family's dwelling. The percentage of profit mark-up was often highly contested. It ranges from 20% for one-of-a-kind production to 5% for large-batch conventional machining. Yet one had to subtract the uncovered costs to get the net profit. The profit rate of Taiwanese machine industry as a whole had been consistently in the area of 5%, but the small shops usually had lower profit rates than the bigger factories did.

The fair rate was not always achievable. In some areas of the business, competition had driven the rate down to a barely sustainable level. Lathe work on parts, for example, had been obtaining a fixed rate of NT\$ 6 per minute of cutting time since the mid-1980s. This rate was

pervasive throughout conventional, semi-automatic, and CNC lathe jobs; the capital cost difference was disregarded. In addition, set-up and programming time of lathe work was often not accounted for. Lathe work is therefore regarded as the toughest of the machining business. Lathe machinists had to marshal all their ingenuity to cut down on actual work time per piece and maximize their endurance to lengthen the workday.

4.2.2 Bending the Fair Rate

In other areas of the machining industry, however, the formula for job rates could be dramatically altered in the shop owners' favor. HQ is exactly one such case. It took every possible advantage of the programmable CNC machining technology for its own benefit.

First of all, it does only one-of-a-kind jobs. Thus a large part of the labor time counted into the rate formula is the setup and programming time. The standard actual cutting time of a metal job was determined by the material, size, and design of a job, with some machine-specific variations, about which almost every machinist could make a ball-park estimate. Thus there were not really much space for bargaining on this issue. The setup and programming time, by contrast, often varied widely. A highly skilled machinist might be able to program from a blueprint in one day, and setup the machine in one or two hours. Yet a novice might have to spend a whole day's worth of trial and error just to set up the machine to the proper parameters. Complex jobs might also take a long time for the machinist to study the cutting route and to program it. Thus HQ's owners had much more leeway in bargaining with the customers over the job rate because only they could authoritatively estimate the cost for necessary work time.

Second, the owners of HQ did their best to acquire jobs that involved cutting complex contours, thus utilizing the programmable machine's unique capability, and steering away from jobs that could be done with conventional machines and are more heatedly competed on the market. As Shaiken (1984) argues, although the numerical machines were initially designed to replace the machinists' input on the shop floor, its most successful application turned out to be in

areas where it can complement a machinists' work skills. Complex contours of molds and dies used to be cut manually by bench workers with hammer, chisels and files—a difficult and labor-intensive job. Two of the three partners at HQ had been trained in conventional plastic mold shops and were familiar with the bench work. One of them, Li Baoxi, even won a medal for his bench work in the National Craft Olympics in his vocational school years²⁷. Yet neither of them were willing to go back to manual work, since the CNC machine could now do the same job, albeit with lesser precision, but with much less time and effort. By concentrating on this kind of job, HO was able to avoid competition from the more numerous conventional machine shops.

Third, with expertise not only in machining but also in the whole process of plastic mold making, the owners of HQ were involved in problem-solving processes far beyond the machining jobs they received from larger shops. For example, in November 1997, Li Baoxi received a job for building a blow-injection mold for air cushions in sneaker shoe soles—similar to that in the pricey Nike Air Jordan shoes. This was a new product for the shoemaker, and the cushion making technology was also new to the supplier, as well as all others involved. Li spent three months--from drafting and programming on his computer to trying out and altering the mold

²⁷ The National Craft Olympics is an annual event sponsored by the Bureau of Industrial Development of the Minister of Economic Affairs. Its competitive events range from computer programming to furniture carpentry, and the players are usually vocational school students. National champions will represent Taiwan to the International Craft Olympics, usually held in Europe. In recent decades, Taiwanese players have frequently won prizes in metal- and wood-working crafts. However, Mr. Huang Qingtai, a long-time coach of gold-medal winning carpenters, said that the skills cultivated for the game were often wasted, because the prize winners would be given scholarship to college. They would then go from college to managerial jobs and never return to the shop floor. Cases like Li Baoxi, who won the medal and stayed in related occupations, are rare.

several times--until he satisfied the customer. During this period, he frequently visited the plastic shop to experiment and discuss with the cushion makers, as well as bringing the mold to other mold makers who had previous experience in such cases for advice. Unlike in the case of parts processing, fair monetary rewards for such holistic participation in the manufacturing process could hardly be accurately estimated. As a result, HQ often got deals on a “cost-plus” basis—priced at whatever costs were incurred to them (including the owners’ own wages) plus a 15% to 20% mark-up—similar to the situation of household plumbers or the U. S. defense industry.

By comparison, SY’s approach to the CNC machining technology was from a totally different direction, and much more similar to the original design of NC technology by the U. S. military-industrial complex. Instead of complementing conventional machining work, SY’s line of business sought to replace the labor of machinists with the machines. Ironically, corresponding to the deskilling tendency of this approach, SY’s Ruan Dongyi himself became mired in a worse working condition, similar to that of the workers deskilled by the CNC.

Ruan Dongyi was a good friend to the three partners at HQ. Sometimes he would bring more complex jobs to HQ and let his friends do the programming for him with their more powerful MS Windows-NT-based software. He himself used an old 286 PC running DOS text editor to do his own programming. When I asked him why they choose different paths for using their CNC machines, he replied that “some people got more brain than others” and suggested that his friends at HQ were smarter than he was. In fact, except for his lack of holistic participation in the product-making processes, Ruan had to meet mental challenges no less complex than those at HQ in his daily work. Yet these challenges were of a different nature. While mold production, as a prelude to the subsequent mass production, retains many features of craft work, the production of parts is closer to the realm of mass production.

Similar to the Fordist factories using Taylorist techniques to speed up work, small shops

doing specialized work, such as SY, also take speed as their utmost concern of production.²⁸

After a piece rate was set, roughly based on the standard time necessary to complete the process of a job, Ruan Dongyi would do his best to speed up the process and beat the standard time. The advantage of a CNC machine center over its predecessor, the conventional milling machine, is that it could use multiple cuts in one setup and save much of the setup time. Ruan further sped up the process by building specialized jigs that could hold as many work pieces as possible at once and cut down on the loading and unloading time. Designing and building jigs requires meticulous consideration of the various cutting routs and angles for a job. In bigger factories, jigs were typically contracted out to specialized tool- and die-makers, such as in the case of TW's new lathe cutting tool-handle production, described in the previous chapter. Ruan was not well-connected enough to go into the jig building business, but he was capable of making the jigs himself for the parts jobs he received, charging his customers only material costs for the jig. He would typically spend four or five days to design and build a jig for a big batch job, so that he and his helper A-Lam only had to load, unload, and push bottoms every once in a while during the rest of the production run.

In addition to jigs, sometimes special tricks had to be employed to cut down on production time. In one case, a recess had to be cut out on the bottom of one work piece, while the rest of the cuts were on the top. Instead of flipping the piece over to make the cut, as most conventional machinists would do, Ruan made a detachable cutter that could allow the machine to mill from the bottom up through a hole on the piece. Thus he could make all the necessary cuts with only one setup, and save about ten minutes on each piece.

The aim of all the creativity Ruan spent on a job was to make the machine center as versatile

²⁸ Speed was, however, still a concern in mold production. The industrial standard in Taiwan for making a plastic mold, from receiving the order to mass production, was two weeks. As far as the mold makers knew, this was faster than most of the foreign competitors could do.

as possible, while making the routine operations of himself and his helper as simplified as possible. The principle was hardly different from the Taylorist process of deskilling, except for the fact that the deskilling and deskilled bodies belong to the same person in different stages of production. His daily work consisted of sporadic moments of creative labor, but the larger part of it was spent on mind-numbing work, no different from that on the assembly line. As to A-Lam, the helper, he described his work as “screw fastening,” i.e. monotonous loading and unloading in the service of the machine. He strove to get out of this servile position vis-a-vis. the machine by learning CNC programming in the evenings, hoping to become a shop owner one day.

For owners of workshops such as HQ, whose area of business allowed for more leeway to bend the fair rate, entrepreneurship might make their working conditions vastly better than that of a typical wage laborer. But for others, such as SY’s Ruan Dongyi, who are more subjected to strict standard fair rates, there was not much similarity between working for themselves and working in a factory. Their rewards are calculated primarily according to labor time as wages typically are. In addition, although they control their own labor process, their work are partly subjected to similar deskilling tendencies as those in a Fordist factory.

4.2.3 Skill and Technology

The notion of skill was curiously absent from the formula for calculating fair piece rates. Instead, skill appeared as a modifier, of uncertain quantity, on the perceived true value of a piece of work, which was defined by labor time and capital. Capital, in turn, is merely past human labor objectified in the production machinery as in the analyses of classical Marxism. In other words, “fair” piece rate for a certain task was determined by the socially necessary labor required to perform it. The more common and segmented the task was, the more closely the piece rate would approximate the market-wide standard. The parts processing jobs Ruan Dongyi did, for example, could all be easily done with conventional machines in other shops, albeit with more manual effort in the production process. More relentless merchants, or those under tight financial pressure,

would not hesitate to switch their patronage from Ruan's shop to other places. Conversely, Ruan could refuse a job if the rate for it was below the market standard. His skill and command of newer technology benefited him not in the form of a straightforward monetary premium for the invested "human capital," as Becker (1974) and other human-capital theorists suggest, but as a potential to make his (and his helpers') labor time spent on a task shorter than the market-wide standard. Whether and how much this potential could be realized was uncertain; there was much leeway for him to exploit. By contrast, unique and more holistic jobs such as mold making could have rates that were highly uncertain at the point of transaction, as the amount of socially necessary labor for such jobs is difficult to estimate accurately.

CNC technology by itself did not determine whether the shop's jobs would fall into the categories of certain or uncertain rates. It was hardly the case that the newer and more fashionable a shop's technology was, the better rates it would get. The two three-man conventional shops, CR Grinding and CY Lathe work were both in the mold business. Although their jobs involved much more manual work than those at SY, the ways they calculated the rate were more similar to those of HQ. Precision requirement was a decisive factor. High precision jobs are generally less segmented as they need to be done throughout the whole process by a single machinist, and are therefore harder to assess according to a market-wide standard. In fact, the most precise jobs were often done with much manual labor. XC Company, a two-man mold shop, and HQ's close associate, specialized in precision molds for the small machine parts used in copy machines and such. The two partners at XC used only one conventional, not CNC, milling machine and one EDM machine to make crude cuts, and then used hand-held dentist's tools to refine the work pieces to a margin of error of $1\ \mu\ (10^{-3}\ \text{mm})$. They estimated that their profit rate was near 20%!

(971120)

The small workshops reputed to have the most profitable rates in the plastic-mold trade of the Taichung area were those doing Halogen arc welding. Sometimes mold makers would make a mistake and cut the metal too deep or too wide, or, even worse, crack the work piece. In such

cases, there was no alternative but to bring the piece to a Halogen arc welder to be mended. The welders were often called “mold doctors,” who could revive a dead piece from the hands of careless machinists. Like medical doctors, they did not accept any haggling. Whatever price they demanded, the customer would obediently pay--and there would still often be a long waiting line at their shops. The sole “mold doctor” in the Wufeng area, a Mr. Qiu, was famous for his bad temper and often refused to do a job if the customer got on his nerves. There is hardly any competition in their trade, largely because Halogen welding is known to be a dangerous job. The radiation from the white-hot arc often causes skin cancer or eye injuries and mold doctors seldom have long careers. (971003) Thus endurance of hardship functions like a skill that can give a craftsman exclusive business and good rates.

The only case I saw where technology made much difference in profit rate was HJ Precision: their high-precision Electric-Discharge Wire-Cutting (EDWC) technology was relative new and expensive and they had less competition in the area than shops with other kinds of machinery. With more than NT\$10 million in capital investment, HJ was clearly out of the league of the other small shops. The owner, Lin Kunsheng, was from an affluent merchant family. The moment he graduated from vocational school, he decided to make the best of the financial backing of his family and go into an area of the machining trade where money could make a lot of difference. Thus he chose a job in one of the earliest EDWC shops in Taiwan. (980410) This choice was not open to every machinist. Family ties influence what kind of skill they might acquire on their road toward becoming an independent shop owner, and consequently what kind of job rate they will get. The issue of family ties will be more fully discussed in the next section.

In summary, similar to a factory worker’s wages, the job rate an independent machinist get is primarily determined by socially necessary labor time to complete a task. There are secondary factors that can bend this standard rate. They include skill, areas of business, level of technology, capital size and personal connections. Yet these factors provide advantages for the shop owner not by directly adding to the job rate but by indirect ways such as elimination of market

competition. In this light, there is a fundamental commonality between independent small shop owners and wage laborer.

4.3 *The Family Ties*

Lai Hungzheng, owner of CY Lathe Works, had one of the most quintessentially Taiwanese stories of “Black Hand becoming Boss.” Born the eldest son of an ethnic minority Hakka peasant family in the mountainous Zhuolan Township, in nearby Miaoli County, he grew up with the frustrations of his family in the depressed rural economy of the 1970s. When he graduated from the local junior high school, his father sent him out to the cities looking for a better economic future. He recalled to me that on the day he left home, his father stood at the door with a big stick. “If you come back to become a farmer, I will break your legs with this stick,” said the father. The fifteen-year-old boy set out to Taipei for the first time in his life. The only person he knew in Taipei was his aunt, who would board him for a little while. For days after his arrival, he wandered the streets of Sanchung City—a suburb of Taipei and the “Black-Hand” capital of the north—looking for red help-wanted fliers on the lampposts. Speaking little Taiwanese, and without any previous knowledge about factory work, he finally got a job as an apprentice in a lathe workshop. “The only thing I kept in mind was what my junior-high teacher told me: work hard and make many friends,” Lai Hungzheng recalled over twenty years later. (971020)

Starting by sweeping floor, cleaning machines, and preparing tools for the masters, he gradually learned the trade by watching and doing. And his wage rose from a pathetic pocket-money amount (NT\$ 120 a day in 1981) to a legal minimum monthly salary (around NT\$ 5,000 in the same year), which allowed him to send money home to subsidize the farm, while living frugally on the top floor of the workshop’s building. On every other Sunday, when the workshop was closed, he would hang out with young apprentices at the neighboring workshops. (The normal work hours for blue-collar workers in the early 1980s were 52 hours a week and the second and fourth Sunday of the month was usually the only day off.) Eventually, after he had

learned most of the conventional lathe work, and gotten acquainted with a group of young friends, he cast off his country-boy shyness and began to hop from one job to another. Whenever he heard from friends that there was a new opening that offered slightly higher wages and opportunities to learn new skills, he would go for it. In his nineteenth year, he changed jobs ten times. Eventually, he chose a plastic mold shop to stay at; but instead of becoming an all-around mold maker, he specialized in precision lathe work.

After military service, Lai Hungzheng came back to central Taiwan, got married and found a steady job as the only journeyman at CY Lathe Work, then owned by a senior machinist. When the former owner got into financial trouble over a failed stock-market investment in 1995, Lai Hungzheng bought up the whole shop with his savings and a loan, borrowed with his fathers' farm land as collateral. He hired another journeyman, and, since his youngest brother was just out of vocational school and looking for a job, he hired him as well. The two brothers lived together at a nearby apartment. Yet the younger Mr. Lai almost always left work at 5:00 PM sharp, along with the journeyman, and went to night school for his junior college degree. He also received apprentice-level wages from the elder Lai, and maintains his own personal bank account. Lai Hungzheng kept remitting money to his parents to subsidize the family farm until early 1997, when the family finally managed to sell the land and the elderly couple were able to retire. The parents still lived in their mountainous home town

Table 4-2: Family Background and Family Ties

Company	Owner-operator	Family Background	Main Family Ties at Work
SY Industry	Ruan Dungyi	Local ²⁹ peasant-turned worker	Financial support from parents; Wife's unpaid bookkeeping work
HQ Industry	Cheng Wenbin, Li Baoxi, Yau Zhiliang	Nearby peasant/ worker /micro-business owners	Financial support from parents; Some business connections
CR Grinding	Li Changrung	Out-of-town rich peasant	Financial support from parents Wife's unpaid bookkeeping work
CY Lathe Work	Lai Hungzheng	Out-of-town poor peasant	Financial support to parents; Paid employment of brother Wife's unpaid bookkeeping work
HJ Precision	Lin Kunsheng	Out-of-town rich merchant	Financial support from parents, Wife as co-manager, computer worker

Rural connections were not always a financial burden, as they were in the case of Lai Hungzheng. Under the KMT government's policy of extracting agricultural surplus to support industrial development, Taiwan's agriculture economy has generally been declining since the 1960s. The opening of the farm produce market under U. S. pressure since the mid-1980s further devastated many agricultural sectors, including citrus fruits and apple—the typical mountain crops. Yet a number of resourceful farmers managed to diversify their businesses and were still able to make a profit. Furthermore, in the Western Plain area, where the urban residential and industrial zone had been constantly expanding, farmers would sometimes turn into instant millionaires once their farmlands were rezoned for residential, commercial or industrial use. Even without rezoning, farmlands in the plains were valuable collateral with which farmers could get government subsidized loans from local Farmers' Associations. Children of these more prosperous rural families could find their family connection a true advantage for their own business ventures.

²⁹ I use "local," "nearby," and "out-of-town" to denote the location of the owners' parental home vis-à-vis the site of the workshop. This is significant in terms of the ritual practices that I will discuss in the next section.

Li Changrung, the owner of CR Grinding was exactly such a case. Growing up in Erlin Township in Zhanghua County, a largely plain farm area south of Taichung, he was the eldest son in a relatively prosperous farm family. In response to the stagnant prices of rice and sugar cane, the traditional crops of the plains, the Li family switched one after another to short-term crops—vegetables of all kinds, flowers, and so on. With fluctuating prices and threats of natural disasters, this kind of farming was as risky, and as potentially profitable, as any urban business. With exceptionally good fortune over a decade, the Li family did not suffer from a devastating price collapse or damage from a typhoon. They were thus able to keep their eldest son Li Changrung out of the labor market so that he could stay in school as long as he liked. As one of the best students in his hometown junior high, Li entered the Zhanghua Vocational School—one of the most prestigious public vocational schools in the area, whose well-trained graduates were highly sought after by the industries. With a valuable diploma and a web of former graduates from the school, Li entered Linshanben, one of the topmost plastic mold companies in the Taichung area, a spin-off of the respectable Har Lin Inc. Apprenticed at Linshanben for two years, he later worked for the same company as a mold technician for three years after military service. When the owner of Linshanben decided to downsize and outsource all of its manufacturing processes, Li got a vital, generous sum of money from his family to open a shop himself in 1989. Since then, financial support from the countryside has allowed him the luxury of not worrying about monthly payments for the machinery. Consequently, in homage, he kept in his shop an altar of Tudi Gong that had been spiritually initiated at the communal temple of his hometown. This was the only case I encountered where a company's Tudi Gong had a traceable spiritual origin.

