中華人民共和國的職業健康與安全：以歷史社會學的角度看
國家、管理者與勞工

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中文摘要

從一個社會主義到一個市場取向的資本主義制度，中國大陸社會經歷一個戲劇性的變遷。這個變遷對職場健康與安全代表了什麼意涵？本國科會計劃以研究中國大陸目前的工人健康的問題及其歷史發展，以及國家、管理階層及工人在其中的角色，試圖理解此問題。研究策略以歷史社會學方法為主，再輔以中國全國工會調查資料的分析。中國大陸歷經四次工人健康問題的高峰。在毛澤東時期，中國面臨嚴重的工人健康問題。但國家因為社會主義工人是主人翁的氛圍，再加上中央集權的管制，工人健康的問題是受重視的。工人健康問題第四高峰始自鄧小平 1993 年出名的南巡，之後私有化、市場化、外國投資大幅展開。這個鉅變使得中國大陸面臨極大的職場健康問題。當國家政策的重心從工人轉向管理層時，國家在職場健康與安全的角色往下滑落，中央或地方掌理職場健康與安全的人事與機構被消減或重組，相反的，工廠的管理者權力卻越來越擴張，而工人的地位也一日不如一日。在工人健康與安全的保護事業中，中國面臨的形勢是嚴峻的。

English Abstract

China has undergone dramatic transformation from a socialist to a market economy. What is the implication of this transformation to occupational health and safety (OHS) among workers in the PRC? This research addresses this question by studying the current status and historical development of PRC’s OHS and the role of the state, management, and labor in this development. We used a historical sociological approach in this research and analyzed a large data set from All-China Federation of Trade Unions. China has experienced four peak periods of workers’ health problems. During Mao’s era, China faced serious OHS problems but they were taken more seriously due to the socialist ethos and the centralized and regulated bureaucracy. The last peak period began in 1993, after Deng made his famous “tour to the south,” which triggered rapid privatization and marketization and the increase of the foreign investments. With this market reform, China has been confronted with daunting OHS problems. The role of the state in regulating OHS has been declined as the emphasis of the state policy shifts from labor to management. The OHS personnel and organizations at the central and local state level have been massively downsized and restructured, while the number of factories has drastically increased. In contrast, the power of the management in the factories has been expanded dramatically. Finally, the social status of the labor has declined significantly. China faces enormous challenges in its endeavor in the protection of its workers’ health and safety.
Introduction

The past two decades witnessed one of the most important events in world history: the great transformation from socialism to market economy swept through the former socialist countries. These countries include the People’s Republic of China (PRC), the former USSR, and those in Eastern Europe. Accounting for more than one quarter of the world population, the peoples living in these countries spent almost a century to construct a socialist system – a path totally different from the one developed by the Western powers, a capitalist system. However, starting from the late 1970s in the PRC and the late 1980s and early 1990s in Eastern Europe and the former USSR, shocking many people in other parts of the world, these countries changed their career path completely. They rejected the socialist system and launched a market reform.

This dramatic transformation, important as it is a social, political, and economic phenomenon, has attracted the attention of a great number of social scientists. These social scientists have been studying many aspects of this transformation. For example, they studied the factors contributing to this transformation (e.g., Joppke, 1995; Verdery, 1996; Lemke and Marks, 1992), the impact of this transformation on the life of the peoples living in these countries (e.g., Rosenberger 1992; Peng, 1993), the actual changes in the political, social, and economic dimensions of the societies (e.g., Crawford, 1995; Fischer and Gelb, 1991), the implications to the gender, class, and other socioeconomic relations (e.g., Haug, 1991; Szalai, 1991; Akos, 1994; Iatridis, 2000; Atkinson and Micklewright, 1992), the changes in the access, organization, financing of the health care systems (e.g., UNICEF, 1994; Vienonen and Wlodarczyk, 1993; D’Intignano, 1992), et cetera. Many have also studied the impact of the transformation on the workers in these countries (e.g., Chan, 1999; Chan, 2000; Howell, 2000; Clarke et al., 1993). However, few have conducted research on the occupational health and safety issues as they relate to the market reform in these former socialist countries.

The transformation from socialism to market economy that has occurred in the PRC since the late 1970s is, at the very least, as dramatic as those of other former socialist countries in the former USSR and Eastern Europe. In fact, this political, economic, and social transformation was described as “the great reversal” by Hinton (Hinton 1990), the author of the classic, Fanshen: A Documentary of Revolution in a Chinese Village (Hinton 1966).

