

INFORMATION SOCIETY WITH CHINESE CHARACTERISTICS

DISCURSIVE EVOLUTION OF THE NEO-INDUSTRIALISATION STRATEGY IN THE

PEOPLE'S DAILY YU HONG

Abstract

By focusing on the Chinese official discourse of “neo-industrialisation” published on the *People's Daily*, this article not only provides an understanding of the Chinese official understanding of information society and information economy, but also foregrounds the issue of information in China's conflicted reintegration with global capitalism. This article argues that, deviant from the Western discourse of post-industrialism, the neo-industrialisation strategy promotes a coordinated effort to both “industrialise” and “informationise” the economy. Moreover, pragmatic concerns with China's realities, including unfinished industrialisation, structural unemployment and the domestic demands for all-around national development, all find echoes in the discourse of neo-industrialisation. By providing a political-economic contextualisation of this discourse, this article also strives to provide an insight of the most recent plan of forming a “super” Ministry of Industry and Information Technology in the Chinese government, which was announced in March 2008.

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Introduction

In March 2008, during the annual session of the People's Congress, Chinese Prime Minister Wen Jiabao unveiled a government reform plan of setting up five "super-ministries," which include the Ministry of Information and Industry (Yardley, March 12, 2008). It is planned that industrial policy responsibilities, which used to belong to the National Development and Reform Commission, would be hived off to the Ministry of Information in order to create the Ministry of Industry and Information Technology. While an immediate purpose is to centralise power and to enhance efficiency, this study shows that discursive configurations of how to pursue a Chinese version of "information society" had continued for years before the culmination of this imminent merge. This study attempts to make sense of the emergence and strategic deployment in a Chinese discourse of information society, i.e., the neo-industrialisation strategy. In particular, I argue that considering China's developmental realities, the Chinese leadership significantly modified Daniel Bell's vision of a post-industrial society, and furthermore, promoted a synchronised process of industrialisation and informationisation as what is called there the neo-industrialisation strategy.

In order to understand this information society with Chinese characteristics, it is imperative to set it off against a dominant paradigm. As an amalgamated product of official, media and intellectual discourses, a Western theory of "information society" has emerged in recent years as a predominant paradigm. In 1994, after former U.S. Vice President Albert Gore used the term "information superhighway" to describe a future of Internet accessing and communication over a world-wide network, "information society," "information age," "information economy" and "information industry" became buzzwords in global media coverage. Mass media have devoted a significant amount of attention to the futurist and utopian vision of information age, which presumably boasts a brand new civilisation, improved education, elevated entertainment, upgraded medical service and enhanced cultural diversity and equality.

On top of the media coverage, Western intellectuals have made substantial contributions by authoritatively formulating the vision of "the coming of information society." Among them, sociologist Daniel Bell's 1976 book *The Coming of Post-industrial Society* remains an acclaimed and classic futurist work. As Kumar points out, in light of the variety and convergence among the futurological strands of a post-industrial society in the 1960s and 1970s, this book of Bell provides "the most systematic statement" regarding "a new social order in the making." As a result, Bell is considered as "the intellectual leader of the post-industrial school" (Kumar 1978, 196). In this book, Bell forecasted that the technological revolution of information technology would herald the coming of post-industrial society, which would be an inevitable and inexorable stage of human development. In Bell's vision, post-industrial society would be characterised by a knowledge-based economy as opposed to the manual labour-based and goods-producing economy of industrial society.

As a logical extension of the fundamental changes of economic structure, Bell argued that the character of work and the core resources of economic development would correspondingly undergo qualitative transformations as well. Specifically,

information would overtake material resources, such as capital, land and energy, to become the pivotal resource and the “basis of all economic and social exchange” (Bell 1976, xiii). In addition, service work and white-collar jobs, characterised by “a new intellectual technology based on information,” would replace manual and unskilled labour in creating social wealth. Overall, according to Bell’s model, production forces embodied in information and communications technology would be the “axial principle and structure” (Bell 1976, 10), which would shape concrete socio-economic relations and conditions, rather than vice versus.

This whole discourse of post-industrial society or post-industrialism has been systematically challenged by a critical tradition. In this tradition, critical scholars examined the historical relationship between global capitalism and international communications, and they revealed the ways in which the discourse of post-industrial society grew out of specific social contexts, being shaped by laissez-faire capitalist values (Schiller 1973; Kumar 1978; May 2002; Webster 2002; Maxwell 2003; Mosco 2008). However, despite critical challenges, the developmentalist and technological-determinist discourse of post-industrialism remains a dominant paradigm. The technological-determinist logic has reincarnated itself into numerous developmental policies promoted by international organisations.