Shop owners with more urban backgrounds all had similar financial connections with their families. Ruan Dongyi's family elders had all become wage laborers after a 1957 flood swallowed the rice patties they had received through the Land Reform of the early 1950s. Although they still lived in their ancestral home, the elder Mr. and Mrs. Ruan were forced to

worked in various working-class jobs ever since. Throughout the decades, they had saved enough money through the village financial mutual aid groups and were thus able to provide Ruan Donyi with down payments for his machinery when he first started his own shop in 1991.³⁰ The three owners of HQ Enterprise were also from a similar background, their families had all been farmers in the adjacent townships in the 1960s, and turned into industrial and construction workers or owners of small business such as noodle shops in the 1970s and 1980s. They raised money from their parents to start their company. Lin Kunsheng of HJ Precision was from a wealthy merchant family. He was thus able to go into the more capital-intensive branch of the machining business. In this regard, family background greatly influenced what kind of business machinists could go into when they opened their own shops.

Financial support from parents to sons was usually considered a parental responsibility and, thus, the parents rarely demanded that the sons to pay them back. Although the sons' responsibility to support his parents might eventually balance the account, these transactions were regarded more as unilateral gifts than reciprocal business relationships.³¹ However, private loans,

³⁰ The financial mutual aid groups (*Huzhuhui*, or simply *Hoe-a*) are informally organized among Taiwanese workers and farmers and serves as one of the most important savings institutions in post-war Taiwan. Typically, a group consists of ten members or so, who regularly contribute a fixed amount to the common fund and bid for loans. Women usually play pivotal roles in organizing and managing such groups. See Gates (1987) for more detailed discussion.

³¹ The situation of daughters varies greatly from one family to another. Traditionally, daughters have been regarded as outsiders to the lineage and thus have less access to family property. Today, however, many parents regard daughters as more reliable in terms of supporting elder parents, because they are usually emotionally closer to the parents. In such cases, daughters may get the same or even more financial

borrowed from more distant kin—uncles, aunts, cousins, even brothers and sisters--were expected to be repaid, with interest. The benefit kinship offered in finance was easy credit without collateral, because the loan was considered to be guaranteed with intangible factors such as family reputation. This was instrumental for small businesses, as the established banks and credit unions almost always demanded large collateral from small borrowers. Financially, distant kin were regarded as being only as good as close friends, who might also provide easy credits. Thus the classical form of patricorporation—the patriarchally organized kinship unit which collectively owns property—remained in full only in the direct father-son relationship. For the extended family, it existed only partially.

In spite of the conspicuous role of kinship in finance, it did not appear to be nearly as important in terms of regulating the supply of labor power and business connections. Only one worker (Lai Hungzheng's brother) among the employees in these five shops were related to the shop owners. All other workers were recruited either through school ties, from former coworkers, or through the open labor market (by way of newspaper classifieds or red fliers posted on neighborhood billboards).

On the other hand, unpaid work of wives was common among these shops. Bookkeeping and essential financial management in every one of these shops were done by the owner's wife. She was thus respectfully called "*thâu-ke ñiù*," the "bossess," by employees and guests alike. Yet this was not a big job; it required only about one workday every month and sporadic visit to the shop's office. Most of the wives either worked full-time outside the home, as did the wives of the three HQ partners and Lai Hungzheng, or stayed at home doing housework and raising children, as did the wives of Ruan Dongyi and Li Changrung. In the latter case, even if the home was just on the second floor of the workshop building, the separation of man's and woman's, productive

support from parents than sons do. HJ Precision's Mrs. Lin, for instance, stated that her father had also contributed a lot to their initial capital.

and reproductive, spaces was very clear. The shop floor and production was male.

The only exception was Mrs. Lin at HJ Precision. She and her husband were classmates in the vocational school. They went to work for one of the earlier EDWC shops in Taipei together: he on the shop floor and she in the computer lab doing CAD drafting and programming. They got married, moved to Taichung and opened their own shop. She still worked full time on the computer tasks. As the business expanded, Mr. Lin gradually moved toward managing outside contacts, and left the shop essentially in the hands of his wife. She not only did computer and clerical work but also had a good understanding of the shop floor technologies, directed the production workers, giving technical suggestions to the customers. Here, the female realm of home included the workshop, while the male realm extended to the outside social connections.

The role of kinship in providing business connections was minimal. Of the five cases, only HQ had some significant business connections through kinship. In November, 1997, when the plastic mold business began to recede because of the Asian Economic Crisis, Cheng Wenbin and Li Baoxi both sought out new jobs from their wives' relatives. They got some jobs processing shoe molds and cast molds, which were both considered very distinct lines of business from plastic molds.

When asked about the relative importance of various sources of business, all informants responded that old schoolmates and former coworkers were the most reliable sources. School and coworker ties could be as rewarding in obtaining work as were those with relatives in obtaining financial backing; that is, they could bend the logic of pure market relationships between strangers but not replace it. The shared experience not only welded personal bonds between them, but also made them aware of each other's work capabilities, styles and credibility. Since none of the working relationships, hiring or subcontracting, is actually based on legal contracts, personal understanding is often the only guarantee to the success of such endeavors. Can the new job applicant really do lathe work to the degree of precision that he claims? Does he shirk? Is the employer short-tempered, nitpicking or stingy? Will the shop owner finish the job on time as he

promises? Is the company that is outsourcing work in sound financial standing? Will their checks bounce?

Personal connections, although they do not necessarily guarantee trustful relationships, can at least reduce uncertainties on the open market, allowing the buyers and sellers of labor power and services to make informed decisions. When and where personal connections are unavailable, it is entirely natural for the machinists to hire helpers from the open market, look for special process subcontractors in the trade magazines, or accept jobs from strangers. Yet such pure market relationships are always approached with more caution, such as setting a trial period in hiring or demanding prompt payments from the customers.

It remains to be explained why the “simulated kinship” among schoolmates and coworkers, instead of genuine kinship, is so important in the working relationships of the machinists. Most informants also found this question interesting, as they too acknowledged that the Chinese traditions encouraged closer family ties in business than those that actually existed in the 1990s. Whenever I threw out this question in the shop floor chitchat, the result was almost always a lively discussion. The lack of family ties within the machine industry, most machinists agreed, was due to the lack of such relationships in hiring, which, in turn, is a result of the lack of inheritance of trades and occupations from family elders to juniors. The machinists offered a variety of explanations for this. Some, especially older ones, argued that younger generations were simply too lazy to endure the hardship of the “black-hand” jobs. Yet, from the discussions, there also arose two, more sophisticated, inter-related sociological explanations.

The first is that jobs and formal education now differentiated workers’ skills and career paths fairly early in life, and young people are often encouraged *not* to follow in the footsteps of family elders. After the mandatory education ends at junior high school (9th grade), working class and peasant youths almost invariably move out of the sphere of the family to be socialized. Poorer families often send their sons to apprenticeships and their daughters to factory jobs (both of which might be in conjunction with night-school education). Somewhat affluent families will

usually let their children go to vocational school or general high school (which leads to college) full time.

Greenhalgh (1994) describes the tendency of family business owners to influence or even dictate the education of junior family members as a way to steer them into their own firms as cheap, trusted employees. However, in my investigation, while owners of bigger firms such as DY Enterprise did exactly what Greenhalgh says, most small shop owners did not. Most younger machinists stated that there was little pressure from their families about their career and education choices. Instead, most of my machinist informants had followed either the advice of school teachers, their peers at junior high school, or sheer chance to enter apprenticeship or machining programs in vocational school. Their siblings, having been socialized in different groups at school or on the job, often went into vastly different occupations. In addition, working class and peasant family patriarchs, facing daily difficulties in their own occupations, rarely encouraged their children to follow them. Instead, they either encouraged children to move higher up on the social ladder than they did, or were indifferent to the job choices of the children, as long as the jobs were perceived as respectable and gainful. In such cases, although the family members might be connected financially, they could not help (or exploit) each other only through lending or giving money, but not through contribution or appropriation of labor power.

A second explanation my informants offered was that a relaxed labor market allows younger people the freedom not to resort to family ties for jobs. Older machinists often recounted that in the 1950s and early 1960s, entering skilled trades such as machining, even as an apprentice, required many connections because jobs were scarce and competition high. Huang Mingzhe's experience is an example. He apprenticed at a machine shop in South Taichung in the late 1950s through the introduction of his uncle, who was acquainted with a foreman at the shop. Apprenticeship in those days, similar to more traditional trades, had a strict term of three years

and four months.³² The ones who introduced him, his uncle and his friend the foreman, had to sign a contract to guarantee the apprentice's good conduct and completion of the term. The very real necessity for connections made it virtually impossible for young people to choose jobs far beyond their family connections, unless they were willing to start as common laborers. This situation has been totally absent in the labor market since at least the 1980s. In the past two decades, expanding industries have been desperately seeking workers; consequently, job opportunities were everywhere, even though the pay and working conditions might be bad at times. Job-hopping became a common practice of young workers. Family connections, although nice if one had them, were no longer essential. Instead, the peer groups one joined at school or on the job often became more important for developing into long-term relationships.³³ The groups might hop from one job to another together, and maintain close ties even after the members open

³² "Three years and four months" is still a widely used idiom among working class Taiwanese to denote a rigorous and orthodox training, such as that of a traditional apprenticeship. Hou (1998) traces the origin of this term in the traditional carpentry trade in Lukang, the oldest trading town in Central Taiwan.

According to his informants, during the apprenticeship, the apprentice received only room and board and pocket change (called "barbershop money") and used his surplus labor to "purchase" the craft and membership within the guild. Three years of surplus labor was considered the "fair price" for those, and the additional four months was meant to make up for holidays during the three-year term. In Lukang, however, this kind of indentured apprenticeship had largely been displaced in the early 1960s, when the rising urban industries began to compete for labor power with the traditional trades.

³³ In some cases, the "*kâng-the*" (same batch) relationships in the military service were also instrumental.

For instance, Li Boaxi of HQ and Liu Yinan of XC Plastic Mold, a two-man shop in East Taichung, were of the same batch in the army. They frequently exchange business opportunities or even use each other's machines for free.

shops of their own.

In other “low-skill” industries in Taiwan, such as garment (Ka, 1987) or simple plastic injection (Niehoff, 1987), unpaid or low-paid women and junior kin are instrumental sources of labor power. In larger firms relatives are often hired as trusted managers. (Greenhalgh, 1993) Unlike in these cases, family ties for the machinists are now more in the background. While the financial resources family provided (or did not provide) do have a significant influence on many aspects of a machinist’s career, the more important working relationships are established through the web of schoolmates and coworkers. These latter relationships often emulate kinship ties and can be as hierarchical. Yet the reduced significance of kinship and its substitution with non-kin relationships in the organization of work implies an erosion, if not yet subversion, of the traditional patriarchal roles of the independent machinists. The new simulated kinship relations are more reciprocal and versatile than traditional patriarchy. In the next section, I shall explore this erosion of traditional patriarchy from another angle—communal ritual practices.

4.4 *The Village Tudi Gong and Civic Life*

Extra-economic ties are often held by social scientists as one of the most important factors in previous analyses of dispersed industrial structure. Piore and Sable (1984), for instance, describe the northern Italian textile, ceramics and shoe machinery industries as a model of artisan-controlled “flexible specialization.” They suggest four factors that allowed these small interrelated firms to flourish outside the milieu of mass production: the Italian extended family, the view of artisan work as a distinct activity, the merchant traditions, and the favorable policies of local governments. (227) In their analysis, these are not merely coincidence or remnants of the Middle Ages, but the products of a complex of recent historical and contemporary events: the pro-petty-bourgeois policies of the Fascist regime, the struggle of a socialist working class against the big capitalists, the efforts of the Christian Democrats to secure votes in the rural parishes of some areas, and the attempts of Communist local governments to win the small business to their

side in other areas. In any event, the result is that the artisans exercise considerable control over the local social, political and ideological institutions. In this way they limit entrance to the trade and, thereby, to attenuate cut-throat competition among the small businesses in the trade.

In the context of the machining trade in the Taichung area in the 1990s, how much such extra-economic restrictions on business practices existed was questionable, and the control over or even participation in local institutions varied greatly between small and big firms. A more detailed investigation on participation (or the lack thereof) in the smallest local rituals may help to understand this issue. Traditionally, participation in rituals had been one of the most important realms of civic life for Taiwanese businesspeople. As Gates puts it:

“‘Being Taiwanese’ involves having roots in a family and in a community, which gives a person a solid, reliable reputation in business. It also means maintaining at least some ritual traditions and ties with a temple as a public demonstration of prosperity.” (1981: 277)

With the publicly acknowledged prosperity come good reputations, credibility, and social networks. Ritual life is crucial for Taiwanese business people who rely so much on their social networks. By this standard, few of my small shop owner informants had much of a civic life in the traditional sense.

Both the HQ Enterprise and the larger DY Enterprise were located in Jiayin Village, of the Wufeng Township. Carved up by two six-lane highways and invaded by the sprawl of the town of Wufeng proper, the village itself was recognizable only in the form of the dwellings centered on the village temple and some scattered rice paddies surrounding the dwellings. Yet the Tudi Gong shrine guarding what used to be the entrance to the village still stood under two large Banyan trees, and the highway made a careful curve to avoid intruding on the temple property. On every 2nd and 16th of the lunar month, villagers as well as workshop owners who did not have altars of Tudi Gong in their shops would bring incense, stacks of ritual money, and modest sacrifices to the temple for their own worship.

The three partners at HQ, without an altar of Tudi Gong in their own shop but keeping the

ritual norms of the trade, were always among the crowd at the Jiayin shrine. In the afternoon, on the worship days, they always left the computer or machining work to the helpers and went to pay their homage to the village Tudi Gong. On the 2nd of the second lunar month, Tudi Gong's birthday, HQ Enterprise donated a modest sum of NT\$ 1,000 to the general fund of the temple, as almost all other small shops in the hamlet did. This constituted the sum total of their relationships with the local Tudi Gong—cordial, respectful, but distant. Similarly, CY's Lai Hungzheng kept regular worship at, and limited financial donation to, the Tudi Gong shrine in the neighborhood of his shop. Owners of both shops were considered “outsiders” to the locals. Lai and HQ's Yau were from another county; Li and Cheng were from the nearby townships of Cautun and Tanzi. They therefore were not (by the archaic Imperial population registration system the temples used) on the ecclesiastical local registry and had no vote in the selection of the committee of the local shrine. Even though they did vote in the secular local elections, they were disenfranchised from participation in local ritual organizations. They consequently paid homage to the local Tudi Gong in a manner similar to paying rent to the landlords of their workshops. This kind of passive participation prevailed among workshops that did not own the building and land and/or where the owners were not related to local clans.

Especially in the newly urbanized communities, the two determining factors for ritual participation, land ownership and local clan affiliation, were often intertwined, as the owners of now urban land were usually former local farmers whose farmland had been rezoned. The eight members of the committee of the Jayin Village Tudi Gong shrine were elder local farmers or former farmers from the hamlet. The chairman Lin Baosheng, a merchant, also served on the committee of the village temple and the public temple of the whole township. He was also a campaign agent for local political factions in elections. The vice-chairman Chen Facang, a retired plumber, owned a private shrine for other deities and provided private ritual services for donations. He was elected as the lay ritual specialist for the Tudi Gong shrine. The shrine organization served as a node to weave together the ritual and political ties that dominated the

local community life.

SY's Ruan Dongyi had a different relationship with the local shrine. Although he did not have a company Tudi Gong either, before he moved, his shop was in his ancestral home. Thus the jurisdiction of the local Tudi Gong was over his entire family instead of over the workshop alone. Ruan's mother managed the ritual ties on behalf of the whole family, just as she managed the family savings with the village women's mutual-aid groups. She also went on Mazu pilgrimages with the local Mazu temple and brought back pilgrimage flags to be put at the domestic altar. Yet in most of the ritual occasions, such as the fortnightly worship, she needed men in the family to play at least a token role. Thus Ruan Dongyi and his father had to follow Mrs. Ruan to the neighborhood shrine to offer incense, even though all other ritual preparations were done by the family women. The move from ancestral home to the new site partly severed Ruan Dongyi's ritual ties with the local Tudi Gong, and his participation in the rituals of the new neighborhood became as passive as the owners of HQ and CY.

Shop owners such as Li Changrung (CR) and Lin Kunsheng (HJ), who each had their own company Tudi Gong, were even more detached from local ritual activities than those who did not. Ritually, they became self-sufficient units, and even the periodic spiritual regeneration rituals that featured the traditional cult of Tudi Gong were absent in such cases. While Li Changrung kept strong ritual ties with the cult in his natal village in Zhanghua county, Lin Kunsheng's ritual practices were confined almost solely to the worship of his own company Tudi Gong.

For successful businessman, like Lin Kunsheng, the center of civic life had shifted from folk ritual cults to more modern, and often imported, secular civic associations. Since he expanded his shop to three EDWC machines and broke free from confinement to daily work on the shop floor, he had joined the local Kiwanis Club, members of which include owners of mid-size enterprises, teachers and police officers. And, in mid-1997, he purchased an expensive membership in the prestigious Taichung Golf Club. Similarly, Huang Mingzhe, the milling machine maker, was an active member of the local Rotary Club as well as the Golf Club. Lin Lisheng, the owner of DY,

was a long-time member of the elite Rotary Club of Taichung City, which made him the peer of many of the topmost business and political movers and shakers of the region. At the wedding of his son in March 1998, the Rotary Club Choir entertained the guests, including many of my small-shop-owner informants, and apparently awed them with their cultural sophistication. The mayor of Taichung City also gave a lengthy speech congratulating the newlyweds and praising the esteemed members of the Rotary Club and Mr. Lin's clan. For the well-to-do in Taichung's machine industry, folk rituals had ceased to be the only, or even the most desirable, venue for the demonstration of their prosperity and the cultivation of social networks. While the common folks still wheeled and dealt with spiritual officials like the local Tudi Gong, the more successful businessmen actually dined with the real-life officials. With the election campaigns becoming the most important political process, the affluent factory owners even helped determine many of the officials' careers with their crucial campaign contributions.

Worth noting is the fact that interpretations of Tudi Gong had become much more diversified during the transformation of the local society. The traditional interpretation emphasizes the magical power and efficacy of deities. Implicitly, because efficacy is constituted by the worshipers' devotion and piety, this interpretation celebrates communal solidarity. This understanding now competed with views stressing capitalistic self-help and individual morality. Lin Lisheng maintained rigorous worship of his company Tudi Gong, but he did not actually believe in magical powers and the blessings of the deity (although many of his technicians did). Instead, his interpretation was that the worship was a humble gesture of thanksgiving to the community and the environment. The humbleness made one seem morally upright but was not expected to produce tangible economic results. (970912) This is exactly the interpretation KMT political officers aboard *CNS Chung-Chi* used to sanction the year-end "thanksgiving" worship of Mazu. Lin Kunsheng still believed in the spiritual power of the deity, but not in the form of unexplainable supernatural interventions. Instead, he said:

When I have a difficult decision to make, I will offer incense to Tudi Gong and praise him. Sometimes, a flash of inspiration will then come to my mind. I thank him for that and take it under advice. (980507)

In both interpretations, the central actor was explicitly the individual entrepreneur himself. The outside world, symbolized by the magical power of the deities, merely aids in his self-cultivation, but does not determine his fate.