What are the implications of this “great reversal” to the occupational health and safety (OHS) among workers in the PRC? How significant is this transformation to the protection of workers’ health and safety? How has the occupational health and safety status changed since the PRC was founded in 1949, particularly after the market reform? How have the roles of the state, management, and labor changed in the protection of workers’ health and safety in the PRC in different political periods after 1949? How has the power relationship of the state, management, and labor reflected the protection of workers’ health and safety during different periods before and after the market reform? Although there have been studies concerning the problems of occupational health and safety in the PRC before or after the market reform, we have not found any sociological study that addresses the above questions. The NSC-supported research project reported here aims to address these questions and to fill the gap in the literature regarding workers’ health and safety in the former socialist countries.

Objectives

To resolve the above questions comprehensively and systematically, we need to address two major aspects of the research problem. Firstly, we need to study the current status of the OHS problems. Because the OHS problems vary greatly among different industries, we focus our research on the manufacturing industry.
Secondly, the current status of the OHS problems and the protection of workers’ health and safety does not develop in a vacuum – it is a result of the historical development of the past (through different political and economic periods). Therefore, in order to fully understand the current situation, it is imperative to study how the current situation has been developed since the PRC was founded in 1949. In this case, a historical sociological approach is an essential research tool. Therefore, using the historical sociological research approach, we will need to examine the changes in the status of the OHS problems and protection; the ideology, the OHS policies, and regulations of the PRC state; the attitudes and policies of the management (or the capital) toward the protection of workers’ health and safety; the workers’ status, control, and participation in the decision-making concerning the OHS issues; and the interactions of the state, management, and labor regarding the OHS issues.

**Review of Literature**

As mentioned previously, to date, no studies have directly addressed our research questions outlined in this proposal. Nevertheless, there are some studies relevant to our research concern. In the following, we will briefly review these studies.

**OHS Problems After and Before Market Reform.** Some western scholars have warned that the PRC’s rapid modernization drive will undoubtedly lead to explosive growth of hazardous industries and unsafe workplaces as well as enormous challenge of occupational health problems (Christiani, 1984; Guidotti and Levister, 1995; Abrams, 1980). Indeed, the most recent ACFTU survey of the status of Chinese workers revealed that 11% of the manufacturing workers have been inflicted with occupational disease and 13% have been injured from their workplace since they started their work in the surveyed factories (ACFTU, 1999). It was estimated that about 34 million people (about 30% of the workforce in the PRC) engaged in hazardous occupations (China Women’s News, 1996). In reviewing the OHS problems in China, two Chinese researchers commented that the OHS problems with which the PRC is confronting after the market reform is daunting (Chen, 2000; Liu, 1999).

Nevertheless, there are more optimistic estimates too. Indeed, there exist prevailing occupational health problems such as occupational lung diseases, metal poisoning, pesticide poisoning, organic compound poisoning, toxic inhalation, dermatitis and chemical burns, noise-induced hearing loss, and occupational cancers (Guidotti and Levister, 1995). But some Chinese researchers suggested that the OHS problem in the PRC is improving. For example, these researchers indicated that the rate of industrial poisoning is decreasing in the 1990s (He, 1998) and the incidents of silicosis, one of the most prevalent occupational diseases, have also been decreasing (Gu and Wang, 1999).

**The State’s Efforts in Protecting Workers’ Health and Safety.** How have the state’s efforts on OHS problems been changing for the past few decades? Researchers have very different assessments. Some suggested that the state has devoted greater resources to the OHS problems after market reform. For example, some indicated that the PRC has given higher priority to the prevention of the OHS problems and management during recent years (Guidotti and Levister, 1995); allocated greater budget to OHS problems (Quinn et al., 1987); spent greater efforts in improving the reporting of occupational diseases (Chen, 1998); and strengthened the OHS legislation and inspections (Vincoli, 1994). However, some researchers disagree with the above positive assessment. For example, some indicated that the protection of the health and safety of woman workers have declined since the market reform (Xiao et al., 1997). Some lamented that decentralized and market-driven economic changes resulted in the deterioration of the OHS regulation and weakened state control (Guidotti and Levister, 1995; Chen and Chan, 1999). Many
OHS standards are outdated (Chen and Chan, 1999; Gang, 1985). In fact, the law for the prevention of occupational diseases for the country has only been drafted and not yet been passed (Su, 2000). Some researchers even suggested that the PRC’s OHS law enforcement is much more lenient than most other countries (Liu, 1999). The above contradictory assessments of the PRC state’s OHS efforts resulted from a lack of systematic study of the changes in the state’s OHS policy and regulations. Our proposed research is designed to fill this literature gap.