The actual political economy of communications development further makes post-industrialism compelling from the perspective of developing countries. In the 1980s and 1990s, transnational capitalist powers ferociously drove rapid technological changes as well as the global expansion of information technology. As Dan Schiller and Rosa Linda Fregoso (1991) pointed out, since the 1980s, influential agencies, including the World Bank, the IMF, the U.S. Agency for International Development and the U.S. Departments of Commerce and State, enthusiastically trumpeted privatisation and deregulation of telecommunications. As a result, informationisation driven by privatisation, proceeded across the globe, from New Zealand to Puerto Rico and from Hungary to Sri Lanka (Schiller & Fregoso 1991, 202-203). In this situation of market-driven technological changes and, as a result, the deepened integration of information technology into the global economy, developing countries are afraid of being further lagged behind, and were therefore compelled to enter the global system of information economy.

Undeniably, in the 70s and 80s, some newly industrialised countries benefited from participating in the transnational information economy. As McKay pointed out, in the post-War global economy, the successful rise of Japan and the Four Little Tigers, i.e., Hong Kong, Taiwan, South Korea and Singapore, is largely attributable to “their initial participation in global electronics to jump start their advanced industrialisation via export-led growth and industrial upgrading” (McKay 2006, 31). Not accidentally, during this period, Japanese scholars created a home-grown theory of information society in line with Bell’s post-industrialism, as exemplified by Masuda’s book *The Information Society as Post-Industrial Society* (Masuda 1980).

In the late 80s and early 1990s, during the post-Mao market reform, China accelerated its re-insertion into the global economy by heavily tapping into information and communications technology (ICT). As Zhao pointed out, “Mesmerized by the ideology of post-industrialism in the West...top leaders embraced the view that, as former Party General Secretary Jiang Zemin declared, ‘[n]one of the four modernizations would be possible without informationization’” (Zhao 2007, 97-98). Re-

markably, China's home-grown development theories, put forth by the party state, have established a framework for the later understanding of information society. Smythe observed that a technological-determinist version of development theory remained largely unchallenged during the Maoist era. This uncritical belief in the "neutrality of technology" led to "the post-Mao Chinese elite's re-articulation of the deep-seated modern-era Chinese belief that the only way to redeem the Chinese nation from its past humiliation ... and to avoid being bullied again in the future was to 'catch up with the West'" (Zhao 2007, 97). When the post-Mao state started to prioritise economic development over socialist considerations in the 1980s, the state legitimised capitalist techniques for economic development, including the pursuit of a market-oriented and ICT-driven mode of economic development.

On top of developing domestic end-use capacities, the Chinese state has strenuously encouraged a FDI-driven and outward-looking mode of development of ICT manufacturing capacities. By eliciting foreign direct investment and pursuing an export-driven mode of development, China's ICT sector has achieved a giant industrial size of 3 trillion by the end of the Tenth Five-Year Plan (2001-2005). Quoted by McKay, *Yearbook of World Electronics Data 2004* documented that in 2002, China passed both Taiwan and South Korea to become the world's third largest producer as well as the third largest market of electronics (McKay, 39).

Given the lasting impact of the post-industrial society theory of Daniel Bell and the profound global implications of China's reintegration into global capitalism through the development of its information industries, it is logical to ask whether China, as a large developing country, is striving towards "information society." What are the motives and strategies of the state-led drive of ICT development? What are its political economic characteristics? And how do national aspirations shape the development of information technology? More specifically, how does the Chinese state understand and digest the technological-determinist and universalistic discourse of post-industrialism? If post-industrialism is not the guideline of China's ICT development, what is it? And how would the Chinese state understand and handle real contradictions and tensions in its re-insertion into the global economy? Although these questions cannot be fully answered, it is important, as a first step towards tentative answers, to study a Chinese native rhetoric about ICT development. Overall, this paper is about the emergence and strategic deployment in the native discourse of "neo-industrialisation."

I chose the *People's Daily* – the largest and most important party organ newspaper – to represent the Chinese official discourse. As the top party newspaper of the Chinese Communist Party, the *People's Daily* (PD) possesses the exclusive privilege of reporting and commenting on the party state's ruling decisions and practices on the national level, and therefore is the most authoritative "mouth and throat" of the Chinese state. Methodologically, this project used keywords, including "information society," "information economy" and "information industry," to search articles from odd-numbered months from 1995 through 2001 and 2003. This method of sampling is meant to limit the amount of articles I examine, because relevant and similar news articles are redundant. While I teased out major themes, patterns of reasoning and attributions in the text, I also grounded the content analysis in the social history and political economy of contemporary China. In particular, I would use this study of the PD to gain a glimpse of the conflicted nature of China's reintegration into the global informationised capitalism.

More specifically, the first purpose of studying the *PD* is to question the presumably universalised and technocratic assumption of post-industrialism by presenting the indigenous discourse of neo-industrialisation. Secondly, recognising the *PD* as a discursive terrain of discussions and negotiations, this research traces journalistic writings on this topic to discover what expectations and strategies of ICT development the state wants to communicate to the public. Last but not the least, extending from the discursive analysis, the paper strives to shed light upon actual tensions and contradictions China faces within the domestic and global political economy. Based on a systematic review of approximately 1,000 newspaper articles published in the *PD*, this paper puts the discourse of information society under critical scrutiny.