In the machining trade, the traditional “blessings” and “efficacy” view of the Tudi Gong was mainly held by the small shop owners and the employed machinists. For them, although individual initiatives were still the center of all endeavors, individual alone is not that powerful. Too many uncertainties in the outside world, on the open market, might change their fate in an instant. Dealing with the spiritual guardians of the locality as an attempt to cope with the world was still worth trying. Yet, the small machine shop owners, unlike their peasant forefathers, although they still owned the means of production, were less and less woven into to the social fabric of patriarchy and rural community. For that reason, they often dealt with deities like Tudi Gong as individuals, trading their offerings for the gods’ blessings. They ceased to participate as members of a collective of believers who not only provided for the deities, but also constituted the efficacy of the deities.

4.5 *The Weiya Blues Syndrome*

Weiya, the 16th of the 12th lunar month and the weeks around this day, was a depressing time for the independent machinists. Around this day, almost every small shop owner I regularly visited was unhappy, irritated and restive. What made them even more depressed was the popular view of *weiya* as one of the few joyful moments in the business world. In the mainstream press this event has always been highly celebrated and held as a unique expression of the humanity of Taiwanese enterprises.

Before the end of the lunar year, all employer in Taiwan is expected to provide a

thanksgiving feast to their employees. In the old days, it was the farm laborers that would be feasted by the landlord. Taiwanese people generally regard this as a Chinese tradition from time immemorial, but I failed to find any mention of this custom in ethnographic writings on other parts of China. As a perfect ritual inversion of the dominant order, during this feast, employees are recognized by the employer as the creators of wealth. The employer usually has to express his/her gratitude for their labor by toasting every employee during the banquet. Big companies sometimes pass out year-end bonuses and have a raffle, the prizes for which can be as desirable as a new car, in more prosperous companies.³⁴

Out of all of the five core cases of small shops, only the most prosperous, HJ Precision, had a proper *weiya* banquet of its own. The smaller shops simply substituted for the banquet a red envelop of cash for each employee. As Ruan Dongyi put it, it would be absurd and utterly depressing to have a “banquet” for himself and his helper A-Lam alone. Moreover, all small shop owners, including HJ’s Lin Kunsheng, had to attend the *weiya* banquet of their big customers and be feasted and toasted and given thanks along with the customers’ factory workers and small subcontractors. The symbolic meaning was loud and clear. As an inversion of the ritual inversion, the fact that on the *weiya* banquet they were feasted instead of feasting others, thanked instead of thanking, revealed the understanding that, in the rest of the year, these ostensibly independent machinists were subservient to the hosts of the banquet. For them, the benign and humble gestures of their big patrons were condescending, and painfully exposed their own conditions of dependence, which were otherwise shrouded under the opaque veil of independent ownership of property and independent control of labor process. As Ruan Dongyi recollected, “When the big

³⁴ When the Asian economic crisis began to bring down one after another large Taiwanese corporation in late 1998 and early 1999, many companies cancelled their *weiya* banquets and passed out modest cash bonuses instead. This was perceived as a particularly alarming phenomenon, signaling gloom for ever Taiwan’s economy. See *China Times Express*, 1/30/1999, p. 3.

boss toasted me, I came to realize that, after all these years of hardship and struggle, I am still just a hired hand.” (980115)

This unsettling knowledge was, of course, nothing new to the independent machinists. In their daily work and life, the working class dependencies of their condition appear on all sides. In ritual and civic lives, they were becoming detached, passive participants instead of active constituents of the community. Socially, the efficacy of patriarchal kinship in organizing work was deteriorating. These family men were thus thrown out of the secure, ascending path leading toward a dominant position as patriarch, which traditional patriarchy had promised them. More and more uncertain market relations and reciprocal personal ties structured their everyday lives. Prices for their services were based on labor time, exactly like the way factory workers’ wages are set. In the organization of production, the output of these small shops could not become useful and saleable commodities unless they were organized, assembled and distributed by the merchants or big factory owners—the legally designated “makers” of products.

If one understands “exploitation” in its dual meaning both extraction of surplus value and bringing a passive element into useful being (as in the exploitation of natural resources), adequately captures the relationship between the product “makers,” the merchants and the big factory owners, and the “independent” machinists. Without the vital but exploitative link to the local and world market provided by the patrons, the small workshop could not independently set the cycle of commodity production into motion. Studies of small family firms often use an ironic oxymoron “self-exploitation” to describe the excessively intense work in these shops.³⁵ (Gates, 1981; Piore and Sable, 1984: 1984) Later critics tend to point to outright exploitation inside the family: of the patriarch over women and junior family members. (Greenhalgh, 1994, Gates, 1996)

³⁵ The term “self-exploitation” is, in my opinion, misleading. Exploitation in its primary meaning of “taking surplus away” requires two parties in the action, one deprive the surplus from another. One cannot exploit herself more than she can pull herself up by the shoestring.

For the small machine shop owners in Taichung, even this privileged position became less and less attainable with the deterioration of patriarchal relations. Except for the few helpers each of them might have, the only persons to be exploited were the shop owners themselves; they are exploited by their patrons but use their very own hands, ebergy and intelligence to accomplish this end.

The machinists themselves understood this situation. According to the analysis of Lai Hungzheng the lathe shop owner, the future for independent machinists was precarious. He said:

It is clear for a machinist that if you cannot make your business grow so large that you can live off other machinists' labor—say, becoming a product-making merchant or a bigger factory owner—you are doomed. After you turn 40, your strength and vigilance decreases, your ability to learn new techniques grows dull, and you cease to be productive on the shop floor. Then, if you are self-employed, you cannot do enough jobs to sustain yourself. If you work in another person's shop, you will be fired with any excuse. You end up with menial jobs, like parking lot attendant or security guard. That is what most of the masters I apprenticed with ended up with. Whenever I see them, I see my future. And I don't want this future. (971020)

In other words, under the cruel market reality of Taiwan, one has to either exploit others, or be exploited. In one's youth, future seems forever malleable, and skills, hard work and personal initiatives can possibly change one's fate for the better. Yet the logic of capitalism will eventually catch up when one grows old. Eventually, those who labor and those who exploit will be forever separated in two antagonistic classes. It is no wonder that during my whole year of field work in the Taichung's machine industry, I had never seen machinists older than 50 and still working on the shop floor. The absence of old craftsmen contributing their time-honored craftsmanship in the production process is one decisive difference between Taiwan's World of Black Hands and the medieval patriarchal trade guilds. The Black Hands, after all, are in a capitalist world now.

4.6 *Summary*

The analysis of the middle layers is always an intriguing and challenging task in the study of class societies. Concerning the male skilled workers, there have been some widely-held misconceptions, both in the Taiwanese folk ideologies and in academic discourses, that are challenge by the closer empirical examination of the condition of self-employed machinists in this chapter.

First, it is widely believed that the male entrepreneurs in the family firms are still in a similar situation of petty capitalist patriarchs in late Imperial China. Hill Gates (1996), for instance, use this perception to argue that there is a fundamental difference between Chinese market economy and Western capitalism. This perception is also a fundamental reason that entrepreneurship remains a live aspiration for Taiwanese male workers. However, at least in the cases examined, the patriarchal kinship that allows male household heads to appropriate the labor power of other family members had now lost most of its effectiveness. The entrepreneurs, therefore, have to confront the market, in large part, as individuals, just like in a typical capitalist social formation.

Second, ownership of the means of production is often regarded as a solid foundation for the entrepreneur to confront the market as a free producer of commodity and control his own labor process—just like the medieval craftsman did. In reality, in industrial capitalism, production of one commodity typically involves a great number of people engaging in a variety of productive labors in a socially coordinated way. Flexible specialization divides these coordinated labors into different production sites, each of these sites being under different ownership. Yet it does not change the nature of vertical division of labor developed in the factory system. Thus each of these flexible-specialized producers often perform only a segment in a long process, and only the merchant who organizes these segmented labors into a whole process can have a view of the totality of the socialized production. Each of these tasks the small workshop perform is useless unless it is organized into the whole process. This way, the small entrepreneur-producers have to depend on the merchant to make their own labor, along with their own productive machinery,

useful. This dependence is very similar to the dependence of wage laborer on the capitalist.

Third, Hsieh (1997) argues that since payments for labor in the subcontracting chain of small producers are typically in the form of piece rate, the exchange between subcontractors and their clients, the small producers cannot but fall prey to the deceit of capitalist hegemony and failed to understand that they are selling their own labor power. Based on this argument, Hsieh further suggests that Taiwanese workers, who are either under the piece rate system or aspiring to become piece-rate-earning entrepreneurs, cannot develop its own class consciousness. However, as every entrepreneur machinist who bargain with patrons over piece rate everyday knew, his labor time, namely, segments of his labor power, is what he sells. The dependent and exploited condition of the entrepreneur machinists did not escape their own eyes.

In sum, what we see in the industrial suburb is a differentiating society. Age-old social relations such as petty capitalist patriarchy is giving way to a set of more full-fledged capitalist relations. The former petty-capitalist class is differentiating into two antagonist classes of capitalist and workers. This is not only so in objective conditions, but also reflected in the entrepreneurs' own understandings of the world in both implicit and explicit forms.

Before proceeding into the next chapter, however, I would like to point out that although the Taiwanese industrial suburb is moving toward the direction of full-fledged capitalism, it is not yet a typical Western-style capitalist society. The traditional patriarchy is not replaced by an atomized individualistic culture. Instead, reciprocal personal connections replaced the old hierarchies and become the most crucial form of social organization. Cultivation of particularist personal ties thus becomes the most valuable skill. In addition, just as personal relations are typically not atomized, work skills—the relations between people and productive technology—are not segmented either. This crucial difference between contemporary Taiwan and the West will play out in the awkward introduction of international management standards, which I shall explore in the next chapter.

Chapter 5: Shelving the ISO-9000:

Smart Machines, Skilled Workers and Hegemony

Lively conversation at DY Enterprise's small conference room went on and on well past five o'clock, while the rest of the company punched their time card and went home. The issue was the one that has been sweeping through corporate workplaces throughout the world since the 1980s--organizational restructuring. And the occasion was one of a series of preparatory meetings for the certification for the International Organization of Standardization's ISO-9000s standards for quality organizations—a status sought after by an increasing number of companies worldwide in the 1990s. Convened by the vice president of the company, the ISO-9000 implementation committee was composed of representatives from each production shop floor and managerial sections, and the company president.

Ms. Lin Hanshu from the production planning section started the meeting with a presentation on the requirements for ISO-9002 standards, one among the ISO-9000s series. She had just attended a training course offered by a consulting firm in Taipei. Then, the VP drew the current organizational chart on the board, and, with enthusiastic inputs from the participants, added and erased one after another positions and even whole sections on the chart.

After an hour into the meeting, Mr. Lin Lisheng, the company president who usually maintained a calm and patient demeanor, was visibly anxious.

"We have been doing this practically every three to four months for the past two years. We can draw charts in anyway we want, but our real organization of work never seems to change. This time, we really have to change, or we'll never get the certification," said Mr. Lin.

"I guess our current way of doing things is already a kind of cultural tradition. It's not like a machine which you can change settings by turning a dial," responded Mr. Yen from the mold shop. "We are customer-oriented, they [the ISO-9000 consultants] want us to become

task-oriented.”

Mr. Lin articulated the problem at hand: “We have to make a decision. Do we want to change from division of labor according to customers, as we always has been, to division of labor according to functions?”

After a long deliberation and some more changes on the drawing board, the meeting settled with a model that divides work “primarily according to function between departments, and secondarily, inside the departments, according to customers.” This principle should be sufficiently close to the ISO-9002 standards, as interpreted by the consulting firm, but not too far away from DY’s long-time *modus operanti*.

Mr. Lin was not yet satisfied with the conclusion. He told me after the meeting:

“I don’t want the implementation of ISO-9000 standards in my company to be a cosmetic effort. Many companies do this by simply hiring two “ISO-9000 ladies” to forge the documents and records. I want to use every opportunity, including this one, to modernize the company. Although I do have good relationships with my employees, many work procedures are opaque to me and, in effect, to everyone else except the individuals doing the jobs. ISO-9000 promises open information and better control [by the management] at all levels. But it looks like we need a long time and much effort to deliver such promise.”
(980305)

The problems this meeting tried to address are longstanding at DY, and common in Taiwanese workplaces: the contradictions between formal bureaucracy and the personalistic culture, between modern capitalist vertical division of labor and the petty-capitalist horizontal division of labor, and between management hierarchy and skilled workers’ autonomy. In the previous three chapters, we have seen these intertwined contradictions playing out in three organizational configurations: the large bureaucratic settings of the military intersected with the late Imperial Chinese social formation; the factional politics and village-like organization of private-sector machine companies; and small machine shops in the village-turned industrial suburbs, which are independent in ownership but dependent in the labor process upon larger firms

or mobile merchants. All three contexts are featured by intricate hegemonic orders constituted by traditional and novel elements.

In this chapter, I shall explore the connection between the cultural-bound local configurations of social relations in labor process and the global forces of capitalism. My analysis of the local-global interactions will be focussed on the seemingly brand new issue of ISO-9000s. The enthusiasm for the ISO-9000 standards is now permeating through many industries in Taiwan including the machining industry. Among the machine shops I investigated in the 1997-1998 period, TW was certified for ISO-9002 compliance in 1996, DY was actively pursuing the same certification, and the small family workshops were either already involved in their big customers' ISO-9000 initiatives, or seeing the influence coming their way.

Although formulated as quality standards, the ISO-9000s do not actually regulate any tangible and measurable quality of products or services as such. Instead, their focal point is on the "quality organization" and the most important requirements for such organization is "openness of information." This inevitably draws in the complex issue of information and information technology at the workplace. Numerous managerial reforms and corporate restructuring taking place in advanced capitalist countries are often attributed to the development of such technologies. As I shall argue later, there are strong continuities between such reformed or flexible "Post-Fordist" workplaces and the original Fordist workplace, where control over the labor process is concentrated in the hands of the corporate management. ISO-9000s, which allow for centralized detailed control over labor process in dispersed industrial organizations, is one crucial element in maintaining such continuities.

As a society long under dependent development, Taiwan's economic and social landscape has been shaped, in great part, by powerful forces from abroad—Japanese colonialism, U. S. multinational corporations, and so on. The trends and fads emerging in the advanced industrial countries inevitably have great impact on Taiwanese industries who look up to these countries for, among other things, vital markets, sources of new technologies, and paradigms to be followed.

Consequently, it is reasonable to suppose that the technological and managerial changes in the West will profoundly affect the Taiwanese workplace.

However, being no strangers to hegemons ruling at a distance, workers and managers in the Taiwanese workplace have managed to “shelve” the newest imported managerial paradigms—venerating them while rendering them irrelevant in day-to-day practices. Like the official regulations aboard the naval ship *CNS Chung-Chi*, the ISO-9000 standards in the Taiwanese machine shops I studied were often implemented in highly ceremonial ways, while the local configurations of social relations in labor process persist regardless of the reform measures. TW Gear is one of such cases that I shall discuss later in this chapter. Whether this would be the case in DY was uncertain, but Mr. Lin was surely seeing the strong possibility that ISO-9000 will be shelved in his company, too.

On a broader level, even the politics embedded in the imported technology did not significantly change the Taiwanese workplace. For example, the introduction of information technology on the shop floor, especially computer-numerical-control (CNC) machines, carries a strong deskilling tendency and has aroused profound controversy in the West. (Cf. Chapter 1) Yet its impact on the social relations at the Taiwanese machine shops is much less dramatic. In the West, the most visible change accompanying CNC machining is the removal of much of the conceptual part of machining work from the machinist into the hands of the programming engineers, and, consequently, the strengthened domination of the latter over the former. In Taiwan, skilled machinists remain in firm control over their work, and programming is either done by the machinists themselves or perceived as an auxiliary work in the service of the “real” machinists. Moreover, such auxiliary computer work is often viewed as “feminine” and usually done by women—in stark contrast to the hierarchy entailed by the Western design of CNC technology.

The interplay of the local and the global elements in the construction and attempted reconstruction of workplace social relations include more than the subtle subversion of the novel

global paradigm by the persistent Taiwanese traditions. From another perspective, a central part of what the flexible management reformers try to achieve in the West already exists in the reality of Taiwanese businesses. As elaborated more in depth in the first chapter, the flexibilization of Western workplace is a broader project to conjure up individual workers' entrepreneurial initiatives in a context of highly bureaucratized monopoly corporate structure. For example, recently, after AT&T announced the layoff of 40,000 workers, its vice president of human resources James Meadow explains that, under the imperative for corporate restructuring:

[The management at AT&T] have to promote the whole concept of the workforce being contingent, though most of our contingent workers are inside our walls. . . . People need to look at themselves as self-employed, as vendors who come to this company to sell their skills. (Quoted in Perelman, 1998, 55)

This is exactly the prevalent understanding of Taiwanese male machinists about their own conditions, even when they are under wage employment. The fragmented market-like appearance of the workplace, against which ISO-9000 is a subtle counterweight, *is* what they experience as the norm, or, as Mr. Yen put it above, "a kind of cultural tradition" of Taiwan. Thus the imported flexible managerial paradigms, of which ISO-9000 is an integral part, for Taiwanese workers and managers, appear, paradoxically, both strangely out of place, and even more strangely close to home.

5.1 *The Taylorist Face of Information*

The generation and processing of vast quantities of information, in the context of which the ISO-9000 standards are designed, are often viewed as the center of today's capitalist business activities. Ever-increasing proportions of the workforce in advanced capitalist countries as well as the developing world are employed in such kind of work. And it is almost beyond dispute that the

information industry is the fastest growing area of the world economy.³⁶ In addition, like so many major technological changes in the past, the rise of information age brings about a wild euphoria for many social commentators proclaiming the end of the world as we know it. One example is George Gilder's famous claim:

The central event of the twentieth century is the overthrow of matter. In technology, economics, and the politics of nations, wealth in the form of physical resources is steadily declining in value and significance. The powers of mind are everywhere ascendant over the brute force of things. (Gilder, 1989: 18)

Such enthusiasm is often followed by claims of the "end-of-history" genre that social critiques and struggles based on the social formation of the bygone years of the industrial age—the age of grim smokestacks, captains of industry and toiling proletariat-- no longer applies. (e.g. Bell, 1974) Information, as Winner observes in the various proclamations of the "computer revolution," is often viewed as a "great equalizer" that will "cause hierarchies to crumble, inequality to tumble, participation to flourish, and centralized power to dissolve." (1986: 113) However, upon closer historical study, the reality appears quite different. In the workplace, the advent of the fast increasing information-related jobs and economic activities is precisely a result of the monopolization of industries on the macro level, and increasing management control over labor process on the micro level, both are features of twentieth-century industrial capitalism. The information age is born out of the trend of increasing hierarchy, maintaining inequality,

³⁶ Although not widely circulated, more cautious views on the "information economy" are arising even in the mainstream discourse. Daniel Sichel (1997), a senior economist in the Federal Reserve Board, for instance, points out that from the 1950s to 1990s, investment in information processing never exceeds 3% of U. S. GDP. And, from the 1970 to 1992, the computer has contributed merely 5% to the growth of labor productivity. Both figures are minimal in view of the overblown importance of the information economy in popular and academic discourses.

diminishing participation by the many, and centralizing power to the hands of the few. Developments toward the otherwise often either exist as yet-be-fulfilled potentials, as the “informing power” of the automation technologies presented by Zuboff (1985), or as unintended consequences, such as the anarchic characteristics of the Internet, which had its origin in the military establishment.