**Research Methods**

The proposed study is based on the theory that the OHS problems and workers’ protection is a reflection of the contested field in which the three major actors – the state, management, and labor – exert their influence and power, as explicitly or implicitly postulated by several investigators of the OHS problems (Noble, 1986; Wokutch, 1990; Wokutch, 1992; Sillen, 1996; Bayat, 1991). Noble’s conceptual framework will be used more as an analytical guide for the proposed study, as in his framework, he delineates, more clearly, the interactions of the three major actors vis-à-vis the OHS issues. It should be pointed out here that Noble’s theory is derived from the theories of Jessop (1990) and Carnoy (1984) concerning the state and related political theories. Thus, the theories elaborated by Jessop and Carnoy will also serve as important research guides.

As noted by Noble, the management (or capital, under the more capitalist mode of production) is primarily concerned about profit-making (under more capitalist mode of production) or about production and productivity (under the centralized economic decisions for the socialist mode of production). Under these circumstances, the management is likely to maximize its control of workplace and of workers, for the profit-making or for the increase in production and minimize the cost of production. These tendencies may inhibit the protection of workers’ health and safety and discourage workers’ participation in the decision-making in the production process. On the other hand, the occupational illnesses and injuries may lead to the interruption of production, the damage to the skilled workers, the lowering of the productivity, and the increase of workers’ medical bills. As a result, the management may consider the OHS problems un-economical. Further, the management may be concerned about the negative images triggered by the OHS problems. Consequently, the management might invest in some measures to protect the workers from OHS problems.

The state mediates between the capital and the labor. On the one hand, it is concerned about its revenues derived from the production (under the socialist mode of production) or from the capital’s profits. On the other hand, it is also concerned about the preservation of the labor power for continuing production. Depending on how the state deals with this contradictory concerns, it may take different forms of intervention -- legal liability, workers’ compensation, or factory legislation. For the workers, effective OHS regulation requires that workers take an active role in plant governance and in national policymaking. Workers may influence the conditions of work through various means including strikes, collective bargaining, elections, lobbying, et cetera. Because the modern plants are mostly designed with the principle of Taylorism and Fordism, the work tasks are often segmented and routinized, the solidarity among workers may be difficult to develop. Further, workers may trade off between economic demands (higher wages) and nonwage demands such as the OHS protection.

This project is a historical sociological study. Tocqueville, Marx, Durkheim, and Weber developed historical sociology in their inquiries into the social origins and effects of the European industrial and democratic revolutions (Skocpol, 1984). By the 1980s, historical sociology had emerged as one of the most important sociological methods because of its fruitfulness in addressing many profound social science questions (Smith, 1991). Historical sociology is the study of the past to find out how societies work and change. Since the goal of the proposed research is to study the
historical processes for the past few decades in the OHS problems and workers’ protection and the roles of the state, management, and labor in these issues, historical sociological method is the most appropriate approach.

In addition to historical sociological approach, we also used statistical analytical approach. We used the ACFTU (All-China Federation of Trade Unions) data set to analyze the current OHS status, OHS protection, and their relationship to factory-related factors.

Results and Discussion

In this section, we will briefly review the major findings of this NSC research project in three sections: current status of occupational health and safety (OHS), historical changes in OHS, and the role of the state, management, and labor in OHS. Most of these findings have been discussed in the two articles the P.I. and her collaborator have published in journals.

Current Status of OHS. In the 1990s there were, on average, 100,000 fatalities from industrial accidents each year (Xia et. al, 2000); between January and July 2002, such fatalities stood at 65,350 (China Daily, August 8, 2002). 11,700 cases of serious occupational diseases were officially reported in 2000, a jump of 14.5% from 1999. Of these, pneumonokoniosis was the most serious, taking up 77.7% of the cases. In 2000, 9,100 new cases were discovered, and of these 2,755 of the victims died. The estimated cumulative number of pneumonokoniosis cases was slightly over half a million, and the death rate was 23.85% (Bureau of Legal System and Supervision in Health, 2001). The rates of industrial fatalities, injuries and contraction of OHS diseases were so alarming that the Chinese government awoke to the fact that immediate stopgap measures had to be instituted: two new laws – on the prevention and treatment of occupational diseases and on safe production -- were promulgated in 2001.