I argue that the discursive construct of information society on the *PD* features distinct Chinese characteristics, which deviates significantly from the post-industrialist paradigm. Specifically, with some fundamental conceptual modifications of Bell's vision of a post-industrial society, the *PD* has formulated and advocated an alternative rhetoric, i.e. the strategy of neo-industrialisation. Neo-industrialisation promotes a coordinated effort to both "industrialise" and "informationise" the economy. The discourse is an amalgam of conflicting and contradictory expectations and goals. First of all, the neo-industrialisation strategy is a strategic response to the changing world industrial pattern and a gesture of accepting the logics of free market capitalism. Yet it shows an acute awareness of unequal global division of labour within which China has been assigned to a relatively downstream position. Secondly, the strategy of neo-industrialisation entails not only a concession to China's industrial backwardness and unemployment pressure, but also to capitalist imperatives and market values. Thirdly, the neo-industrialisation strategy is a struggle between a national development tradition that demands a self-sufficient and capacity-building approach and a free market schema that would prefer revenue-generating and export-oriented economies.

China's Embrace of Bell's Post-industrial Society?

The impact of the post-industrialist paradigm can be easily perceived in the *PD*. Following a Western hype for information society in the middle 1990s, the number of articles on information and communications technology (ICT) skyrocketed from 113 in 1995 to 927 in 2003. The *PD* also opened up new columns, such as "Information Age," "Information Industry" and "Computer, Network and Telecommunications," to have focused discussion on social, economic and cultural issues that presumably stem from the advent of a new information epoch.

Prophetic articles in line with post-industrialism mainly clustered in the late 1990s in the *PD*. In this period, the Western-led trend of informationisation was an overwhelming phenomenon in the eyes of the Chinese ruling groups. As a result, urgent advocacy of building an indigenous information industry and introducing knowledge economy from the West was a staple topic in the *PD*. These articles drew upon the statistics of Western countries to demonstrate the transformative power of information technology as what is called "the future force of production."

In these prophetic articles, "information" or "information industry" were singled out and mystified as if their intrinsic nature might change the quality of economic activities and social reality. Key elements of Bell's rationale were present in the

news stories. Ranging from the mass appeal discussion of the digitalised library to the official decree on restructuring national economy, the idea of information society all of a sudden became a formidable reason for reassessing “old” values and practices. Some articles even made the bold exclamation of the humankind entering a network society with a brand new civilisation (PD 1998, Sep 19). Beneath these exclamations lied an evolutionary and technological-determinist logic, which puts societies into a hierarchical order, ranging from agricultural society as the lowest stage to industrial society as the intermediary stage and to information society as the future destination. For example, an interpretation of the Western fad for information technology followed this rationale:

Currently, Western developed countries are undergoing a significant social revolution, i.e., the transformation from industrial economy to information economy. The driving force is the ongoing technological revolution, which would greatly impact the global economic structure and would re-configure power relations (PD 1995, Jan 09).

Perceiving China as a part of the universal and objective progress, theoretical articles and official remarks published on the PD predicted that information technology would revolutionise the social and economic status quo in China in the same way as any other societies. In terms of economic structure, information economy was perceived as a superior production force to replace manufacturing and agriculture (PD 1995, Jan 09). In terms of occupational structure, the PD anticipated reduced demand for human labour as an inevitable trend of information economy (PD 1996, March 16).

In addition to these “advances” of post-industrial society that were either presumably universal or have been tested in wealthy and developed countries, according to the PD, information technology would be an effective antidote to underdevelopment, and therefore would uplift developing countries on the lineal scale of development. Numerous articles in the PD exclaimed with great excitement that, although China lags behind on the level of industrialisation, China could utilise the “privilege of backwardness” and leap into “information age,” without repeating the same mistakes and inputs already made by industrialised Western countries.

However, the foregoing opinions of the PD only reflect one facet of the complex discourse. Actually, the PD has followed a direction Bell and other futurists would not think it would go. A critical and systematic review of the newspaper articles would reveal that the PD has formulated and advocated an alternative rhetoric, i.e. the strategy of neo-industrialisation. I would argue that the neo-industrialisation strategy, as a major framework of talking about informationisation in the PD, has attempted to reconcile several emergent tensions and contractions in China’s re-insertion into the global economy, which include unfinished industrialisation, structural unemployment and the risk of being entrenched in the labour-intensive and low-tech mode of global accumulation.

The Path of Neo-industrialisation

The idea of neo-industrialisation was formulated out of numerous debates over several years. At first, prophetic arguments were increasingly under fire, and

counter arguments became prevalent from 2001. In contrast to the hierarchical and lineal conceptualisation of post-industrialism, the *PD* started to point out that no matter how advanced a country is, production and consumption of tangible goods would still occupy the largest proportion of the country's GNP (*PD* 2002, Aug 17). More poignantly, the *PD* conceded that because China is still in the middle of industrialisation, China should not blindly copy the steps of Western developed countries (*PD* 1996, July 06). According to the *PD*, China is still an agricultural country with the least mechanised and least productive agriculture sector. About 50% of the working population are still in agriculture, forestry and fisheries, and two thirds of the national population are in the countryside (*PD* 2002, Dec 02; *PD* 2003, June 16). In short, urbanisation and agriculture industrialisation are by no means completed.