In his classical work on the rise of big corporations in the U. S., *The Visible Hand*, Alfred Chandler uses the case of the railroad to illustrate the historical process that lead to the modern corporate administrative system. Central to the establishment of centralized control is a comprehensive system of daily reports, compilation of detailed accounts, and other means for the central authority to construct a panoptic view of the subordinate branches geographically scattered in a wide area. As early as 1850, Daniel C. MacCallum, a general superintendent of the New York and Erie Railroad had recognized the centrality of information to big business:

[I]t is very important . . . that principal officers should be in full possession of all information necessary to enable them to judge correctly as to the industry and efficiency of subordinates of every grade. (Chandler, 1977: 103)

This had not been a concern for manager-owners of capitalist enterprises immediately before MacCallum. Management scholar Sidney Pollard describes the situation in the early part of the 19th century:

The large-scale entrepreneurs of the day began with very limited managerial, clerical and administrative staff: he wrote his own letter, visited his own customers, and belabored his men with his own walking stick, (quoted in Braverman: 1974: 259-260)

Such ways of management, very similar to most small Taiwanese entrepreneurs today, inevitably constrained business expansion by the limit of personal capacity (and personal wealth). Specialization and the expansion of enterprises, while breaking such constraints and helping to establish huge trusts, cartels and monopolies, made it impossible to run the business by the physical presence of the owner-operator. Instead, management’s knowledge of, and consequently control over, the labor process increasingly rely on formalized means of communication.

Taylorism, emerging at the turn of the 20th century, is to some extent but an extension of such pursuits. It merely brought the effort of formalization of the managerial processes further into the codification of minute details of work, and further concentrated the generation and management of information. In this context, information is not simply knowledge about certain things, events or people, but such knowledge disembodied from its bearers. Economist Michael Perelman notes that,

What seems to set the information age apart from earlier epochs is widespread codification of information; that is, general knowledge is worked into a form that simplifies its transfer from one party to another. . . . [D]e-personalization and formalization are integral parts of the creation of information. (1998: 10-11)

Knowledge is not “information” when it is in the brain of a certain person who use it as an integral part of his or her labor, in conjunction with his or her physical and other kinds of labor, in other words, when it is part of skill. Yet when a cook’s recipe is written down, or a craftsman’s special technique is analyzed and translated into CNC program codes, or a salesperson’s contacts are translated from personal connections into customer database, information is created. Such knowledge becomes transferable information. This de-personalization of information has its liberating aspects and potentials. It breaks down barriers created by workers’ differentiated knowledge and abilities and allows for large-scale cooperation in collective productive work. Yet under industrial capitalism, creation of business information often goes hand in hand with deskilling. In modern monopoly corporations, the flow of information is predominantly one way—from workers to management and from local management to central office. As Braverman points out:

The concept of control adopted by modern management requires that every activity in production have its several parallel activities in the management center: each must be devised, precalculated, tested, laid out, assigned and ordered, checked and inspected, and recorded throughout its duration and upon completion. The result is that the process of production is replicated in paper form before, as, and after it takes place in physical form. Just as labor in human beings requires that labor process take place in brain of the worker as well as in workers’ physical activity, so now the image of the process, removed from

production to a separate location and a separate group, controls the process itself. (1974: 125)

Developments since Braverman in managerial reform did not substantially change the centrality of paper (or digitized information) in the production in advanced capitalist country. In the “lean production” model, for instance, task sheets, time-and-motion studies, statistical analysis of production process, and all other information work designed in Taylor’s time remains. The amount of information generated alongside physical production work is still enormous, although production workers now participate in the paperwork, and the segregation between manual and mental work becomes less strict. (Womack, et al, 1989; Babson, 1995)

What is novel today is the growing trend of information becoming possessed as private property and traded as a commodity. And, as a rule of commodity production in capitalism, when information is created out of the often-tacit knowledge and skills of workers, it no longer belongs to the workers, Nor does it belong to the society, from interaction with which the workers develop such knowledge and skills. Instead, it becomes the private property of the employer. Consequently, utilization of such information becomes the prerogative of the management working on behalf of the owner of the intellectual property. Thus, in the information age, the Taylorist principle of separation of conception and execution in labor process is provided with legal basis. It now becomes the division between owners of intellectual property (the information previously created by workers), and workers who owns nothing but their own mental and physical labor power, subtracting the proprietary information in their own brain but owned by others. The latter cannot work unless through the employment and under the control of the former.

There is a visible continuity between contemporary managerial reform projects in the name of information management and hitherto developments of managerial control under the conditions of monopoly capitalism. However, there are also crucial differences. Frederick W. Taylor was able to proclaim unabashedly that there is only “one right way” of doing everything,

and it is the management's sole prerogative and responsibility to perform mental work, to produce this "one right way," and to dictate it to the workers. Yet, modern managerial reform projects are generally much more subtle and hegemonic than the despotic Taylorism. In the "flexible" management reforms such as lean production, workers' consent to the authority is an equally important goal as measurable profit gains for the capital. It is therefore preferable for the managerial control not to appear as such, but in other forms, as imperatives for some common goals of management and workers. "Quality" is one such common goal that is often used today. The ISO-9000 regime that seeks to achieve "quality" through "openness of information" is typical of such endeavors.

5.2 *Quality and the ISO-9000 Regime*

The ISO-9000 series is an issue full of amazing puzzlement and worth much more in-depth social studies than this chapter can afford. Although formulated as a series of technical standards for quality, it deals exclusively with organizational and procedural issues, and has nothing to do with objective qualities of products. Although in the form of practically mandatory by-laws regulating more and more firms internationally, it is not enforced by any state agencies. Instead, private, independent consulting firms audit and certify a company's compliance with the standards. In effect, the ISO-9000 regulates human relations in production. Yet, unlike other regulations on workplace human relations such as labor laws and collective bargaining agreements (CBAs), this series of standards poses as a purely technical matter, and is bestowed by experts, instead of being debated and negotiated by concerned parties like laws and CBAs are.

Furthermore, even as an organizational standard, this series is extraordinarily vague about what one usually expects from an organizational standard, such as individual rights and responsibilities. These details are all left for the management of individual firms to decide, and, as Patricia Kopp, a standard administrator of the American Society for Quality Control (ASQC), puts it: "There is no one right way to do ISO 9000. Industries are free to find their own way. They

can view it as a creative opportunity rather than an additional burden.” (quoted in Parker and Slaughter, 1995: 141) However, the vagueness and broad leeway in the ISO-9000 regime does not necessarily mean that it is an ineffective regulating mechanism or even a sham. In a hegemonic hierarchy, freedom and choice for the subordinate on one level is often accompanied with strengthened control by the superior on another level. While ISO-9000 does not require changes of an individual firm’s business practices, the most important change it requires is disclosure of detailed information about each firm’s practices to its superiors in the subcontracting chains.

5.2.1 What is ISO-9000?

Developed by the International Organization of Standardization’s Technical Committee 176, whose members include mostly North American and Western Europeans, the standards were published in 1987 as five documents numbered ISO-9000 through ISO-9004, and updated approximately every five years.³⁷ The ISO is the international organization responsible for setting standards for such things as threads on nuts and bolts, which allow many things from machine parts to technical reports to be interchangeable across national boundaries. These standards were promoted firstly by the European Union under its technical harmonization and product safety initiatives, and then gradually adopted by European corporations as requirements to their international suppliers. In the past decade, thousands of business consulting firms in countries

³⁷ The contents of the five documents are as follows. ISO-9000 is a general guideline for selection and use of quality management standards. ISO-9001 through 9003 are actual rules for quality management systems and differ from each other in scope. ISO-9001 covers procedures in all aspects from design through production, through installation and service; ISO-9002 covers the processes of production and installation, while ISO-9003 deals with final inspection and tests only. ISO-9004 provides guidelines for the elements of the quality management systems that the previous three documents define.

ranging from the United States to Bolivia have been established to help businesses acquire the ISO-9000 certifications. Every day, more and more companies in all fields have passed the certification processes. In Taiwan, there is even a famous national hair salon chain, the Mandu Salons, boasting its ISO-9003 (final inspection and tests standards) compliance certification in its advertisement.

The most important requirement for the entire ISO-9000s system is documentation. Table 5-1 is an explanation of the elements of the standards contained in Section 4 of ISO-9000 standard document. Whenever asked, a qualified firm should be prepared to answer these questions from a customer and support its answers with sufficient documentation. Presumably, product or service quality is maintained not by imposition of ossified criteria for tangible quality as such, but through establishing a set of internal quality procedures in every aspect of the business's daily operation; documenting all work procedures, and making sure that every employee abides by these procedures. This way, customers purchasing products or services from a company need not spend precious resources in its own quality assurance inspections—as in the case of TW Gear's customers measuring the precision of gears with a decibel reader.

TABLE 5-1: TWENTY ELEMENTS OF QUALITY PROGRAM AND WHAT THEY MEAN TO THE CUSTOMER		
4.1	Management responsibility	Who is responsible for ensuring that the product or service is what I ordered and when? Who ensures that your system is effectively managed?
4.2	Quality system	Is the quality system in place to ensure that everything delivered to me is as you said it would be? How do you make sure?
4.3	Contract review	What is your system for ensuring that what marketing and sales sold me is actually what I will be getting and when?
4.4	Design control	Show me how you designed the product and how you ensure it does what you say it does? Is there agreement between the designer and salespeople that it works as they claim? If you make changes to the design, how is it determined that my product is still acceptable?
4.5	Document Control	How do you inform manufacturing of the requirements and materials for building the products? If you make a change to the requirements, how is that communicated? If I need parts, will you be able to tell me what to order? If changes are made in the material requirements, how is manufacturing informed and how to test it or when to acquire the new parts? Will the service organization know which parts are needed for a repair job?
4.6	Purchasing	Can you show me how you are making sure that your purchasing group is buying what your designers and engineers are specifying? How do you know you are buying from a supplier who makes good product and delivers it on time?
4.7	Purchasing of supplied product	Show me how you protect, store, and maintain your materials. If there is a problem with the materials, show us how you fix it.
4.8	Product identification and traceability	Show me how you ensure my materials don't get mixed up with others and that they are really what you ordered. How do you check that they are what the drawings say they are? How do you ensure that correct materials are used when building my products?
4.9	Process control	Show me that you have procedures in place to build my products properly—I'm especially concerned with procedures on critical items relative to the manufacture of my products. Do you know how to make my product correctly and can you distinguish between the right way and the wrong way? Do you know when you are making junk? Do you have any points in the process where you cannot tell by inspection that the product is acceptable? How do you handle this? They should be written down so that people can easily access them if they have any question or if they want to train someone.

TABLE 5-1: TWENTY ELEMENTS OF QUALITY PROGRAM AND WHAT THEY MEAN TO THE CUSTOMER		
4.10	Inspection and testing	How do you ensure that I will receive what I ordered? Have you verified that my product will work as promised? Can you show me?
4.11	Inspection, measuring and test equipment	How do you ensure that the equipment you are using to test the correctness of my product is accurate? How do you do this?
4.12	Inspection and test status	Show me how it is indicated on my product that it was tested?
4.13	Control of nonconforming products	When it is discovered that part of my product doesn't work or fit as it should, is there an established procedure for fixing it? Does anyone know what to do when it is fixed? I would like it to be re-tested. How do you know it didn't get mixed with other products after you discovered it wasn't correct?
4.14	Corrective action	If you find a problem with a product, what is the procedure for ensuring it doesn't happen again? Are you writing new procedures and training people to ensure it doesn't occur again?
4.15	Handling, storage, packaging, and delivery	How are you ensuring my product was built properly and that it is packaged and stored to prevent damage? Can you make sure that delivery process keeps my products from being damaged?
4.16	Quality records	Do you have procedures to document the quality of my products? This should include the raw materials record. Could I find these records quickly if that was our agreement?
4.17	Internal quality audits	How do you ensure that you are running your operation as you claim? Have you trained a group of people to review your operation? Can you show me records that demonstrate that attention has been given to the critical areas? Can you show me where the management in the area has fixed a problem discovered by the audit team?
4.18	Training	Prove to me that the people who built and tested my products are trained. Do they know all the critical aspects of my product and how it should work? Has the supervisor agreed that the person is trained properly?
4.19	Servicing	If you told me you could service my product, how would you do that? Can you ensure that you will conduct your operation as well as you did when you first built my product (i.e. good parts, delivered in time, tested again)? Can you ensure that my product will be worked on only by someone who has been properly trained?
4.20	Statistical techniques	If you are using statistical techniques to validate that my product is good, could you show me that they work? Does everyone who is using these techniques know what to do when it is indicated that the process is out of control or moving outside the control limits?
Source: John T. Rabbitt and Peter A. Bergh (1993) <i>The ISO 9000 Book: A Global Competitor's Guide to Compliance and Certification</i> . White Plain, NY: Quality Resources. 14-17.		

As previously mentioned, the ISO-9000 standards are not enforced by any state agencies and are not required by law. Instead, they are promoted mainly through the big multinational corporation's requirements of its suppliers.³⁸ In addition, an ISO-9000 compliance certification is viewed in the business community as a good advertisement, and a company's acquisition of which is usually followed by much publicity.

In order to get an ISO-9000 certification, a company will have to establish and review its procedures, and write up a quality manual. This process is often done in association with major management restructuring and implementation of a computer-integrated information system. (cf. Thondavadi & Raza, 1998) Then, the company will call an accredited consulting firm (called "registrar" in the U.S. and "certifier" in some other countries) for an audit. After all deficiencies that the auditors point out are corrected, the company receives a certification issued by the registrar. Thereafter, the registrar will make twice-annual inspections to make sure the certified company abides by its own quality manual, and there will be a complete assessment every three years. The certification is never given by the ISO. The ISO specifically prohibit anyone from using the international organization's own trademarks, and from implying that the certification is issued by the ISO. (See <http://www.iso.ch/9000e/dontexis.htm>) The credibility of a company's

³⁸ There are dissent voices emerging among the top multinational corporations, though. In April, 1998, Industry Cooperation on Standards and Conformity Assessment, a consortium of 58 transnational corporations including IBM, General Motors, Ford Motor and Hewlett-Packard, called for changing the costly third-party certification system of ISO-9000 into one that companies can self-declare their compliance by the year 2005. Should this happens, the now fast-growing industry of third-party ISO-9000 certification firms may disappear soon, and the ISO-9000 regime will become a more direct control of the suppliers by the big corporations, without the mediation of a "neutral party." (Zuckerman, 1998)

ISO-9000 status is therefore dependent on the reputation of the registrar. In Taiwan, many companies seek European consulting firms to register their ISO-9000 status. TW Gear, for instance, is certified by a German firm TÜ V. The flexibility of the ISO-9000 standards makes the certification process open to much negotiation and manipulation. As Parker and Slaughter point out:

The vagueness of requirements shifts the technical issues [of a “quality management system”] to the registrars. Since the criteria are vague, the best way for a company to assure it will get certified is to hire a consultant who has experience with ISO 9000, or perhaps even some links to a registrar. And if management knows what workplace changes it wants to make—say getting rid of [job] classifications—it is easy to find a consultant who will weave these changes into a “quality program” that is supposedly designed to gain ISO 9000 certification. (Parker and Slaughter, 1995: 141)

Worth noting in the ISO-9000 documents are the highly elusive meanings of the terms, especially “quality” On one hand, in abstract terms, anyone living in a market economy, and hence being a consumer, would agree that “customer satisfaction” and “quality” are desirable ends for a business. Nobody, after all, wants a bad product or service for his or her money. Industries making quality products can also be a “win-win” situation for everyone. The companies get more profits by increasing sales and eliminating unnecessary costs. The consumers get better goods and services. The workers—even if their wages and job security are not increased with the profitability of the companies as promised—at least are spared of the frustration of making futile efforts on the job. And the environment benefits as well from the reduction of wasted material and energy. On the other hand, the commonsensical idea of “quality” is not usually what management consultants mean when they design a quality management system and measure it against the ISO-9000 standards.

5.2.2 The Elusive Quality

Parker and Slaughter provide an insightful critique of the deceptive aspects of the quality

zeal in contemporary business management. “Quality,” they argue, “is not a science, though its proponents like to pretend it is. At the root of any quality program are value judgements about what is and is not important.” (1995: 141) In the capitalist workplace, maximization of profit is the utmost standard for most business decisions, and it often comes at the expense of workers, and sometimes has little to do with the objective quality of the commodities through producing and trading which the profit is made. Take for example, the following elements of the common usage of “quality” by the management:

Waste Reduction:

The meaning of this phrase is less self-evident than it appears to be. To begin with, “waste” for the management, does not only include scrap material, defective parts, wasted energy and such, but also costs in all fields of business spending that can possibly be saved. In the lean production system’s hallmark “*kaizen*”—continuous improvement—process, for instance, the management puts great emphasis on soliciting workers’ input in improving “quality” of a workplace. The most valued suggestions are often in the field of saving labor. Elimination of “unnecessary” motions of the worker is considered a highly desirable “waste reduction.” This can be fine for workers if their jobs can thus be made less stressful and demanding. Yet such reduction in “waste” can be translated into the company’s profit only through reduction in labor costs per unit of product—i.e. either speeding up the production and/or laying off excess workers and/or replacing higher-paid worker with lower-paid ones. In this situation, the “quality program” is essentially an old-fashioned Taylorist scientific management project with deskilling as its main thrust.

Even if the reduction of waste is in material, it can have the same effect as reduction in labor costs. Parker and Slaughter (1995: 134-135) provide an example often used in the quality training program. Suppose a widget company normally makes 200,000 widgets per year, with a defect rate of 10%—20,000 per year. Each scrapped widget costs \$4.00, of which the cost of raw material is \$1.00. After the workers tackled the problem, the scraps were eliminated, and the

company saves \$80,000 per year. This sounds agreeable to everyone. However, upon closer look, quality for the customers—in the name of which this whole effort is made—has not changed. The customers never had to put up with defective widgets in the first place as, in most factories, the inspectors would catch the defect products before they are shipped. Among the \$80,000 the company saves, only \$20,000 is in actual material costs. The other \$60,000 comes from increased productivity. Previously, in order to make 180,000 good widgets, the company had to make 200,000 widgets, and now it only needs to produce 180,000. This saving, for the company, can be realized only through reduction of paid work time, and laying off 10% of the workforce that is no longer needed is one of the options. Therefore, the workers who participate in the improvement of the widget production line run the risk of becoming self-defeating, threatening their own jobs while saving costs for the company.

This is not to say, of course, that waste in production is good for the workers. Instead, it merely shows the inherent contradiction of capitalism that the livelihood of workers is the cost for the capital. If a company can possibly pay less to workers but does not do so, it is wasting money.