Historical Changes in OHS. Chinese researchers divide the historical changes in OHS into four peak periods in workers’ health problems. The first period occurred during the late 1950’s during the Great Leap Forward period; the second happened in 1974-75 during the later part of the Cultural Revolution; the third occurred during 1985-86 when China’s construction industry was entering a boom period; and the fourth period began in 1993, after Deng made his famous “tour to the south,” which triggered rapid privatization and marketization and the increase of the foreign investments (Ming Pao, 1994).

Under the political and economic system in place during the rule of Mao Zedong from 1949 to 1976, China faced serious OHS problems. For example, the world’s largest study of benzene poisoning, covering 529,000 workers, was conducted from 1979 to 1981 in China. Of the ten benzene-related industries, footwear had the highest leucopenia prevalence rate, at 1.25 percent (Yin et al., 1987). It was also discovered that the prevalence of aplastic anaemia was 5.8 times higher among footwear workers than the general population ((Yin et al., 1986). In fact, some of the smaller, collectively owned footwear factories, not included in the above-mentioned large-scale surveys, were found to have more serious OHS problems (Yin et al., 1994). Fortunately, the OHS problems were taken more seriously by the Chinese government. The socialist ethos, aided by a centralized and regulated bureaucracy, was able to improve on the hazardous workplace conditions which prevail today under the economic reforms begun in the early 1980s. The workers in the SOEs(State-operated Enterprises), for example, as the most prominent economic sector inherited from the Mao’s era, have traditionally had the best job security and other welfare benefits (Chan, 1999). However, this situation seems to be deteriorating after market reform was launched (Chen and Chan, 1999). Some researchers pointed out that it has been more difficult for the state to enforce OHS standards as modernization drive seems to run in contradiction with the socialist ideals of treating the workers as the “master” of the country (Quinn et al., 1987). However, some
statistics do show some improvement in the OHS problems. For example, the fatality rate in the SOEs has decreased from .520 to .099 per thousand workers from 1950 to 1992; the rate of serious injuries also decreased from 1.028 to .138 per thousand workers during the same period of time (Hay and Wang, 1994). It is, however, difficult to assess the accuracy of this comparison as the SOEs have also gone through dramatic restructuring after the market reform. In our research, we found that this improvement is mainly due to the technological advancement in the OHS equipments and measures.

There are about 20 million TVEs (township-village enterprises) in China (Xu, 1998). These TVEs, emerging as an important economic sector in China, have little prior experiences in the prevention or control of OHS problems (Guidotti and Levister, 1995). It was estimated that, among these TVEs, 82% contain various levels of occupational hazards and 62% of these workers do not wear personal protective measures against toxic chemicals (Xu, 1998). Other researchers have also pointed out the increasing risk of occupational diseases of the workers in TVEs (He, 1998).

The FIEs (foreign-invested enterprises) are not better than TVEs in terms of their working conditions (Stevenson-Yang, 1994; Tan, 1994). For example, a study found that the industrial accidents in the FIEs quadrupled from 1991 to 1992 (Stevenson-Yang, 1994). In addition, in Guangdong province, one of the provinces with an enormous number of FIEs, 75% of the industrial toxic poisoning occurred in FIEs, of which 90% were related to organic solvents exposure (Jia and King, 2000). Further, there have been frequent reports of serious fire accidents in the FIEs (Yu, 1994).

In sum, the extent of OHS problems have been changing in China, as the political system has been transforming to different periods. Due to the market reform, China faces serious OHS challenges mostly due to the industrial restructuring and the policy change. Nevertheless, it has also benefited from the technological advances in the protecting of workers’ health.