Recognising this national reality of unfinished industrialisation, numerous articles debated on how to strike a balance between informationisation as a global trend and industrialisation as a domestic need. Continuous debates eventually culminated in a national economic guideline for the first twenty years of the 21st century announced at the 16th CCP Congress, which was summarised as "following the path of neo-industrialisation" (*PD* 2002, Dec 02). In contrast to the evolutionary and lineal model of post-industrialism that imagines information society would come into being after industrial society has reached all its potential, the logic of neo-industrialisation combines and synchronises informationisation and industrialisation as two mutually complementing processes. The strategy of neo-industrialisation is exactly an attempt, at least on the discursive level, of reconciling the global trend of informationisation with the unfinished task of industrialisation in the local context.

For example, one article "Correctly Choose the Strategic Focus of Informationizing National Economy" represented the awareness of unfinished industrialisation. It was asserted that in the globalisation era, a country's overall national power is still determined by the quantity and quality of goods manufactured by primary and secondary industries, and therefore, the construction of communication infrastructure should serve, rather than replace, the further development of the primary and secondary industries:

Even though building information network is an important aspect of informationization ... information technology is just a tool, which cannot replace other industries; and thereof, we must maximize the auxiliary function of information technology so as to boost traditional industries and activate the whole economy (PD 2001, June 18).

In contrast to the evolutionary categorisation of "information industry" versus "traditional industry," which would assume information industry as a more advanced stage located at a later point of time than traditional industry, this article pointed out that traditional industry, such as the chemical industry, the metallurgical industry, the mechanical industry and the manufacturing industry, would continue to represent modern production forces and would not shrink as opposed to new technology.

In addition, the magical term "information" which used to buzz around 1995 was replaced by "information industry" and "information infrastructure" after 2001. Information infrastructure was normalised as a part of the circulation system

comprised of transportation, power transmission and telecommunications (*PD* 1997, Jan 18). This way of discursive formulation would imply an appendage status of information technology, instead of painting this technology as the overhauling force to the national economy.

The modest tone towards information technology and the pragmatic outlook regarding China's task of further industrialisation have reflected China's low-end position in the global information economy. According to the *PD*, in the global information economy, developed countries monopolised high-tech and highly profitable industries, and transferred labour-intensive and least lucrative industries to developing countries. As a result, developed countries have forestalled developing countries from occupying the pinnacle of the industrial hierarchy on the global scale. The self-awareness of China's position in the global economic structure has challenged the dogmatic classification of information industry as "high-tech." For even in the so-called "high-tech" information industry, China has mostly undertaken low-tech and labour-intensive assembly and processing operations.

Empirical studies and secondary literature support the view that China's participation in the global information economy has disproportionately encouraged labour-intensive operations in the ICT sector. For example, in the telecommunications sector, foreign capital has concentrated in labour-intensive operations, partially due to the state prevention of foreign capital from entering protected high-end industries before China's accession into the WTO, and mostly due to the unwillingness of transnational capital to make technology transfer. Overall, in the telecommunications sector, foreign players' activities have been confined to technology-licensing and to the mass production of digital switching equipments, which contributed little to improving local innovation and manufacturing capacities of high-end products (Broadman & Sun 1997, 359).

This downstream position in the global division of labour is not limited to the telecommunications sector. The official evaluation has confirmed that despite the classification of the ICT sector as "high-tech," China has not mastered the whole value-added chain of ICT production, and the ICT sector is mainly comprised of low value-added and labour-intensive processing and assembly activities. The value-added rate of the electronics manufacturing industry was around 20% in 2003, which was not only 15% lower than the average level of developed countries, but was even lower than the average value-added level of the whole manufacturing industry in China (Ministry of Information Industry 2003).

This industrial structure has its political-economic roots in China's reinsertion into global economy. In China's post-1978 market reform, the comparative advantages strategy and the coastal development strategy have underpinned China's re-entry into global capitalism, both of which promote the utilisation of China's cheap labour and coastal regions to attract foreign direct investment. In this broader context, the ICT sector has spearheaded the trend of China's re-entry into the global economy. Since the inception of China's ICT sector, foreign direct investment (FDI) has been widely introduced to jump start China's ICT development. In electronic and telecommunication equipment, foreign affiliates have a dominant 70% share of output (Lemoine & Unal-Kesenci 2004, 840). As a result of foreign domination, despite rapid economic growth in quantitative terms, China's ICT sector and its industrial structure have been shaped by transnational capital

and have mostly specialised in assembly and processing activities (Hart-Landsberg & Burkett 2007, 36).