Conformity to Requirements:

The commonsense meaning of quality is highly subjective and often involves aesthetic values that vary from one individual to another. In the context of craftwork where the customers may interact intensively with the direct producer regarding a custom-made product, the customers' requirement may be easily achievable. However, this is seldom how modern businesses are run. For a typical Fordist corporation, what customers require of a commodity is researched by the marketing department, built into the design by the R&D, and translated into detailed work instructions by the management bureaucracy. In such a context, "[c]onformance to requirement' [for workers] means 'do what management has decided and do it the way management has decided.' Discretion for the worker is erased. 'Quality' becomes the justification for the rigid standardized work [of a Taylorist system]." (Parker & Slaughter, 1995: 136)

This conception of quality as "conformance to requirement" is closely related to the

conception of quality as “reduction in variation.” Indeed, one of the central aspects of contemporary quality assurance—the statistical process control (SPC)—is exactly aiming at identifying all kinds of variations in the work process and eliminating them. Uniformity may make perfect sense in the evaluation of qualities of interchangeable machine parts such as gears. For human workers or when complex human factors are involved, increased uniformity is not always desirable. For workers, it can entail worse working conditions, such as in the case of repetitive strain injuries caused by standardized motions on the assembly line. For consumers, it can mean worse goods and services for consumers, such as in the case when insurance company or HMOs impose standardized diagnostic and treatment procedures in health care. Yet uniformity almost always increases the interchangeability of workers and hence the control of capital over labor process. Thus corporate managers deem it a necessary and desirable element of “quality” even though it can be quite the opposite in the eyes of others.

Customer Satisfaction:

“Customer satisfaction” is supposed to be the ultimate goal of any quality improvement efforts. This notion is very agreeable to everyone living in a capitalist economy who is necessarily a consumer on the market, except that the term “customer” is often misleading.

Parker and Slaughter note that there is a popular tendency among advocates of quality programs to use the term “internal customer.” As a General Motors quality document says: “While the ultimate customer is the purchaser of the product, each production process along the line is the “customer” of the preceding process and must be treated as such.” (Quoted in Parker & Slaughter, 139) Thus, in a plastic parts factory, for instance, the subassembly worker is the customer of the injection machine operator, who is, in turn, the customer of the mold maker, and so on. In this view, the corporate workplace is a big marketplace, and each worker has to compete with coworkers in the selling and buying of his or her services, and work out the best combination of product, service and cost with internal suppliers and customers. However, this “free market” metaphor is, again, not the way modern corporations operate. In most corporate workplaces, there

are management plans, schedules, designs, requirements and instructions bestowed from above. The invocation of the market metaphor conceals the top-down power relations, and shifts the contradictions between management and workers toward competitions and antagonism between coworkers. This has little to do with the satisfaction of the “ultimate” customers, the consumers, but greatly enhances effective managerial hegemony.

Even if the “customer,” whose satisfaction is sought after in the quality program, is a genuine outside party who purchases the collective product of the workers, it is not usually the average consumers. As evident from the questions listed in table 5-1, the ISO-9000 series, with the disclosure of procedural information as the central premise, is not designed to serve individual consumers. It would be a fantasy to imagine that, in the foreseeable future, a shrewd consumer will demand, or be provided with, information regarding the efficacy of the process control or product inspection methods a company uses to produce the hamburger or car he or she buys. Instead, the customers who are likely to take advantage of the information collected and disclosed through an ISO-9000 certified quality management system are big firms who incorporate the suppliers’ products and services into the commodities they produce and sell.

It is this last element of quality programs such as ISO-9000 that makes them perfect companions to the downsizing and outsourcing trends of the big corporations in advanced capitalist countries. For an auto maker buying transmission gears from suppliers, an HMO subcontracting healthcare services to independent clinics, or a U. S. -based fashion company outsourcing production to garment factories in Indonesia, it is very desirable to take control of the ins and outs of the labor processes in which those commodities are produced. With these processes revealed through the ISO-9000 regime, the central firms can now examine, study, and then direct every step in the series of production activities for their products or the performance of the services they sell, regardless of where and by whom the task is performed. This kind of direct control can transcend boundaries of firms and nations. It is this potential that makes the ISO-9000 standards instrumental to a globalized capitalism.

In the past, such centralized control were made possible mostly through vertical integration of firms performing different stages in the production of a commodity into a big corporation, and thus bringing these diverse workplaces under the jurisdiction of corporate planning. With ISO-9000 becoming a prevalent international standard, such control is possible without integration of property ownership. Thus the work process can be subcontracted to numerous firms throughout the world, but the control can remain as effectively centralized as in the old days when everything is done in-house. In this regard, the ISO-9000 regime is an extension, instead of subversion, of twentieth-century monopoly capitalism. In the name of “quality”, it thrives to maintain uniformity—hence interchangeability—of all elements of production under the control of big capital, even when the ethos of mass production, which gave rise to the dominance of uniformity in modern society, is waning. It is little wonder that International Standardization Organization—the people who promote machine parts interchangeability—is the one who developed the ISO-9000 standards.

5.3 *The Craftsmen and the ISO-9000 Ladies*

5.3.1 Difficulties at DY

In the village-like Taiwanese machine companies such as DY, the precision parts workers produce may be uniform and interchangeable, but the workers themselves are hardly so. This was the problem that has been confronting the company president Lin Lisheng ever since he founded the company in the early 1970s.

As Mr. Lin recounted, his decades of effort to “modernize” the company had been mainly focussed on setting up a system of documentation on everything in the factory—detailed technical data, characteristic attributes of every machine, accounts of material flows, business contacts and transactions, etc. These were done in the hope that “the whole company can function like a machine, not a simple aggregation of able individuals.” (970925) To elaborate, “able individuals,” the skilled workers, may each have valuable connections with customers and

business associates, or with the machines—in the form of technical knowledge and affinity to particular machine established through years of experience. Yet if these connections remain in the hands of individual workers, they cannot be shared by other workers, and, more importantly for the company, cannot be managed unless through these individuals themselves. Mr. Lin gave a specific example:

Once I had an employee who went out and got a injection mold deal. Somehow, the customer was less than satisfactory. It could be either some problems with our molds, problems in installing the molds, problems with THEIR injection machines, or that the parts specification they gave us was incorrect. It may also well be that they just did not like the price because they lost money for some other reasons. There was no way I could tell whether it was our fault, their fault, or neither, because the person in charge of this case left the company three months later. It has been three years now. To this day, nobody else in the company can untie the knots we have with that customer. In such case, it is no longer a technical or money matter; it is a matter of personal relationships. You cannot substitute one person for another in such relationships. (970925)

As explained in Chapter 3, DY Enterprise, as a typical Taiwanese village-like company, had a two-tier workforce. At the bottom rung were contingent teenage, women or older workers in “low-skilled” jobs such as subassembly, warehousing, and housecleaning. They made up for about one fourth of the total workforce, but were usually considered by management and core workers alike as outsiders. Some of them, such as the women subassembly workers, had formal employment relationship with a labor-supply company, and were only “leased” by DY temporarily for a project. These workers were considered highly interchangeable, and many of them were indeed moving from one job to another frequently and stay at one job for only months or even weeks at a time. The upper three fourth of the workforce, however, were in a very different situation. Technicians on the shop floor and the design laboratory, salespersons, and clerical workers were all expected to develop all-around skills in, or at least some knowledge about, all the company’s technical and business activities. They were considered “insiders” and participated in the fortnightly worship of the company’s Tudi Gong. In addition, they would usually stay for years and keep close business and personal relationships with the company even

after they leave.

For this latter group of core employees, it is difficult to trade places with each other at work for two reasons. The first and obvious reason is the division of labor into different specialties. This is probably in common with all enterprises involving skilled labor. The second, and more characteristically Taiwanese, reason is the role of the skilled worker as not only a bearer of specialized labor power, but also an active builder and manipulator of a web of personal relationships.

Although the barriers between specialties exist in many workplaces under different social-historical contexts, those in the Taiwanese machine factories such as DY do have its special features. As mentioned in Chapter 3, DY is famous in the local machining and plastic trade for its comprehensive training program for core employees. Unlike in a typical Fordist labor regime where training is confined to each specific job classification, DY's training provides employees with good knowledge about each other's work. Even so, it does not render them interchangeable. No matter how much a salesperson might know about machining and injection molds, it was impossible for he or she to build a mold as well as did a mold technician trained through years of hands-on work. However, at DY, this barrier between trades is not equally impassable for everyone. While moving from jobs on the business side—sales, production planning, accounting, and so on—toward the production side—chiefly mold building and plastic injection—was extremely rare, the other way around is more common, and even regarded by the company management as necessary in the development of an employee.

Two factors contributed conspicuously to the one-sidedness of the occupational barrier. The first is the gender division of labor. With the exception of “low-skilled” subassembly work, production in DY and most other machine shops was an exclusively male domain. Women core workers concentrated in office jobs that involves handling of symbols and human connections, but not materials. In the gender hierarchy of work, men's domain encompasses women's. The second factor is the job hierarchy embodied both in the formal chain of command and the ideal

career path of the male skilled workers. Production is subordinate to managerial tasks. Thus moving from the lower to the higher is desirable but the opposite is not. Ostensibly, these two hierarchies contradict each other to the extent that production work (male) is higher on the gender hierarchy, but lower on the job hierarchy. Yet, they are coherent in the view of male skilled workers. As Huang Mingzhe, the senior milling machine maker explains:

To be successful in the machine industry, you need “hard” skills—solid technical background—so that you know exactly what your subordinates are doing, and you can do them better than they do. Men are better at this. You also need “soft” skills about management, personal relationships, money matters and so on. We may say women are better at this latter. But while man can learn to do the clean office work, women are just not suitable for the hard and dirty jobs at the shop floor. A man grows from being a worker on the shop floor, through learning how to run a business, into an entrepreneur in the trade. A woman may become very able in business by working at the front office. But without an equally able man, who knows how to handle the production, to work with, she cannot succeed in the machine industry. In this Black Hands’ World, “real power” (*shili*, with the connotation of “solid skill”) is more important than business skills. (971007)

Some women in the machine industry did object to this widely held view of women’s lack of “real power,” namely the technical ability to handle production. However, the gender segregation of work remains a norm in the Black Hands’ World. And the “soft” skills, which women are allowed access to, are widely perceived as auxiliary to the “hard” skills, which are exclusively male, although both are required of a successful, usually male, entrepreneur.

It is the exercise of the more feminine “soft” skills, though, that contributes most to the difficulties in implementing the ISO-9000 regime at companies like DY. The most important division of labor among DY’s core employees is what workers called “customer-oriented” division of labor. Each employee, no matter which department he or she may be in, is responsible for maintaining connections with a number of business associates. Each of these firms may be buying products or services from DY in one project, but selling their products or services to DY in another. Smaller workshops doing processes instead of products tend to subcontract more and buy less from DY, and larger companies making their own products tend to do the opposite.

Workers in the sales department deal more with the bigger customers, and those in production planning and on the shop floor tend to deal more with the smaller subcontractors. But since each business associate's relationship with DY may reverse from one project to another, the kinds of business connection maintained by the salespersons and the production people are not entirely different from one another.

Successful execution of a project often involves complex maneuvering of a wide array of personal relationships as well as business and technical activities. The mold shop foreman Hung Chengdian gave me an example of making an injection mold. (971105) Typically, at least ten units—including outside firms and DY's own sections--may be involved in the process. The tasks Hung performed in this one project alone covered almost all area of the company's business: planning, production, customer relationships, purchasing, training, finances, etc.

In October 1997, DY got a mold deal from CH—a neighboring plastic company. As this company is highly respected in the trade, Hung himself handled the case, not only because his skill is well-reputed but also because he has many friends working at CH. An initial meeting of Hung and an injection shop technician with CH's technicians clarified the requirements not specified in the sketch provided by CH, such as material attributes and some dimension tolerances. Then, Hung and his apprentice went to three different workshops to acquire the material—one for the mold frame, another for the mold core, and yet another to grind the surface of the mold core piece. On the way, Hung introduced the apprentice to the suppliers so that he could do the acquisition the second time.

Back at DY, Hung tried to schedule the CH job on the design lab's schedule to write the CNC program code for the cutting of some contours on the mold. The lab could not do it soon because a big Japanese customer's job was on the line. So, he turned to the small workshop HQ. Two of its co-owners were former workers at DY. In addition, Hung broke down the rest of the metal cutting jobs on the mold into six portions—milling, turning, drilling, EDM cutting, grinding, and engraving—two were done by his apprentice and himself at DY's mold shop, the

rest were subcontracted to four different shops. With each of the subcontractors, Hung had to haggle over the scheduling and prices for his job. This involves weighing past business and personal relationships, future prospects of cooperation, scrutinizing the jobs he currently have with the subcontractor, and a lot of exchanges of information over tea. After the portion at a subcontractor's was done, Hung and his apprentice went to scrutinize and fetch the work piece—sometimes bringing some other jobs there—and went to the next subcontractor. Finally, the work piece was brought back to DY for assembly.

Then, Hung brought the finished mold to CH's injection shop to test the mold. After scrutinizing the defects on the trial run product with CH's injection technician, Hung brought the mold back to DY and performed some alterations. One of the alterations had to be done by the subcontracted mold grinder, and Hung had to persuade the grinder not to do the alteration work immediately without charging extra fee in exchange for long-term good relationships. The trial and alteration went back and forth two more times. Finally, satisfactory products were turned out from the CH's injector. This whole process from taking the order to successful delivery took about two weeks. At the end of the month, one of DY's accounting ladies went to CH to collect the payment, in the form of a post-dated check. For how long was the check post-dated depended on CH's financial situation, the long-term relationships between CH and DY (and with Hung Chengdian personally), and how satisfied CH's boss was on this specific job.

The central task DY needed to accomplish in order to get an ISO-9000 certification, the consulting firm told DY, was to codify all its production and business processes typified by Hung Chengdian's handling of CH's mold project. Once the procedures were codified, and every step was meticulously recorded with a well-designed documentation system, anyone with similar qualifications could take Hung Chengdian's place and deal with CH. Moreover, the company could design a performance assessment system based on the objective criteria laid bare by the codified procedures, and a second person in the company could evaluate whether Hung Chengdian had done his best in this and every other jobs. However, as evident from the above

description, even to aptly describe a person's job is a daunting challenge. To meaningfully codify the job activities and document them are almost hopeless. Moreover, central to the efforts spent in projects like the building of a mold is the maneuvering of personal relationships. On this point, interchangeability of workers is impossible. No matter how well Hung Chengdian documents his interactions with all the things and persons involved in the project, another person, with different degrees of closeness to the subcontractors and the customer would have to interact with them very differently.

Table 5-2: Levels of Difficulty to Codify Skills at DY

Type of Skill	Examples	Level of Difficulty to Codify
Direct interaction with things	Machining; mold making	Difficult
Indirect interaction with things	Production planning; programming;	Easy
Indirect interaction with human	Accounting; personnel scheduling	Easy
Direct interaction with human	Customer/subcontractor connections; training	Difficult

There are, however, parts of DY's business that have already been meticulously codified and documented, as the ISO-9000 standards require. Those tend to be the activities dealing with things or humans indirectly. Table 5-1 lists the four types of activities and their relative levels of difficulties to codify. On the shop floor, attributes of every machine and every kind of material had been documented and compiled by workers into technical notes for reference. Most of the operational procedures of the machines are also written as part of the training material for new employees. Yet, the real procedure of work changes from one project to another. Especially for the mold technicians, who hardly ever repeat a task, codifying the procedures is doomed to be superficial. However, production planning and CNC programming at the design lab—the preparations for direct production processes—did have codified procedures. The planning staff's office work mainly consisted of filling out pre-defined schedule and material accounting forms, and the programming job was highly routinized translation from sketches to program codes. On the human side of business, managing connections with customers/subcontractors is a highly

unpredictable task, and the best the company required employees to do was to keep a journal of activities. Financial accounting—the indirect management of transactions with business associates--was highly routinized, so was personnel scheduling and work-hour accounting.³⁹

Worth noting here is the tendency that the jobs that are easier to codify, routinize, and render interchangeable, tend to be those regarded as women's jobs. Men's jobs seemed more resistant to the modernizing attempt of ISO-9000 and similar managerial reform projects. In the eyes of the ISO-9000 certifiers, women must be doing better quality work than men generally do. At TW, the ISO-9000 certified gear manufacturer, two women known as the ISO-9000 ladies played instrumental roles in maintaining the company's compliance with the standards.

5.3.2 Solutions at TW

TW proudly presented its ISO-9002 certification on its brochure. It was awarded by a German certification firm with a branch office in Taiwan. For every fastidious customers seeking to put TW's gear in its machines, there is a full set of quality handbook, work rules, regulations, and documentation that can provide detailed information about the daily operation that makes the quality gears they receive. However, as I walk through the shop floor of TW, I got an eerie feeling of going back to *CNS Chung-Chi* where mandarin officialism was effectively shelved by the unruly locals.

³⁹ There are important exceptions to this general pattern. For instance, design, an indirect manipulation of things, remain a highly volatile and hard-to-routinized job at DY. In addition, the pattern applies more toward the jobs and less toward the job bearers, as the core employees always do more than what was in their job description. Production planning, for example, is a highly routinized job in itself. But it is also always accompanied with responsibilities for managing subcontractor connections at DY, and thus the complex hard-to-codify direct dealing with humans.

The first bit of homecoming feeling for me came from the operational instructions posting all around the shop floor. Aboard *CNS Chung-Chi*, every gadget, be it as simple as a carbon-dioxide fire extinguisher or as complex as the main engine, was accompanied by an operational instruction printed on a piece of yellowing paper and framed on the bulkhead, gathering dust. Except for entertainment purposes during the tedious long four-hour watches, no seaman on board would bother to read the instructions. Yet their prominent presence maintained the appearance that the knowledge needed for the ship's day-to-day operation originated from some expert's office, far away from the seamen and close to the heart of the officialdom, where those instructions had been written. Similarly, every piece of machinery on TW's shop floor had a one-page operational instruction attached to it in almost the identical format as that in the military. Nobody bothers to read the instructions; in fact, nearly one-third of the shop floor workforce—the Thai migrant workers—did not even read Chinese language in which the instruction was written. Yet in the spirit of ISO-9000, such useless appendage is a crucial gesture, symbolizing the desire, if not yet the reality of unified managerial control.

Compared to DY, TW did have substantially more paperwork for the direct workers to do, and some paperwork was dealt with seriously. Unlike DY, whose production projects were usually handled by the same person throughout all phases, TW's production of gears is vertically divided between departments. TW's production workers were also more physically bound to their workstations by their machines. Thus, direct verbal communication—the most important means of interpersonal interaction at DY—was much less intense at TW. With the form of work organization at DY, all the detailed information about a project is in the mind of the core worker in charge, but at TW, some form of written communication is necessary to string together different tasks performed by different people. The most important of such means of communication was a computer-generated blueprint attached to each batch of work pieces. The blueprint sheet not only showed the specifications for each job, but also a list of all work procedures. Whenever a worker at TW or a subcontractor completed a procedure, he or she would

sign on the list, and a worker at the quality assurance section would inspect the work pieces in random and stamp on the blue print. The blueprint transmitted technical data while recording each worker's involvement in the process simultaneously. Every worker took this piece of paperwork seriously not only because he or she had to rely on the blueprint to set up the job but also because the work procedure list was always used to double check on each worker's time sheet.

The time sheet is another piece of paperwork that was always duly filled out. The daily time sheet for an individual worker recorded the beginning and end time of each batch job, the blueprint number of the batch, and the time spent on preparation time under the heading of "Time Lost." Overtime pay constituted a great part of the wages of production workers. Yet overtime would not be counted and paid for unless one accurately recorded the time one spent on each batch job on his or her time sheet. In addition, a quota bonus was calculated against the production quota allotted to each worker—in the form of the number of gear teeth to grind for the grinding machine operator, for instance. Every month, the production management department would collect all the time sheets, calculate the total work time and the amount of work done, and calculate each worker's pay accordingly. These figures were always double-checked with the blueprints, which each worker had signed.