The State, Management, and Labor in OHS. The role of the state, management, and labor can be demonstrated quite clearly through the transition from socialist to market economy in China. As mentioned previously, the ideology of the state has been shifting from the workers being the “master” of the nation to the management being the key players in control. The massive downsizing of the OHS personnel and state organizations demonstrates this dramatic shift at the national level. The serious situation in occupational diseases and injuries was compounded by this restructuring of government bureaucracies at the national level at the end of the nineties. In 1998 the Bureau of Labor Protection under the Ministry of Labor was disbanded and its staff laid off. Nationwide there is no longer a special government institution in charge of OHS. Instead, the Bureau’s functions were taken over by the State Economic and Trade Commission (Mei, 2002). The latter is China’s bureaucracy in charge of economic development, and in the absence of an effective peak employers association in China this Commission has played that role. As such, it has not been protective of labor. Thus when dramatic fatal accidents continued to be reported in the Chinese press, the Chinese government realized it was necessary to rebuild its OHS bureaucratic system. In 2001 the State Economic and Trade Commission established the National Safe Production Supervision Management Bureau, and to emphasise the government’s seriousness in improving the country’s OHS conditions, a Safe Production Committee was set up under the State Council (Labor Protection Magazine, 2001). Whether China’s OHS record will improve in coming years with the re-emergence of these peak OHS bureaucracies still remains to be seen.

The economic reforms have shaped an industrial structure that is also detrimental to workers’ health and safety. Before the market reform, during the Maoist era, the state sector, followed by the urban collective sector, were dominant. There was no private sector, and the state-owned factories
tended to be large, often employing several thousand workers. They were therefore easier to monitor. In contrast, after the market reforms many tens of thousands of smaller private and rural collective factories sprang up, making monitoring of OHS protection a daunting task. In addition, there is a booming sector of foreign-invested enterprises managed by Hong Kong, Taiwanese and Korean firms, which are notorious in China for their lack of concern for workers’ health and safety. In Guangdong province, where these Asian-invested enterprises are concentrated, local Chinese newspapers carry stories of total disregard for human lives in the use of labor. Local governments eager to attract foreign investments tend to turn a blind eye to this (Chan, 2001).

As to the role of the labor, in general, the social status of the labor declines and the power structure of the workplace shifts toward management. In addition, the impacts of the labor organizations such as trade unions (TU) and staff-workers representative council (SWRC) have been weakening. The following excerpts from our in-depth interviews can best characterize this change:

“… Only if the company can survive financially, would the workers be able to keep their jobs; would they be able to labor; would the company be able to improve working condition, to decrease labor intensity, and to protect workers’ health and safety.” (Company A full-time chairperson)

“… If the boat was shaking, then people on the boat would become ‘sea sick’… if the company has enough rice, every employee would have rice to eat… The company has to lay off workers if it deems to be necessary…” (A factory office worker, workers’ representative)

“…If individual workers had health or other problems such as being laid off, the TU or SWRC should not be expected to resolve their problems because those problems are part of the social problems, not the company’s problems. The best approach to protect workers’ interests is to improve the company’s productivity and financial standing…” (A factory worker representative)

“…We are a shareholding company. According to the Enterprise Law, the board of directors has the determination power. The SWRC is not a ‘power institution’...it was one, but only before our company was restructured into a shareholding one. It is now only a democratic management institution.” (A factory management and planning department director)

In sum, given that China has benefited from a technological advancement in the protection of workers’ health and safety, it has also been confronted with enormous OHS challenges after the market reform. Furthermore, the role of the state and labor has been weakened through this political-economic transformation while that of the management has been expanded dramatically. More research in this area is needed in delineating the details of the power struggle in workers’ protection of their health and safety.

Publications and Papers


3. 為什麼工作會對健康產生威脅？ 2004 年<公衛教育在社大>種籽師資培訓營手冊, This paper is being revised and will be submitted to 台灣社會研究季刊
4. 從勞工參與的角度談台灣的職場健康保護機制，This paper is being revised and will be submitted to 台灣衛誌

**Self-assessment of the Research**

Basically, this project has achieved the major objectives originally planned. Part of the research findings have also been published in international journals (listed above). The P.I. noticed that the published articles have also stimulated discussions among the international OHS researchers. The only aspect of the research that this P.I. is not completely satisfied is the more systematic collection of the data concerning the historical changes of the state policy toward OHS. This P.I. has collected some and has also discussed these data in her publications. But she would like to dig more deeply into this question, as the inquiry into the transformation of the state policy toward OHS under China's political-economic transition is an important aspect of the social science research and will enlighten the current efforts in the research of the transitional economy in the former socialist countries.

**References**


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