This FDI-driven mode of industrial expansion has long-term implications. Serving as a downstream outsourcing and assembly platform for transnational players, China's ICT sector has had the difficulty of fully automating their operation, because of a "wide variation of raw materials and components used in the final products" (McGuckin et al. 2004, 14). Moreover, to the Chinese leadership's dismay, the massive influx of foreign capital hasn't introduced significant scientific upgrading or technological leapfrog to indigenous economies as originally promised. Although China could incorporate high-tech products in its production for exports, the dissemination of innovation capacity into China's domestic industry has been low (Lemoine & Unal-Kesenci 2004, 843). Lastly, disadvantaged by the lack of capital and without monopolistic control of core information technology, China's fledgling ICT enterprises have to face the risk of being overwhelmed in localised global competition. Their premature entry into global competition has left little autonomous space for them to develop indigenous manufacturing and R&D capacities.

Information Technology and Market Expansion

The strategy of neo-industrialisation is not simply a concession to China's backwardness, but is also the recognition of market mechanisms and market values. Divergent from the technological-determinist way of valorising and mystifying information technology in the post-industrialist paradigm, the *PD* stressed the market values of information products and services. According to the discourse of neo-industrialisation, not only would information economy be conceivably a continuity of industrialism, but how to develop information industry and information economy in China would also be a market-oriented decision.

After the fad for post-industrial society faded away, a more cautious and analytical attitude began to shape the discourse in the *PD*. In contrast to the earlier articles that glorified information technology as the defining feature of "new economy," The *PD* promoted information as an important resource, "not because of its intrinsic nature," but rather because the market has turned "information into a field of strong production and consumption capacities" (PD 1998, Aug 25).

Firstly of all, due to the existence of huge domestic and international markets for information products and services, the state promoted the development of information industry to meet the newly created consumption trend. In the Tenth Five-Year Plan, this recognition of the market potential of information industry translated into the government guideline of "increasing the proportion of information industry in overall national economy" (PD 2001, April 06). In this sense, the neo-industrialisation strategy is a state gesture of getting adjusted to the changed world industrial pattern that demands both China's manufacturing and consumption capacities of information industries.

Moreover, the *PD* highlighted the value of information and information technology in terms of its contributions to economic globalisation. According to this perspective, the unprecedented prosperity and sustained economic growth in the U.S. in the 80s and 90s should be attributed to economic globalisation, which was predicated upon the expansion of information technology (PD 1998, Feb 13; PD 1999,

March 30). So, recognising that information technology has become an indispensable infrastructure for global capitalism, the *PD* pointed out that an outward-looking information infrastructure and advanced information services must be developed. According to the newspaper, because transnational corporations have the resources to create a global reach, it is imperative to teach Chinese enterprises “the objective law of mass production and the notion of boundless market economy,” which are presumably embodied by information and communications technology, in order to prepare them to compete on the same platform with foreign transnational corporations (*PD* 2001, Aug 18).

Likewise, information technology was found to crystallise the same market maxim of industrial society – i.e., “the art of making more with less” (Bell 1976, 126). This view was supported by the analysis of how “information” would modify and upgrade production and marketing processes. It was argued that:

The important strength of information technology is its capability of being implanted and built into any other industries...Information technology exerts its promoting functions throughout the whole production and marketing processes, by raising the level of automation and efficiency, by lowering production cost, and by fastening circulation of commodities, etc (PD 2001, April 06).

In this sense, ICT embodies the capitalist imperative of efficiency and control. Therefore, the *PD* called domestic firms to utilise information technology to fulfil “modern management concepts” in all the operational fields, ranging from research and development, manufacturing, distribution, marketing, organisational management to collecting rivals’ information and designing market strategies (*PD* 1996, July, 06).

Finally, the state’s emphasis on continuous industrialisation was a lesson learned from the recession of the Western information economy in 2000, which was diagnosed as being caused by “the mistake of severing the development of information economy from concrete productions and economic activities” (*PD* 2002, Nov 25). As one article pointedly argued, the 2000 global crisis of Internet Bubble stemmed from the lack of a huge enough market to absorb the consequences of overproduction and overheated investment in the ICT sector. In this light, further developing and modernising traditional industries would benefit the project of informationisation, as the former would provide huge demands and markets for ICT products and services (*PD* 2002, Nov 25).

In the neo-industrialisation framework, China’s initiative of informationisation is less an evidence of the utopian belief in a new civilisation than a pragmatic reaction to China’s need to prepare domestic firms for the vicissitudes of global capitalism. As we saw, the *PD* shifted away from the logic of technological determinism to a fuller recognition of market forces behind this global trend of informationisation. On the other hand, China’s integration into the global economy also creates incentives for the *PD*, as a leading and authoritative newspaper, to endorse and prioritise market values and practices.

Cheap Labour: A Threat and/or an Advantage?

The state's decision to both "industrialise" and "informationise" the economy also stems from underemployment pressures. The market reform has eliminated loss-making state-owned factories and, in the meanwhile, the process of agricultural mechanisation has been under the way. As a result, the large-scale shift of redundant labour could be "a politically destabilising process if not handled adeptly" (Woo 2003, 4). So, labour and employment is another major theme of the neo-industrialisation discussion. Because there has been a realistic need of expanding employment, developing traditional industries, and especially labour-intensive and export processing industries, is considered as a politically stabilising demand in the whole package of neo-industrialisation.