Therefore, for TW's production workers, there were two strong reasons to take the paperwork seriously. The first was the need for written information to do one's job. This is made imperative by the vertical division of labor, or "task-oriented division of labor according to function" as DY's president Mr. Lin vie to transform his company into. The second was the direct link of paperwork to the remuneration system based on work time and quota. This situation is in stark contrast to that in workplaces with less modern capitalist characters such as *CNS Chung-Chi* or even DY, where both vertical division of labor and the link between reward and quantifiable benchmarks of effort were weak. In those places, paperwork recording the work process were either completely shelved as on *CNS Chung-Chi* or pragmatically omitted as in DY. Modern

capitalist form of work organization both necessitates and reinforced the documentation system required by ISO-9000.

However, while some paperwork was integrated into TW's day-to-day work and rigorously kept, much more was shelved.

In compliance with the ISO-9002 standard, TW's management had compiled a big folder entitled *Work Rules and Management Standards*. It contained three hundred some pages of text written in legalistic language and appended with proper forms for all occasions. Each page in the folder had on it a dated authorization and authentication stamp. The format of this document gave it an awe-inspiring authority of the code of law. It is divided into forty-one chapters covering topics ranging from the company's formal organization to minute details such as the safety rules for moving stocks inside the plant. However, upon closer examination, much of this codebook of TW was written purely for the consumption of higher authorities such as the ISO-9000 certification firm or the corporate headquarters. The myriad of forms and documents TW was supposed to accumulate through its everyday operation did exist and in good order, ready for the twice-annual audits by the certifier. However, similar to the PMS paperwork on *CNS Chung-Chi*, many of these documents are forgeries done by two clerks known to other workers as the "ISO-9000 ladies." The superfluous ISO-9002 standards were simply hollowed out where and when they were found impracticable.

One of such hollowed out standards is the formal training system specified in detail in Chapter 39 of TW's *Work Rules and Management Standards*. According to this chapter, there should be three forms of formal training courses for TW's employees: new recruit training, periodical in-house training, and outside training courses. The eight-hour new recruit training is administered by the personnel department on the first day the new employee reports for work; the curriculum of which is specified in the work rules. Courses in the other two categories are planned by each department according to its needs in an Annual Plan of Training and Development. Upon completion of a course, every trainee is required to submit a 500- to

1000-word report on what he or she learns from the course, and his or her foreman and department head will fill out an evaluation form on the efficacy of such course and the performance of the trainee. The evaluation form is used both in the annual personnel performance assessment, and in the annual review of the return of investment on training. In addition, the knowledge a trainee acquired from outside training paid for by the company should become part of the company's knowledge pool. He or she should submit all course material, write a comprehensive report, and provide similar instructions to coworkers if possible. The training standards even go so far in its comprehensiveness as to list the rules of classroom in the company's training course: no smoking, no talking, no sleeping, sitting in designated seats, etc.

As far as my informants knew, no formal new recruit training had ever taken place according to the regulations. On the first day of work, a new employee was usually given a brief introduction about the general work rules by the personnel manager, and then handed over to his or her section foreman. The foreman would introduce him or her to coworkers and assign a mentor for him or her to work with. All the technical knowledge and skills the new worker needed were either acquired through hands-on learning or taught in bits and pieces by the mentor during the slack time in production. So was the understanding of the somewhat complex administrative procedures. Similarly, in-house training is an ongoing affair dispersed in everyday work, instead of concentrated classroom sessions as the regulations called for. Outside training courses were indeed happening frequently. Whenever the company bought new equipment, the vendor would provide training courses on the operation of the equipment as part of the deal. Mr. Zhang Lianxng, the foreman of the gear grinding section had been to one such training. He was sent as far away as Zurich, Switzerland to learn how to program and operate the newest CNC gear grinder. However, the skill required to program this machine was not separated from him and become part of the company's knowledge pool, as the regulation requires. It remained his own sole possession, and the CNC gear grinder became *his* grinder.

Zhang laughed when I mention to him the eight-hour curriculum for new recruits I read

about in the company regulations. He said:

Don't be silly! The company cannot afford to hire a person for eight hours, doing nothing but learning what can be easily and efficiently learned on the job. No sane manager would ever do this. Why waste the money the new employee can make for the company while he is learning by working? (971028)

Similarly, the instruction he is required to provide to other grinding machine operators never took place. In order for such a class to take place, the operators have to stop their machines and meet for at least several hours or even a whole day. But any minute that the machines are not running means not only lost money for the company, but also increasing anxiety on the part of the customers waiting for their order to be delivered. In addition, as explored in Chapter 3, the teacher-pupil hierarchy established and reinforced in the continuous learning and problem solving in everyday work is an integral part of the factional organization at TW. Codify the form of teaching and learning on the shop floor threatens such hierarchy between senior workers and their juniors. Thus, the formal training based on formal classroom-style classes had to be put aside, and the company is better off settling for the status quo of the level, distribution and the mode of transmission of workers' skills. This may be very pragmatic nickel-and-dime business commonsense combined with the special character of the local configuration of social relations, but according to the plant manager Lin Liguó:

It is not a systemized way of training. It does not look good. So we have to design a modern alternative as our goal, even if we cannot achieve the goal in full right now. (971119)

However, either the ISO-9000 auditors did not allow compromises of ideal with good commonsense, or that TW did not want to disappoint big customers who would like to ask: "Prove to me that the people who built and tested my products are trained. Do they know all the critical aspects of my product and how it should work? Has the supervisor agreed that the person is trained properly?" (Cf. Table 5-1) In any event, the impractical training scheme is retained on paper and the ISO-9000 ladies had to produce documentary evidences that such scheme was

indeed implemented. From time to time, the ISO-9000 ladies would walk around the shop floor gathering workers' signatures on the attendance sheet of classes that had never taken place and on the mass-produced class reports that are supposed to be submitted by the workers. What is impractical in the local context but required by the higher authority of the international business standards was effectively shelved at TW, honored in appearance but pushed aside in practice.

The managers' views on the difficulties to faithfully implement the ISO-9000 standards were fairly uniform. The top-down panoptic regime implicit in the standards is desirable. Yet, the local configurations of workplace social relations prevent it to be fully established. This situation is regrettable, and hopefully it can be remedied one day. For the workers, including the ISO-9000 ladies, the shelving operation is so natural that it requires no explanation at all. When I asked them about their opinion on the shelving of ISO-9000, they were either puzzled by the question, or replied that this is the way things are.

However, TW's less-than-full compliance of its ISO-9002-certified documentation procedures does not entail that it was engaging in bad business practice in the eyes of most of its current customers, nor were the customers unsatisfied with its product and service quality. As far as the managers and workers at TW knew, most customers were happy with their business relationships with TW, and the occasional defects or quality problems could always promptly be solved in face-to-face interaction. ISO-9000 does not change such relationships substantially, at least for TW's local customers.

In the practical Black Hands' World in Taiwan, indirect measurement of things and people are always distrusted anyway. As described in Chapter 3, the computer-generated gear profile printout was supposed to be TW's most accurate record of the precision of gear—the most important real quality. Yet fussy customers always needed to see and hear the gear in action to be decide whether they liked it. Similarly, diplomas, awards and other credentials of an individual may raise some eyebrows, but will never impress a weathered Black Hand. Instead, Taiwanese machinists judge potential employees or business partners mostly through personal connections

and direct interactions. Likewise, a company's credentials such as the ISO-9000 certification is always regarded as superficial and received with skepticism. This skeptical attitude has long been rooted in the Chinese folk ideology through its age-old tension with the bureaucracy. Whatever the mandarins say or write is to be venerated and raised to a semi-holy status, but not to be trusted. Real, trustworthy quality comes from direct tangible interactions both with people and with things.

Who, then, would want to see the ISO-9000 certification?

According to Lin Ligu, the imperative for TW to acquire the ISO-9002 certification had come from its plan to go public. Its primary concern was to please the anonymous potential stockholders on the open market, instead of acquainted customers in the local machine industry. (971119) Lin Lisheng, the president of DY, also agrees that the local customers are not ISO-9000's target audience. Even the Japanese customers regard solid, face-to-face interaction more important than the supposedly objective abstract measures such as that provided by the ISO 9000s. It is on the European market that a Taiwanese company can most surely cash in on its investment in an ISO-9000 certification. (980305)

Therefore, for the Taiwanese machine companies, the respectability ISO-9000 standards bring about is for the consumption of far-away authorities—anonymous stock-market moguls, big patrons on the other side of the globe, and so on. Similar to the imperial bureaucracy in the old days, these authorities do not come down and get in touch with real people and things, but seek to administer, at a distance, abstract, powerful and supposedly rational disciplines such as market discipline and the most advanced achievement of management science. Dealing with this kind of authority has been an integral part of Chinese commoners' lives for ages. Whenever there is a conflict between the detached ruler's edict and the local folk's ways, a time-honored strategy is followed: Do not argue, do not defy. Treat the edict with utmost reverence and raise it onto the red shelf where the gods' and ancestors' altars and all things sacred belong, so that the folks can go about their profane daily business in their own way. This is exactly the strategy TW followed.

5.4 Information: Feminine and Masculine, Local and Global

Information technology as well as a host of business activities that generate and manage vast quantities of information is historically a product of Western monopoly capitalism. Implicit in the technological and organizational artifacts of the information age is a hierarchy of the symbolic over the material. This hierarchy corresponds to the dominance of management over workers, and is reinforced with the progressive separation of conceptual work from physical work and the monopoly of the former by the management. However, in many Taiwanese workplaces, such hierarchy is dubious and even often turned upside down. The fact that the ISO-9000 is shelved and dealt with by the ISO-9000 “ladies” at TW is but one visible example. In the cultural world of Taiwanese male skilled workers, from the naval ship to the factories to the family workshops, symbolic manipulation is regarded as feminine and subordinated to the masculine work handling with the material artifacts.

5.4.1 The Femininity of Information Work

The most visible hierarchy of job prestige aboard *CNS Chung-Chi*, as we saw in Chapter 2, is the perceived manliness of manual workers typified by the engine men, and the “weakling” status of the “pencil pushing” workers typified by the radiomen. The former is skilled and largely free from official control, the latter, although also classified as skilled by the official regulations, are constantly under the officers’ tight watch, and looked down on by other seamen. The engine men could enlist the machines into their magical family and conceal their interactions with the machine from the bureaucratic authority. For the radiomen, the Morse-code messages they manipulate everyday are easily logged and double-checked, and any mistake on the job is immediately visible to the officers. The symbolic hierarchy of manliness is directly linked with the degree of autonomy on the job.

This job hierarchy, which apparently reversed the global capitalist order of symbolic over material, can be understood in the local cultural tradition featuring heated contradiction between

the tributary state and the petty capitalist plebian producers. For the commoners, manipulation of symbols is the domain of the ruling mandarins, and the further one can keep away from the rulers' turf, the more one can evade their domination, and the more he can fully develop his own autonomous sphere. In the post-democratization civilian industries, however, this cultural tradition lost its basis with the absence of the state bureaucracy, but the same job hierarchy persists.

One salient phenomenon of this inversed hierarchy of the material over the symbolic is the prevalent perception of computer work as feminine, and machine work as masculine. As mentioned in Chapter 1, the Computer Numerical Control machine tools was originally designed as a deskilling technology. With the detailed machining operation now controlled by the program code, CNC technology enables corporate management to take most of the conceptual part of machining work away from the shop floor and concentrated it in the engineering office. However, in all the machine shops I studied, CNC programming was usually done by the machinists themselves, as in DY, TW, TX, SY, and HQ (see Chapter 3 and 4). When the programming and machine tending work are divided between two people, the programmer working on the computer was typically a woman, and the machine tender was typically a man.

HJ Precision is one such example. The ten workers at HJ consisted of three women and seven men. The male workers all worked at the shop floor, which was managed by the male owner Mr. Lin Kunsheng. The computer lab employed two young women freshly graduated from the mechanical drafting program of vocational school, and was managed by the "bossess" Mrs. Lin. HJ's EDWC (electric discharge wire-cutting) machines required heavy programming work, but Mrs. Lin did more than simply writing programs. Most of HJ's jobs involved complex and intricate cuts on precision stamping dies. The customers coming to HJ usually brought only rough hand-drawn drafts with their work piece. It was Mrs. Lin's job to discuss with the patrons, clarifying all the required dimensions. Then, she and her programmers would create precise drafts with their CAD program, and generate NC codes with the program. The women workers actually

functioned as the engineering department of HJ. However, unlike in a typical Fordist factory, the women programmers were not regarded as hierarchically superior. They consulted frequently with male shop floor workers who tended the machines. The latter, with direct observations on the changing material conditions of the cutting machine, often gave quite authoritative suggestions about necessary adjustments of the program details. In addition, although Mrs. Lin did have considerable knowledge about all the technical details, in daily interpersonal interactions with the customers, she often skillfully conducted the conversation in a way that her husband appeared to be the decision-maker. At least in appearance, the CNC technology did not reverse the gender hierarchy, instead, gender hierarchy reversed the political valence embedded in CNC technology.

The association of women with computer work and men with machine work was so strong, that it created an awkward situation when TW hired three women apprentices with machining degrees. For reasons yet to be studied, women's enrollment in the precision machining program at Taichung Vocational Training Center increased dramatically in 1995. The 1997 graduates of that program unprecedentedly consisted of one third women in the total of 60 some. (971119) Three of these women graduates came to TW for apprenticeship. They were all trained in all kinds of conventional machining. One of them, Fu Yuwen, even proudly told me that she could beat all boys in lathe work. However, with a strong feeling that "girls should not touch the grease," the plant manager Lin Liguang could not think of any other way but to put them on computer jobs. (971007) Despite Fu Yuwen's interest and credential in hands-on machining work, she had to settle for the job of CNC measuring machine operator.

In addition to the cultural explanation, we can observe in these cases another more sociological reason for the perception of the femininity of information jobs. As discussed in Section 2.1, the socially defined women's jobs tend to be associated with indirect interactions both with humans, such as clerical jobs, and with things, such as programming. These jobs tend to be more easily analyzed in detail and codified into standardized work procedures. The

“masculine” jobs of direct handling of things, such as machining, and direct dealing with humans, such as sales, tend to involve more uncertainties, require more desertions for workers, and are harder to deskill. An in-depth look at the actual content of these jobs may well provide more complex pictures, but this general tendency holds true, especially in the prevalent perception of the machinists. In this light, the femininity of information work is not an oddity particular to Taiwanese culture; it is consistent with the perception of man as skilled and women as non-skilled that is prevalent in the West as well.

5.4.2 ISO-9000 as Women’s Ritual Responsibility

In addition to the gender-skill hierarchy that puts information work such as that required by ISO-9000 in the feminine domain, one other reason makes it natural for Taiwanese management to leave the ISO-9000 standards for the women clerks. This explanation is to be found in women’s role in the Chinese folk rituals.

As observed by numerous anthropologists on Chinese societies, women have long played central roles in folk rituals, even when the folk ideology manifested in such rituals define them as hierarchically subordinate. Although domestic and communal rituals are ideally performed by men, it is often women who prepared the offerings, set up the ritual devices, gather family members at the offering table, and only yield to the male household head at the crucial moment and let him offer the first incense. In more conservative areas where women are usually confined in the household, participation in ritual activities is often the only publicly sanctioned social activity for women. In contemporary Taiwan, although most of the nominal leaders in communal temples are still male, it is often women followers who manage and prepare elaborate rituals such as periodical feasts, pilgrimages, and processions. These roles are consistent with the traditional cultural perception that women are better skilled in petty-capitalist wheeling and dealing but only men are the rightful representatives of a household who can be recognized by the tributary authority. In the factories as well as the small workshops with their own Tudi Gong altars, it was

invariably women, the secretaries and the shop owners' wives, who prepared the rituals, and the male managers and shop owners merely played the honorary roles.

The respective roles of the ISO-9000 ladies and the managers in coping with ISO-9000 regime are remarkably similar to that of women and men in folk rituals. At TW, ISO-9000 ladies belabored themselves with all the elaborate rules, regulations and documentation, and the male managers simply signed the document, certifying to the distant authority that the company operates in the officially sanctioned ways. At DY, in spite of the company president's earnest desire to fulfill the promise of ISO-9000, the central role the clerk Ms. Lin Hanshu played in introducing the elaborate regulations in the implementation process paved the way for her to become an ISO-9000 lady.

For the managers, this is a familiar operation. The ISO-9000 auditors, on behalf of the far away authorities of the international monopoly capitals, are like gods in the temple. They put out impractical demands for the local folk to abide to their elaborate rules and recognize only the formal power structure. Let the women do the submission and deal with the red tape, and let the men deal with real business and play only the minimum token roles in the rituals.

5.5 Summary

The predominant social relations of production in Taiwan have a strong petty-capitalist character. Informal personal ties are central to the organization of work, and production jobs are typically not deskilled. However, this is inconsistent with the managerial paradigm of monopoly capitalism. In recent development of the capitalist globalization, international corporations attempted to impose their ideal of workplace control onto their subordinates domestic and abroad. ISO-9000 regime, in the name of "quality" and in the spirit of "openness of information" is one such attempt. If it is successfully implemented, small Taiwanese firms' labor process will be integrated into the control of their foreign big customers. However, such attempts are passively

resisted with a “shelving” operation typical in Taiwanese people’s responses to a hegemonic authority—venerating the leadership of the authority while rendering them irrelevant in daily lives.

In exploring this interplay of the local with the global forces, we can see the resilience of the local configuration of the labor process. In addition, the fact that the hierarchy of symbolic manipulation over material work can be so easily inversed in the Taiwanese context should make us cast some doubt on the widespread belief in the efficacy of this hierarchy. Not only do the euphoric advocates of the “information age” constantly celebrates the triumph of mind over “brute force of things”, but Bravermanian critics of the deskilling tendency of information technology also sometimes overestimate the efficacy of capitalist attempts to separate conceptual work from material production labor. Further in-depth studies should be more cautious on this question and take into account the local cultural-historical factors that contribute to specific configurations of labor process.

In the Burawoyan terminology, the ISO-9000 regime is a typical “hegemonic-despotic” project veiling the despotic deskilling tendencies with various consent-generating concepts, such as the dubious “quality.” The capacity for such managerial reform projects to generate and reproduce workers’ consent is well observed by Western researchers on the labor process. In recent years, many of these projects are beginning to be challenged by the resurgent labor movements. However, transplanted to the context of the Taiwanese workplace, the despotic aspect of the ISO-9000 regime becomes far too explicit, and it has to be shelved. Yet shelving an authority does not overthrow it. The shelving of the ISO-9000 does not overthrow either the domination of international monopoly capital over smaller Taiwanese firms or the domination of the managers over workers. Shelving merely softens the explicit despotic form of power and skillfully makes the domination more benign and hegemonic, but the authorities still rule, no matter how subtle their powers have become.

In both the Western and the Taiwanese contexts, the implementation of contemporary

managerial reform projects such as ISO-9000 generates hegemonic relations in labor process. Yet in the Taiwanese cases examined in this chapter, the hegemonic relations do not come straightforwardly from the projects itself. Instead, the project itself is rejected on one level, but the subtle control it seek to establish is generated on another level in conjunction with hegemonic relations in a broader cultural context.