The post-1978 market reform in the context of global competition has reduced the employment capacity nationwide. First of all, in the transition from planned economy to market economy, bankruptcies and shaking-off of inefficient state-owned enterprises have reduced the number of urban and township workers from 149 million to 108 million between 1996 and 2001 (Zeng 2005, 4). As a counterbalancing trend, the private sector grew radically, and its number of employment rose from 0.4 million in 1980 to 26.1 million in 2000 (IFC 2002). However, despite the immense expansion of the private sector, the amount of job losses still outweighed the gains.

In the process of urbanisation, the employment capacity of agriculture has shrunk significantly. According to the National Bureau of Statistics, the ratio of agriculture's contribution to GDP decreased from 28.1 % in 1978 to 14.6% in 2003 (National Bureau of Statistics 2004). As a result, millions of rural workers have to find urban-based employment. In contrast to agriculture, the contribution of the manufacturing industry in GDP increased from 39.7% in 1990 to 69.8% in 2003. Yet due to industrial restructuring and the reform of state-owned enterprises, rapid economic growth in the manufacturing industry did not create a substantial employment increase. Between 1994 and 2000, the manufacturing industry shrunk in employment from 54 million people to 32 million people (Zeng 2005, 5).

Even in rapidly expanding industrial sectors such as the ICT sector, the rate of employment creation did not catch up with the speed of job losses. As a modest achievement, the employment share of electronics and telecommunications industries rose up from 7.3% in 1994 and only reached 8.73% in 2000. Douglas Zeng observed that the ICT sector could not generate as many new jobs as expected despite rapid economic growth (Zeng 2005). Besides, although the ICT-driven mode of economic growth has created a substantial amount of jobs in quantitative terms, most newly created jobs in the ICT sector are increasingly ones that offer the least protection and stability and the lowest earning (Hart-Landsberg & Burkett, 31-32).

Given the grave situation of unemployment of millions of rural workers, Xiaojuan Jiang, vice director of the Chinese Academy of Social Science, pointed out that, to increase employment and to absorb rural workers into labour-intensive industries and service sectors should constitute a core value of the neo-industrialisation policy (*PD* 2002, Nov 26).

Ironically, while unemployment is considered as a politically threatening factor, as a multifaceted discourse, the neo-industrialisation strategy promulgated by

the *PD* exclaims that cheap labour should constitute China's primary comparative advantage in China's participation in the global economy. As the comparative advantages thinking has been an inherent component of the neo-industrialisation strategy, neo-industrialisation is as much a state initiative of creating more jobs for domestic needs as a capitalist-oriented policy, attempting to submit Chinese cheap labour to the transnational project of reducing production costs and expanding accumulation.

Indeed, as Chinese economies, including the ICT sector, have integrated into the global economy, the state has to acquiesce with the transnational demand for cheap and disciplined labour. According to the Eleventh Five-year Plan for the ICT industry, a new round of global relocation is underway, and more and more developing countries are competing to develop an "investment-friendly" environment (Ministry of Information Industry 2007). As the Chinese state is eager to further jump on the bandwagon of the global industrial restructuring, the state has the incentives to further tap into Chinese cheap labour in order to gear up the labour-intensive and outward-looking mode of industrial development. Therefore, while unemployment was quoted as an important reason to pursue an export-oriented and labour-intensive mode of industrialisation, this explanation alone was far from the whole story. What cannot be forgotten is the question of whose interests the state-sponsored neo-industrialisation program would serve.

National Development versus Global Integration

In the neo-industrialisation framework, the attempt to both "industrialise" and "informationise" the Chinese economy also entails a difficult balance between self-determined development and participation in global division of labour. Since the 1980s, China has used cheap production costs to attract export-oriented transnational capital as a way of re-entering the global economy. However, the low-tech and labour-dependent mode of economic re-integration presents a lasting problem to China's modernisation task. Will China be entrenched in the role of serving as a specialised assembly centre for transnational players? Being integrated into the world production system, will China still be able to establish an independent capacity of science & technology development? These concerns have had a bearing on the neo-industrialisation strategy.

At the end of planned economy in the 1980s, China's industrialisation had achieved a considerable degree of self-independence by developing the domestic capacity of producing capital and intermediary goods. However, this strategy of self-sufficiency was not fully successful: for example, in terms of the level and quality of automation and mechanisation, China largely lagged behind. Therefore, in the 1980s when China accelerated the market reform, the Chinese leadership faced the choice between developing export-oriented economy and developing an all-around domestic manufacture capacity (Maruyama 1990, 92).

After the popularisation of Toffler's *The Third Wave* in the 80s, which proclaimed that developed Western countries were moving beyond industrialisation and actually started to de-industrialise their economy (Toffler 1981), the Chinese state more firmly saw the old tradition of national self-sufficiency as problematic. The state began to consider reintegration into the global economy as an efficient and even inevitable way to get access to new technology (Mueller & Tan 1997, 14-15). The

anxiety about being left behind in the technological revolution converged with the post-1978 market reform. Thereafter, the Chinese government encouraged the development of labour-intensive, FDI-driven and export-oriented industries in coastal regions. The ICT sector has spearheaded this outward-looking and globally-integrated mode of development.