Chapter 6: Conclusions

The Dream of the Black Hands

Despite numerous, complex counter trends, the mechanization of the world has remained a highly visible menace for Western social critics from the time of William Blake and Thomas Carlyle to the present day. In the past two centuries, the ethos of the machine and mass production are often observed to be permeating throughout virtually all realms of social and cultural life. The fragmentation of labor processes under capitalism turns the human worker into an appendage of the machine, and the bureaucratization of the organization of production, and, indeed, of all other social organizations, turns intricate webs of human relations into a giant machine. For many Western thinkers and social critics, especially those of the post-WWII generations, this process seemed to be the inescapable fate of modern humankind. The specter of the machine hovers over them until the recent, more flexible imagery of the world brought on new concerns and anxieties.

In the experience of Taiwanese male skilled workers, however, the machine age has hardly been mechanical. For those whose daily lives are bound with the machines, such as the naval seamen on *CNS Chung-Chi*, and for those who build the machines themselves, such as the machinists in the Taichung Area, the complexity and contradictions of today's flexible world are nothing new. With or without the machines, work and lives go on in familiar forms. Similar to their peasant forefathers, the Taiwanese machinists struggle to fulfill the aspiration of becoming family patriarchs. In doing so, they do not only strive to accumulate work skills as their Western counterparts do, but also build webs of personal connections in a versatile marketplace and bypass the stringent bureaucracies whenever they can--as their forefathers did for centuries. In addition, their folk ritual practices also convey the traditional commoners' values concerned with bending the purportedly immutable hierarchical authorities and carrying out individual initiatives in spite of the predetermination of the fates. The ethos of the machine in the West does not come

to Taiwan straightforwardly with the importation of the machines. Instead, the machine is encompassed by the local culture. Furthermore, the machine is encompassed by the subaltern class of the autochthonous class contradiction—the petty capitalist folks—rather than by the dynastic bureaucracy, even though the bureaucracy is supposed to usurp the primary role under the ethos of the machine. Thus, vertical division of labor, fragmentation of the labor process, deskilling and the degradation of work all appear much less threatening to Taiwanese male skilled workers than to their Western counterparts.

Nevertheless, the contemporary Taiwanese machinists are not simply an industrial version of the traditional peasant patriarchs. It is in the comparison of their conditions today with the aspirations they inherit from their ancestors that the power of the machine becomes visible. Viewed exclusively in the concurrent cross-cultural comparison with the West, Taiwanese working men do possess much more autonomy and less segmented skills on their jobs than their counterparts in the Fordist factories in the West. Yet, examined in the historical transformation of local culture and society, these men are confronting similar dynamics of capitalism that have existed in the West since the Industrial Revolution. Relations of commodity exchange and similar reciprocal social relations are gradually replacing traditional, particularist hierarchies.

Chief among the fading hierarchies is the patriarchal kinship, which has provided the late-Imperial Chinese men a secure, ascending life course, the privilege to appropriate women and juniors' labor power, and a big stake in the ruling social orders. Much more versatile and reciprocal interpersonal connection now replaces kinship as the most important form of social relations for the Taiwanese machinists. Similarly, the quasis-patriarchal seniority hierarchy has been instrumental in passing down work skills, in a form resembling family estates, from one generation of Taiwanese male skilled workers to another. Now, skill is perceived more in its capitalist form, as properties of commodified labor power, instead of its traditional form. And the seniority hierarchy, which has afforded inter-generational continuities, is gradually replaced by the increasingly impassible differentiation between classes. For now, in the Taiwanese World of

Black Hands, capitalism has not yet “pitilessly torn asunder the motley feudal ties that bound man to his ‘natural superiors,’ and . . . left remaining no other nexus between man and man than naked self-interest, than callous ‘cash payment.’” (Marx & Engels, 1848/1978: 475) However, for the Black Hands, the changes in all dimensions of their lives are clearly pointing toward that direction. One interesting contradiction arising in my study is that the more closely the male skilled worker’s social-economic status resembles that of the traditional family patriarch, the less resemblance there is to the labor process of traditional patriarchal household production, and the more modern capitalist attributes appear in his labor process.

The cases explored in this thesis have been presented along two seemingly contradictory lines—one manifesting the vast difference of the social relations of production between contemporary Taiwan and the West, while another shows the diminishing of distinctly Taiwanese characteristics in the organization of production. The former line challenges a tendency in previous labor process studies which overly concentrates on micro-level class struggles (including the struggles embodied in the designs in technological and organizational artifacts), but overlooks the importance of the socio-cultural contexts outside the workplace. The latter line casts doubt on the cultural-determinist tendencies in the studies on Taiwan, which reify the distinctiveness and efficacy of traditional culture and overlook the universalizing power of modern capitalism. In addition, the gradual degradation of the “independent” small shop owners also challenges a prevalent idea in the discourse about de-centered capitalism, namely fragmented ownership and labor process of industrial production necessarily decentralize the authorities.

This transformation of the social structure of Taiwan’s industries from traditional patriarchal petty capitalism toward full-fledged capitalism has its liberating aspects, especially for women and young people who are becoming increasingly independent from the patriarchal authorities. However, for the male skilled worker, this experience is agonizing. He starts his career with the firm belief that hard work and diligent accumulation of work skill inevitably leads him on the ascending path of the patriarchal seniority hierarchy and that, someday, he too will become a

patriarch-master himself. At the end of the journey toward the position of patriarch, he often finds that the secure ladder has disappeared, and he is left hanging in the cold of the ruthless market competition. Thus, his worldview often oscillates between despair, with clearer knowledge of the new reality, and shaky optimism, with the faith that more personal initiative and ever-changing fortune may somehow deliver the promise of traditional patriarchy to him.

Despair and blind optimism are not the only possible responses of the threatened Black Hands. For them, there can be a wide array of ways to cope with the unsettling reality of the 1990s: cynical resignation, passive resistance, active critique and confrontation with the new authorities, etc. Very likely, they will hang on with their bleeding fingers to whatever little privilege remains for them in a desperate two-front battle: against their exploiters on one hand, and trying to subjugate their supposed hierarchical subordinates on the other. In the historical experience of the working class in the West, this kind of nostalgic two-front struggle is futile at best, and reactionary at its worst. I take it as the primary goal of this thesis to help Taiwanese workers, and workers elsewhere who face similar flexible capitalism, to articulate their critiques of the status quo, and to formulate strategies for liberating themselves. Giving up the male skilled workers' illusions of defending against exploitation by reviving their traditional privileges, I would like to advocate, is the most important requirement for such critiques and practices to be truly liberating. I am not proposing to rid ourselves of all trappings of the traditional cultures. Like it or not, people understand the world and create our own world under the cultural, social and economic conditions we inherit. Yet, this does not mean that people can only be passively haunted by the specters of their ancestors, for under rigorous analysis, no cultural tradition is a monolith. There are always contradictions in the traditions, and people seeking effective social transformation need to delve into their rich inheritance for resources to build their own emancipatory projects.

6.1 *The Cross Cultural Comparison*

A quarter of a century of labor process studies since Harry Braverman's groundbreaking work has shed much light on the day-to-day experience of working people in modern capitalism in the West. Numerous researchers have found dynamic class struggles in the design of production technology, the contested social construction of skill, and the generation and reproduction of workers' consent to capitalist exploitation. The feminist perspectives have contributed greatly to this theoretical tradition by connecting labor process with larger cultural contexts, especially with the persistence and transformation of patriarchy. However, much more work needs to be done on the approach pioneered by the feminist labor process scholars, especially in a time when flexibilization and globalization of industrial production is bringing in more and more complex cultural elements into contemporary capitalist labor process.

For the Taiwanese machinists studied in this thesis, patriarchy and masculinity is not merely an "outside" influence, a cultural identity, or a residue of the pre-capitalist era that veils over the real class contradictions in their labor process. Instead, for them, patriarchy has been a live force and has constituted a central part of their social relations of production to this day. Along with their gender identity, kinship, religion, social organization, and a variety of other cultural realms around these male skilled workers are all interconnected and co-evolving with their productive work. In all the cases examined, cultural traditions were never a mere subsidiary or a twist to the dominant capitalist and/or technocratic social relations under which the production technologies and the formal organizations had been designed. Instead, Taiwanese workers and managers used the traditions to construct their social organization of work and encompass modern industrial technologies into their society.

The late-Imperial Chinese cultural traditions so lively constitute the industrialized Taiwanese society are, however, not a monolith, as the orientalized accounts of the "Pacific Century" tend to portray, but rife with autochthonous contradictions. Chief among the contradictions in late Imperial China is the class contradiction between the tributary bureaucracy of the dynastic rulers,

and the petty-capitalist commoners who organized their production and social lives through patriarchal households and engage in quasi-capitalist market exchanges. This contradiction might be softened by a traditional hegemonic form of ruling class powers, but never disappeared until the recent democratization in Taiwan. The attitude of defiance-within-conformity of the late Imperial Chinese commoners toward the bureaucracy is also manifested explicitly and implicitly in the folk rituals practiced rigorously even in today's industrial workplace. Thus, when the Western industrial technology and capitalist production came into the Taiwanese society, it submerged into the local contradiction.

The most salient example of the local traditions encompassing Western technology and relations of production is the case of *CNS Chung-Chi*, in which the Tayloristic formal organization was simply pushed aside, and replaced with a typical late-Imperial Chinese model. The seamen/direct workers organized themselves into quasi-patriarchal seniority hierarchies and monopolized over work skills, and the officer/managers exercised symbolic leadership at a safe distance. Similarly, in the civilian machine factories, vertical division of labor was minimized, and Taylorist projects such as ISO-9000 just could not be implemented. CNC technology, one of the most visible example of the deskilling effort of twentieth-century U. S. corporate management, was used in a drastically different way and hardly had any deskilling effect when it was adopted into the small machine shops of the Taiwanese Black Hands.

In these characteristically hegemonic configurations of labor process, the social constructions of work skill are much closer to the holistic forms of the pre-capitalist craftsmen than to the segmented forms of typical twentieth-century industrial workers. A worker's ability to operate a machine is more often perceived as particularist and holistic personal ties between he and the machine that need to be cultivated, and seldom as composed of segments of knowledge and skill acquired through formal training. In all cases examined in this thesis, Tayloristic detailed work analysis had never been considered let alone implemented. Consequently, transmission of skills in atomized forms, as specific to each task, was impossible. Teacher-pupil

relations in the seniority hierarchy therefore remained the primary channel through which skill was transmitted in its unsegmented form in day-to-day learning-by-doing. This latter fact, in turn, reinforced the quasi-patriarchal seniority hierarchy, and allowed such hierarchy to compete with the bureaucratic authority, when there was one, and consolidate its rank.

These facts point out the limitations of the power of technology to convey a set of politics. The notion that artifacts have politics is a great insight that allows labor process studies and other critical social studies of technology to reject the prevalent idea that technology is neutral. The notion of the neutrality of technology is often used to justify oppressive social relations with technological imperative. However, if interpreted in too narrow a sense and pushed to an extreme, the discovery of the politics in technology can lead to a form of technological determinism, albeit a critical one, namely that a certain technology not only embeds a certain social relations but relentlessly *requires* such relations. One implication of this latter notion is that the most important and effective struggle against class oppression is over the oppressive technology itself at the point of production. (Noble, 1993) This strategy is fine as an antidote to the previous tendency in working class movement to ignore the technology question. However, as labor process scholar Paul Thompson puts it: “. . .if the proletariat is to be the gravedigger of capitalism, it will have to do more than work in the cemetery.” (1983: 235) In other words, without a broad-based movement encompassing many sectors of the capitalist society, by itself, labor’s struggle at the immediate point of production, either over technology or over organization of production, cannot overthrow capitalism. As made evident by my study, the top-down managerial control and vertical division of labor entailed by contemporary Western technological and organizational artifacts can be subverted when transplanted into a different social-cultural environment like Taiwan. Conversely, progressive workplace technological or organizational designs can as well lose their effectiveness when the larger social-cultural context is hostile to the kinds of social changes the designs were intended to bring about. After all, no workplace is an island.

The great difference of the social relations of production among Taiwanese male skilled

workers and workers in typical Western Fordist industries can be attributed in great part to the differences in culture and history. Nevertheless, I would like to qualify this cultural explanation by evaluating two feasible non-cultural-specific explanations. The first one is related to the kind of work that the Taiwanese Black Hands engaged in. The second is the global trend of the flexibilization of industrial production.

The great majority of the Black Hands examined in my study worked either in repair and maintenance (such as the engine men in Chapter 2), in the preparatory stages for subsequent mass production (such as the mold makers), or in the small-batch production of producer goods (such as the gear workers at TW). None of them worked in what is commonly regarded as the core of Fordism—the mass production of consumer goods. Even in the most quintessential Fordist production site—the auto plants in the U. S. —skill trades such as tool-and-die makers and millwrights can enjoy much autonomy and unsegmented skill while the rest of the workforce is subjected to relentless disciplines of the assembly line. In such situation, a sector of the working class can possess high autonomy and skilled status at the cost of the degradation of work for the rest, and the existence of the skilled workers is not a challenge but a necessary complement to a greater trend of deskilling. However, in Taiwan, many previous studies have shown that, similar to the machine industry, numerous patriarchal households are engaging in small-scale production in a wide variety of commodities, including the typical mass-production ones such as garment and shoes. Furthermore, beyond the objective level, the story of “Black Hands Become Boss” has been a centerpiece of Taiwanese folk cultural representation of the experience of post-1960 industrial boom. In this story, even the humblest man can and should succeed in the market with sufficient diligence and skill, and become a patriarch-proprietor. The Black Hands’ story contributes greatly to the reproduction of the consent of working-class Taiwanese to the capitalist orders. Therefore, in both objective conditions and the contemporary culture of industrial Taiwan, the case of the male skilled workers is not an isolated one, but an important component of this transforming society.

The “Black Hand Becoming Boss” story is not only a local Taiwanese folklore, but also a central component of a host of popular conceptions of the post-Fordist world economy since the 1970s. Downsizing, outsourcing, casualizing and off-shoring, the transnational monopoly corporations seem to be transforming their gigantic bureaucratic hierarchies into a federation of tiny enterprises scattered throughout the world. Workers in advanced industrial countries previously found both security and exploitation in these corporate hierarchies now often find themselves lost in the uncertain market. Yet, according to the proponents of this flexible capitalism, they may as well find great independence and self worth, if they are enterprising enough to accumulate enough skills, become bosses of themselves, and actively involve themselves in the flexible and egalitarian network of micro-enterprises. At the same time, the gradual fragmentation of the Fordist production system in the West now seems to open up many opportunities for the developing countries to pursue export-oriented industrialization along the road Taiwan has undergone. Many entrepreneurs in those countries will no doubt seek to organize their workforces using the local cultural traditions and engage in small-scale industrial production, just like the Taiwanese Black Hands have been doing to this day. The case of Taiwan, therefore, is not merely a product of distinct local culture and history, but a part of a greater trend in the transformation of contemporary global economy. I have no doubt that further inquiries along the line of situating the local configuration of labor process in the context global changes is urgently needed and will be very fruitful. Yet, I am equally certain that such research also needs to situate the labor process in the local socio- cultural traditions so as to gain fuller understanding of concrete human experience in the labor process.

6.2 *The Temporal Dynamic*

The pre-capitalist social formation of late-Imperial China is vividly reflected in the cultural outlook manifested in the folk rituals that constitute an integral part of everyday life in the Taiwanese workplace. In this social formation, tributary hierarchy of the state is dominant, while

equal exchange on the market is a defining feature of the restless though subordinate folk society. Inside the household of the commoners, immutable patriarchal hierarchy is the rule, although this hierarchy defines men as equals in the guaranteed ascendancy on the hierarchical ladder of seniority.

This equality-within-hierarchy was celebrated and reinforced in the orthodox communal cult of Mazu among the seamen of *CNS Chung-Chi*, providing them with a source of solidarity against the official authorities. In the cult of Tudi Gong in the civilian machine factory and in the community of industrial suburbs, the hierarchical order is bent to the point that the subordination of worshippers to the gods—corresponding to the subordination of commoners to rulers—became understood as something akin to a commodity exchange of offerings for blessing. However, under the principle of equality manifested in the commodity form of rituals, the previously egalitarian ritual community, encompassing everyone, becomes divided between the mostly rich and powerful active constituents, and the practically disenfranchised passive participants.

Looking at the macro-level of modern Taiwanese society, the late Imperial Chinese formation survived well into the 1980s. Very similar to the old dynasties, the authoritarian KMT regime ruled over the commoners in a way that emphasized the rulers' symbolic leadership, but left some free space for the subjects to enrich themselves in their own ways on the market. The petty capitalist commoners, in turn, relied heavily on the patriarchal family to organize production, accumulate surplus, and actively confront the market while shelving the state authority as best as they could. Equality and versatility on the market was framed under the constraint of ruler-subject hierarchy and patriarchal hierarchy—both immutable. However, when the latter-day emperor receded and the commoners' market ascended, the petty capitalist commoners, who have until recently shared a common culture, language and ethnic identity in opposition to the ruler, become divided. The equality-within-hierarchy for men disappears with the role of the patriarchal family in production diminishing, and they are forced to confront the market as individuals. Furthermore, until recently, the division among commoners between the

rich and the poor and the capitalists and the workers is perceived as highly undetermined and transgressible. There is certain truth in this perception when the size of private-sector capital was typically small and the versatile market could easily change one's fate in an instant. Now, more and more people have found this formerly transgressible class division to be solidifying into a strong hierarchy-within-equality.

Work skill and hegemony in labor process undergo similar changes as the capitalist mode of production gains hegemony. In the late-Imperial Chinese formation of the naval ship, work skill was perceived as a proxy of seniority. It was a well-guarded secret of the trade, accessible only through the quasi-patriarchal organization of the workers, which handed it down from one generation to another. The management authority was in the form of traditional hegemony--established and reproduced by associating the ruler-commoner hierarchy with the workers' seniority hierarchy. The view of skill as a kind of commodity that could be acquired and utilized to gain profit in commodity exchange existed as a subsidiary to the hierarchical view. This traditional form of skill and hegemony still exists in large part in today's machining trade in Taiwan. Seniority is respected. Teacher-pupil hierarchy is crucial in the formation of factions. Management authority is sometimes justified with seniority. However, more and more capitalist characteristics are emerging. The hitherto unquestionable authority of the teacher-pupil hierarchy is now understood in reciprocal terms as indebtedness. Previously, work skill was perceived as the property of a persistent, impersonal hierarchy—like a family estate—and members of the hierarchy were only temporary guardians of the estate. Now, skill is widely perceived as a personal possession, and one has to gain as much skill as possible from the open market of knowledge and skills, and utilize it for the maximum gains for oneself.

This transformation is not, at least not yet, changing the Taiwanese culture, society and workplace into an exact replica of the Western-European and North-American model of capitalism. Individuals are stripped from the security and exploitation of hierarchies, yet they are not typically atomized. Instead, reciprocal interpersonal connections replace hierarchy, and form

complex, particularist networks that bind individuals together. The ability to weave and manipulate this personal network thus becomes the most valuable skill, capable of bringing much more monetary gain than technical skills can.