According to Nobuo Maruyama, the outward-looking mode of economic development aims to attract subcontracts, foreign direct investments and technological imports. Although this new strategy would earn China foreign currencies and, thereby, would increase the country's revenue to subsidise the import of foreign-produced advanced capital goods and intermediate products, this strategy considerably steered away from the long-standing principle of import substitution and self sufficiency (Maruyama 1990, 92-94). According to Maruyama, two facets of this new strategy would counter the principle of self sufficiency: Firstly, in order to produce large-volume and low unit-cost final products for the global market, export-oriented sectors imported sophisticated mass production machinery from abroad, which would thwart China's capital goods sector; Secondly, as China is integrated into the global chain of production as a platform of assembling final products, foreign capital rarely went to the strategically important machinery industry, nor to pillar industries such as steel, petrochemicals, machinery and other material industries (Maruyama 1990, 104).

In this context, the neo-industrialisation strategy is a conceptual framework, trying to make reconciliations between self-determined development and the domination of global market system, and to adjust between labour-dependent and export-driven economic growth and long-term capacity-building efforts of developing pillar industries. On the one hand, while lamenting China's low status in the global division of labour, the state has nevertheless embraced the idea of developing China into a world-class powerhouse of manufacturing. According to the *PD*, although all the countries are inclined to developing high-tech industries, "selective development is important for an industry to grow into a superior force While the American focus on information and biochemical technology, and the Japanese focus on robots, China should strive to become the biggest manufacturing and export-processing centre in the world, given its advantage in cheap labour and huge market potential" (*PD* 2001, Oct 21). Not accidentally, in 2002, the state made the policy decision to strenuously improve the competitive capacity of the manufacturing industry, as one of the few Chinese advantages in the global market (*PD* 2002, March 30).

On the other hand, in the face of the accusation of China's global participation sacrificing national autonomy and self-reliance, *PD* not only attempted to gloss over downsides and pitfalls of this mode of economic development, but also made a nationalist argument that "as long as China selectively receives some transferred industries, and simultaneously imports foreign advanced scientific achievements and management experiences, this approach will definitely accelerate China's progress towards modernisation" (*PD* 1997, Dec 20). Although this idea of channelling transnational market forces into indigenous capacities sounds appealing, this mechanical understanding remains simplistic and ahistorical.

Yet from time to time, the *PD* expressed strong suspicion about prioritising global integration over national needs. This study of newspaper discourses from

1995 through 2003 has found out that the market-driven schema prevailed in this period of time, yet interspersed with nationalist criticisms and corrections. So, in the neo-industrialisation framework, the newspaper supported nationalist interventions of creating self sufficiency in pillar industries. Specifically, the *PD* stressed that despite the global trend of developing information economy, pillar manufacturing industries and especially equipment manufacturing would continue to decisively affect national capacities of military defence, scientific and technological development and productivities in agricultural, industrial and service sectors (*PD* 2002, Sep 26).

According to the *PD*, equipment manufacturing not only has incorporated information and computer technology to improve production tools, equipment manufacturing has also become “the manufacturing aspect of scientific and technological process” (*PD* 2003, Aug 18). In this sense, the so-called “immaterial economy [was] baseless” (*PD* 1998, July 11). So, in the neo-industrialisation discourse, high technology is never foreign to the capital-intensive manufacturing industry, and without goods-producing capacity, no knowledge and high-tech design could be materialised into productive forces.

So, in the framework of neo-industrialisation, the *PD* explicitly campaigned for the redirection of political-economic emphasis back to import substitution in pillar industries, which include materials industries and equipment manufacturing industries. Qu Weizhi, vice minister of the Ministry of Information Industry, cautioned against the pitfalls in informationised economy, meaning excessive investment in information networks and insufficient investment in traditional industries. As he pointed out, because traditional industries, such as the metallurgical industry and machine tool industry, still heavily rely upon foreign technology, it is important to utilise new information technology to create indigenous technological capacities and to achieve industrial upgrading in such industries (*PD* 2001, June 18). Therefore, in the ICT-driven and globally-integrated economic development framework, the import substitution policy persists in the Chinese context.

Conclusion

As mentioned earlier, in March 2008, the Chinese government announced a plan of creating five “super-ministries,” which include the Ministry of Information and Industry. The State Council explained that this bureaucratic reform is aimed at “resolving long-term problems and contradictions as China’s economic grows” (Yardley 2008, March 12). With regard to the Ministry of Industry and Information Technology, the fundamental purpose is to follow the neo-industrialisation path and to enhance and coordinate the convergence between informationisation and industrialisation (CCTV2008, March 12). This study of the neo-industrialisation strategy put forth by the Chinese state on the *PD* illustrates that this strategy combines and synchronises informationisation and industrialisation as two mutually complementary processes, which underpins this imminent governmental reorganisation.