Amidst this transformation, the skilled machinists often experience a journey toward nowhere. From their boyhood, they have received the cultural values and worldview that tells them to work hard, learn the skills of the trade, and stay on the rightful track to be a petty capitalist man. With their accumulation of work skills and personal connections, they are supposed to ascend, step by step, from apprentices, to journeyman-employees, to self-employed entrepreneurs, and eventually to become an employer profiting from others' labor. This "Black Hand Becoming Boss" story is central to Taiwan's popular consent to the capitalist social formation. According to this view, any man who does not become a boss must be inadequate, not working and learning hard enough. However, many machinists today, when they finally reach the much-aspired position of self-employed entrepreneurs, find that the road ahead is blocked. Instead of the independence entrepreneurship is supposed to bring about, the entrepreneur machinists often experience being subordinated and exploited, and develop feelings no different from those of factory workers.

Industrialization has, after all, transformed Taiwanese society and gradually brought down the traditional hierarchies. In the process, the labor process of Taiwanese male skilled workers is also transformed toward a more full-fledged capitalist mode despite the strong folk traditions that have allowed these men to bend and reshape the politics embedded in the imported technological and organizational artifacts for decades. This transformation does not take place in the immediate sphere of production and directly under the influence of technological changes. Instead, labor process at the workplace co-evolves with gender, kinship, ritual and social networks in a larger process of social transformation.

6.3 *De-centered Capitalism?*

The “Black Hand Becoming Boss” dream of Taiwanese male skilled workers has some noble elements in it: the unpretentious egalitarianism between hard-working people, the free and independent control over one’s own labor process, the respect and appreciation for hard-earned skillfulness, and so on. Although this dream is becoming lost in the reality of the social transformation of Taiwan, the aspirations it conveys are shared by a host of popular visions for the post-Fordist world economy. The model of “flexible specialization” articulated by Piore and Sable (1984) is but one salient example.

The appeal of this vision of independent and egalitarian entrepreneurship has its roots not only in fantasy but also in the real, historical experience of many societies. An economy based in principle on equality between free, independent producers engaging in commodity exchange between themselves, what is commonly called the simple commodity mode of production, still exists today in, for example, the production of handicraft and artwork. Yet as Samir Amin points out,

No society has ever been based on the predominance of this mode of production. Frequently, however, there has been a sphere governed by simple commodity relations—in particular, the sphere of handicraft production, when this has been sufficiently dissociated from agricultural production. (1976:15)

Petty commodity production often exists as a marginal and subordinate mode of production, and is articulated into social formations dominated by other modes of production. Its form of social relations existed among the burghers of medieval Europe as well as among the craftsmen of the trading towns in the medieval Islamic world. Petty commodity production also exists in agriculture, as instanced by the petty-capitalist farmers on the periphery of late-Imperial China. In almost all cases, petty commodity producers solidify themselves in opposition to, and become mired within the dominant forms of social relations of, their hierarchical superior. Medieval European burghers were subordinated to the feudal lords over them while maintaining the feudal guild hierarchies among them. Chinese petty-capitalist commoners were subordinated to the

dynastic bureaucracy over them while maintained the patriarchy among them. Petty commodity producers' freedom and equality in commodity exchange is often linked with bondage and inequality above and below the market level—in their submission to the overlords and their dominance over women and junior family members or apprentices. Without the structures of tributary bondage holding petty commodity producers in their place, they become free to accumulate capital and hire labor power to produce commodities in large scale for the market. This gradually, but almost always, resulted in the polarization of wealth among the previously equal petty commodity producers, and leading to class differentiation. The medieval European burghers became bourgeoisie and proletariat, and the Taiwanese Black Hands are becoming patronizing big factory owners and merchants on the one hand, and dependent small shop owners and permanent employees on the other. Romanticizing the historical experience of the petty commodity mode of production does not only gloss over the necessary inequality historically enframing its egalitarian principles, but also overlooks its marginal, subordinate and transient character.

As demonstrated by my study, another argument against romanticizing the petty commodity mode of production lies in examining the material conditions that differentiate production in modern industrial contexts and the historical contexts within which petty commodity production has been hitherto situated. One great appeal of the vision of the federation of small independent producers is that, in their eyes, each producer has great control over his or her own labor process. In the handicraft or even agricultural production of the earlier petty producers, this degree of control is possible because the undivided character of their production allows the whole process to be performed by single individuals from beginning to the end. Since the rise of the factory system, this kind of unsegmented labor becomes increasingly rare. In the case of the Taiwanese machine industry, the machinists can still exercise control over the whole process in some areas. These are typically preparatory stages for subsequent mass production, such as the making of plastic injection molds by bigger firms for large corporations. In other areas, typified by the

production of parts and even the subcontracted processes in mold production, each small firm performs only one stage in a whole series of production. The labor performed in each of these stages cannot be useful unless it is organized by the “product people”—the mobile merchants or the big factory owners—into the larger process of commodity production. In other words, “flexible specialization” is but an altered form of the factory system. In the factory, complex labor processes involving many workers are vertically divided into specialized segments, and each worker performing a specialized segment is dependent on the capitalist to link his own labor into the totality of collective labor. In flexible-specialized production, the dependence of the small entrepreneurs on the big merchants is no less than the dependence of individual factory workers on the capitalist. Under the technological conditions developed in the factory system, the independence of flexible-specialized entrepreneurs often turns out to be an illusion, glossing over the reality of the social interdependence of modern humans on each other’s labor.

On the global level, some recent managerial reform projects such as the ISO-9000 are threatening to further translate the dependence of smaller supplier and subcontractors on the central firms into direct control of the central firm over the subcontractors’ labor processes. So far, these attempts have not yet been successful. At least in the Taiwanese cases I examined, the local configuration of labor processes is still resistant to the global paradigm. However, there is no guarantee that centralized control will not be more fully realized in the future.

In short, there are many pitfalls and illusions in accepting the theories which frame the contemporary phenomena of capitalism as indicating a liberating de-centralization. As typical in hegemonic regimes, decentralization of power on one level is often simultaneously reinforcement of the ruling order on another level.

6.5 *We Are All Ghosts Now*

Every 7th lunar month, the Ghost Month, the wandering ghosts in Taiwan are lavishly feasted

in the Rites of Universal Salvation throughout the island. These ghosts are treated with both compassion and fear. They are wretched souls detached from the two established hierarchies in the other world—the celestial bureaucracy and the lineage. By nature of their freedom from the bondage of hierarchies, they are necessarily resentful, highly unpredictable and dangerous, capable of bringing misfortune to the humans at a whim. A central official capacity and responsibility of celestial officials such as Tudi Gong the policeman is to suppress and pacify these ghosts. Yet, they can also be enlisted into the service of anyone, for any purpose, in exchange for a certain amount of wealth, because the traditional moralities can no longer bind them. There is apparently a subversive egalitarianism among the ghosts, and, instead of by honorary titles carrying hierarchical connotations, the humans call the ghosts “Good Brothers.”

The ghosts are all humans in their previous lives. Yet, most dead people do not become wandering ghosts and come to receive the human handouts in the Rites of Universal Salvation. Instead, they will be regularly provided for by their human descendants. Some of them may even be shelved onto the celestial bureaucracy if they have demonstrated extraordinary magical powers. Dead souls are condemned to their ghastly existence only when ill fate, bad death, and other misfortunes or misdeeds deprive them of their descendants and their rightful place in the orthodox cosmic order. Theoretically, then, any living human can possibly become a wandering ghost should such misfortunes befall him or her. Thus, a great concern for a common Taiwanese in his or her daily lives and ritual practices is to avoid becoming a wandering ghost in the afterlife. This can be achieved by leading a righteous life, by keeping good morality, and, above all, by contributing to the perpetual prosperity of his or her kinship so that he or she can be forever provided for by the descendants after death.

The ghosts perfectly represent a kind of social being—the proletariat—in the orthodox late-Imperial Chinese worldview of the Taiwanese commoners. Seen from the viewpoint of a person harbored in the security of kinship and strapped with the hierarchical norms and morality, the proletariats are miserable and dangerous outcasts. They should be pitied but warily kept away.

One can hire them to produce profit for one's own. But when they become too demanding, one should call on the authorities to suppress them. What makes the existence of these ghosts/proletariats most threatening, though, is the fact that anyone can be thrown into the rank of these wretched souls by a single stroke of ill luck on the capricious market.

Taiwanese male skilled workers often start their career life carrying these orthodox traditional cultural values that propel them to prevent themselves from ending up as ghosts/proletariats. However, in the transformation of the whole society, in which the transformation of their labor process and social relations of production are integral parts, more and more of these skilled workers are feeling like the ghosts, wandering alone in the cold and barren landscape of the marketplace. What, then, should they do?

Many of the Black Hands, when reflecting upon the perplexing reality, will no doubt bemoan the lost of the traditional values. Unlike women and "unskilled" younger workers who have more ambivalent feelings about the oppressive past, the skilled men were supposed to be provided with a secure ascending path in the traditional hierarchies and seem to have a genuine stake in the past. Nostalgia came to the Black Hands as a natural reaction to the oppressions and exploitations they experience in the increasingly uncertain present. Together with the rebellious elements long existed in the Chinese folk resistance to the tributary bureaucracy, this longing for the idyllic past has contributed greatly to the foundation of an oppositional political consciousness in Taiwan in recent decades. Such folk-style political opposition has been central to the mobilization of various movements. They include: bourgeois-democratic movements against the authoritarian KMT regime; ethnic Taiwanese identity campaigns against the mainlander-dominated mainstream culture; massive environmental protests based on communal solidarity; and a variety of other social movements. In the communal environmental movements and peasants' movement I participated in during the 1980s, the centrality of folk culture was loud and clear. Passionate mobilization rallies were held at the communal temples, steering committees were composed of patriarchs, who were often leaders of the ritual organization. And

when the folk marched on the government buildings in protest, the sedan chairs of Mazu and other patron gods often led the procession. Yet, few of these movements turned out to be sustainable over a long haul. One after another, the folk-style social movements are incorporated into the bourgeois democratic political process, and the mass mobilizations die down. And the internal contradictions among the folk—between the rich and the poor, the patriarchs and the women and young people—often could not be resolved. (Chen, 1998)

Resistance to the ruling class and their ideologies is not a completely novel endeavor for the common Chinese. It has existed all along in our ancestors' centuries-old struggles against the Imperial dynasties and their twentieth-century counterparts. It is implicit in the beliefs, institutions and a sundry of everyday practices of the Chinese people. By encompassing the ruling ideologies into its cultural outlook, Chinese commoners often turn the worldview of the tributary bureaucracy on its head. From time to time, the commoners can even successfully create its own limited autonomous sphere under the nose of their rulers by shelving the rulers' bureaucratic control—pushing it aside in everyday practice through venerating it on the symbolic level.

These fragmented and implicit ideas and everyday practice are the necessary sources for the ruled subjects to learn from in articulating their more explicit and coherent revolutionary consciousness and practices. However, the fragmented everyday subversions are not exactly liberating in their inchoate forms, and they almost invariably reproduce the rulers' hegemony on the objective level at the same time that they afford a modicum of dignity and autonomy for the subjects. Confucianism, the mainstream political thought of the Chinese elite, is after all centered on the strategy of containing the necessary healthy heterodoxies in order to strengthen the dominance of orthodoxy. At its worst, the fragmentation of the everyday subversion often exacerbates the oppression inside the ranks of the subjects when they forge solidarity against the rulers and struggle amongst themselves. The role of the highly oppressive and resilient Chinese patriarchy is the most visible of such instances. For Taiwanese men such as the Black Hands, evoking the familiar form of resistance afforded to them by a patriarchal tradition may come as a

natural strategy, but can never bring genuine liberation.

I am convinced that the key to realizing the lost dreams of the Black Hands—the aspirations for truly autonomous control over one's own labor, for genuine egalitarian relationships with other members of the society, and so on—lies not within the bosom of the family as the Chinese folk tradition dictates, but out there with whom the Taiwanese male skilled workers fear most—the ghosts.

The entrepreneur machinists do not regard themselves as proletariat because they own their own means of production. However, similar to the industrial proletariat that the ghosts symbolize, the entrepreneurial Black Hands who find their work degraded and their autonomy eroded are actually not isolated. Confined may each of them be in their lonely workshops in their daily work and lives, they are actually engaging in cooperative labor with much more people and in much larger scale than their peasant forefathers could imagine. Their interdependence with each other, and with all other members of the whole society, is more intense than ever before. It is only under the confinement of the capitalist relations of private property that the collective nature of their work is concealed, and their interdependence appears as the dependence and subordination of each of them to the merchants and the big factory owners. Only by breaking down the barriers between each and every small shop and establish genuine democratic collective control over social production, can the Black Hands realize their dreams. In this respect, the Black Hands have much in common with the ghosts and little in common with the traditional family patriarchs they currently style themselves after.

The dignified, autonomous and skillful nature of the ideal Black Hand's work, I believe, is worth struggling for. I also believe this ideal can be realized in the future society not by the nostalgic struggle of the Black Hands to defend their traditional patriarchal privileges, but by a forward-looking working class movement that is capable of ending all exploitations. Such an endeavor will not be easy and may take generations of defeat before its eventual success. Yet when it succeed, people will no longer see the Rites of Universal Salvation with fear and pity, but

with genuine feeling of joyful solidarity with all the ghosts and all members of the society. In the process, the working class can, and should, stop letting the story of “Black Hand Become Boss” lead us to see the world through the eyes of the exploiters and let the ancient and the venerated to continue to haunt us. Instead, the aspirations of the Black Hands and the traditions we inherited should become sources for the working class to draw strength in our struggle against all exploitations. In doing so, the working class can, and should, as Marx says, “succeed in ridding itself of all the muck of ages and become fitted to found society anew.” (Marx & Engels, 1846/1993: 95)

Appendix: A Note on Research Method

Except for the Chapter 2, which is a retrospective account of my own working experience from June 1990 to May 1992, all material in this thesis is collected in my fieldwork from July 1997 to June 1998. During this period, I visited 20 machine shops and factories in the Taichung area, conducted semi-structured or informal interviews with 55 informants, including factory/workshop owners, merchants, machinists and other workers, and one ritual specialist and one retired vocational school headmaster. I also had conversations with many more people during my visit. In addition, I observed rituals in one communal Tudi Gong shrine, two Mazu temples, and the pilgrimage described in Chapter 3.d

Among the firms I visited, I used four as my central work site. They are: DY Enterprise, TW Gear, HQ Enterprise, and SY Enterprise. I visited to DY, HQ and SY from early August 1997 to late May 1998 on frequencies ranging from twice a week to once every two weeks. Every visit lasted at least four hours. Typically, I start the visit by a conversation with the owner about recent business situation. Then, I would have converse with the workers during the slack time in their production. At HQ and SY, visitors kept coming and going, so I could have informal conversation with a wide range of people in the machining trade. TW, being part of a bigger corporation, had a more formal organization. I was granted permission to visit every week from late September to early December 1997. In every visit to TW, I went through the whole work day with the day-shift workers, from 7:15 AM to 8 PM and after. In addition to the informal conversations, I was permitted to conduct participant observation. The shop foreman assigned me to be an apprentice to a Thai worker, and I worked on the gear grinding machine for four work days during October, 1997.

Other firms were all connected with these four central firms in business. The numbers of my visits to each of them range from 8 to 10, as in the case of CR, CY, and HJ, to two as in other firms.

Understandably, the shop floor is featured by a very strong and informal verbal culture, and I had a difficult time conducting long, structured interviews. Most of the time, I jotted down notes during the conversation, and recorded in my field note every night. The number following the quotations is referred to the dated field note. Most of the direct quotations were verbally confirmed with the informants. I tried to do the more orthodox way once, printing out the part I liked to quote on a piece of paper and letting the informant examine and sign on the paper. The informant refused because the form reminded him of an affidavit taken by the police.

I had ten semi-structured interviews with the informants, each ranged in length approximately from one to two hours. The interviewees are: Lin Lisheng, Lin Liguu, Zhang Xingping, Hung Chengdian, Ruan Dongyi, Huang Mingzhe, Li Baoxi, Cheng Wenbin, Lai Hungzheng, Lin Kunsheng and Li Changrui.

Furthermore, I have videotaped approximately twelve hours of the informants work, and taken numerous photographs. Initially, I intended to use the videotape and photographs to do photo- video-interpretations interviews—letting the taped and photographed persons explain what they had been doing. Yet they all rejected due to lack of time.

Most of the informants had signed informed consent forms despite their apparent displeasure to the formality. Every firm I visited had also provided me with a signed permission for interview. I explain this as “The American Formality,” and most informants seemed to be very understanding. Official formality is, after all, always an integral part of Taiwanese life.

List of Informants

TW Gear		Zheng Caining	quality assurance
Zhang Lianxing	gear grinding foreman		technician
Lin Zhengyi	senior gear grinder	TX Metal	
	operator	(CNC lathe shop inside TW premise)	
Che Mingdong	gear grinder operator	Xie Zhengzhung	Owner
Hu Xingrun	gear grinder operator	Huang Dexun	Operator
Wilai	senior gear grinder	Cheng Minghe	Operator
	operator, Thai	HQ Enterprise	
Sang Khom	gear grinder operator,	Li Baoxi	Partner
	Thai	Cheng Wenbin	Partner
Buraskorn	gear grinder operator,	Yao Zhiliang	Partner
	Thai	Cai Zhijie	Helper
Yan Zhengxun	milling machine	Nian Kunlung	Helper
	operator	Wang Liansheng	Helper
Lin Ligu	plant manager	CY Enterprise	
Hung Minshun	production planning	Lai Hungzheng	Owner
	foreman	HJ Precision	
Chen Qingzhi	CNC technician	Lin Kunsheng	owner
Fu Yuwen	measuring machine	Wang Shufang	owner's wife
	operator, apprentice	CR Grinding	
Li Changqing	milling machine	Li Changrun	owner
	operator, apprentice	YJ Engraving	
		Ke Zhilung	

YC Surface Grinding		Liao Qungzhnag	owner
Liu Wenqin	owner	YJ Packing Machine	
LC EDW Industry		Zhan Xuechang	owner
Wu Lianxi	owner	JZ Machinery	
DY Enterprise		Huang Mingzhe	owner
Lin Linsheng	president	Zhang Liansong	foreman
Lin Siliang	sales, president's son	WS Valve	
Hung Chengdian	mold shop foreman	Lin Zhengxun	owner
Lin Hanshu	production planning	MF Metal Forging	
	(wife of HQ's Li Baoxi	Wang Huaiwu	owner
Zhang Xingping	injection shop foreman	HS Industry, heat treatment	
Lai Yicheng	mold technician,	Yan Renyung	President
	apprentice	VTM Machinery	
XC Mold		Lin Yunade	manager, outsourcing
Zhao Qilin	Partner	Zhuang Shuhui	director, information
Liu Yinan	Partner		technology
SY Industry		Jiayin Village Tudi Ging Shrine	
Ruan Dongyi	Owner	Chen Facang	committee vice
Jian Qingxyung	Helper		chairman, lay ritual
(A-Lam)			specialist
ZC Milling		Gongdong Vocational School	
Liao Yungshun	Owner	Huang Qingtai	retired headmaster
Liao Xinchang	helper, owner's nephew		

YX CNC Lathe

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