On the contrary to post-industrialism that views industrial economies obsolete and manufacturing labour less valuable in the so-called information age, the neo-industrialisation strategy put forth by the Chinese state continues to emphasise the central role of industrial economies in China’s participation in the global market

economy, in reducing domestic employment pressure, and in buttressing China's indigenous capacity of research and production. While the state has accelerated the development of information sectors, the state insists on a continuing process of industrialisation instead of de-industrialisation. So, it is safe to conclude that the Chinese state did not adopt Daniel Bell's vision of a post-industrial society, but rather made significant conceptual modifications regarding what constitute an information society with Chinese characteristics. In a nutshell, the neo-industrialisation strategy, i.e., to both "industrialise" and "informationise" the Chinese economy, is the official guiding vision.

Finally, this study of the PD's discursive construction of the strategy of neo-industrialisation also demonstrates a Chinese attempt to address the contradictions and tensions in its developmental path and especially in its conflicted reintegration into global capitalism. China's developmental realities, including unfinished industrialisation, structural unemployment and the domestic demands for all-around national development, have all found echoes in the strategy of neo-industrialisation. In turn, real tensions and contradictions in China's economic development have shaped the neo-industrialisation strategy into a set of contradictory justifications, concessions, goals and expectations, all of which have been condensed into a unique way of pursuing informationisation and industrialisation. For future research, we should ask these questions: what are short-term and long-term implications of the top-down bureaucratic re-organisation of the Ministry of Information and Industry on China's industrial policies and particularly on the development of China's information industry? After this major reorganisation, how will the Chinese state implement the neo-industrialisation strategy – as the guiding vision? And what specific moves does the state make in order to simultaneously "informationise" and "industrialise" the economy?

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References:

- Bell, Daniel. 1976. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. New York: Basic Books.
- Broadman, Harry G. and Xiaolun Sun. 1997. The Distribution of Foreign Direct Investment in China. *World Economy* 20, 3, 339-361.
- CCTV. 2008, March 12. Establish the Ministry of Information and Industry and Promote Industrial Upgrade. <http://news.xinhuanet.com/video/2008-03/12/content_7770421.htm>
- Gallagher, Mary Elizabeth. 2005. *Contagious Capitalism: Globalization and the Politics of Labor in China*. Princeton: Princeton University Press.
- Guo, Zhongwen. 2002, Oct 21. Speech of Vice Minister of Information Industry delivered at China IT Innovation Global Symposium. <http://news.xinhuanet.com/zhengfu/2002-10/21/content_603505.htm>
- Kumar, Krishan. 1978. *Prophecy and Progress: The Sociology of Industrial and Post-industrial Society*. New York: Penguin Books.
- Lemoine, Françoise and Deniz Unal-Kesenci. 2004. Assembly Trade and Technology Transfer: The Case of China. *World Development* 32, 5, 829-850.
- Maruyama, Nobuo. 1990. *Industrialization and Technological Development in China*. Tokyo: Institute of Developing Economies.

- Masuda, Yoneji. 1980. *The Information Society as Post-industrial Society*. Tokyo: Institute for the Information Society.
- Maxwell, Richard. 2003. *Herbert Schiller*. Lanham, Md.: Rowman & Littlefield.
- May, Christopher. 2002. *The Information Society: A Skeptical View*. Malden, Mass.: Polity Press.
- McGuckin, Robert H. and Matthew Spiegelman with Xu Jianyi, Liu Yaodong, and Jiang Yuan. 2004. China's Experience with Productivity and Jobs: Benefits and Costs of Change. The Conference Board, research report R-1352-04-RR.
- McKay, Steven. 2006. *Satanic Mills or Silicon Islands?: The Politics of High-tech Production in the Philippines*. Ithaca, N.Y.: Cornell University Press.
- Ministry of Information Industry. 2003. Analysis of Economic Performance in the First Half Year of 2003. <http://www.miit.gov.cn/art/2005/12/17/art_5105_47751.html>
- Ministry of Information Industry. 2007. The Eleventh Five-year Plan of Information Industry. <http://www.mii.gov.cn/art/2007/03/01/art_111_1936.html>
- Mosco, Vincent. 2008. Knowledge Workers of the World! Unite? *Canadian Journal of Communication* 33, 121-125.
- Mueller, Milton and Zixiang Tan. 1997. *China in the Information Age: Telecommunications and the Dilemma of Reform*. Westport, Conn.: Praeger
- National Bureau of Statistics of China. 2004. *China Statistical Yearbook 2004*. <<http://www.stats.gov.cn/tjsj/ndsj/yb2004-c/indexch.htm> 3>
- Schiller, Dan. 2005. Poles of Market Growth: Open Questions about China, Information and the World Economy. *Global Media and Communication* 1, 1, 79-103.
- Schiller, Herbert. 1973. *The Mind Managers*. Boston: Beacon Press.
- Segal, Adam. 2003. *Digital Dragon: High-Technology Enterprises in China*. Ithaca: Cornell University Press.
- Toffler, Alvin. 1980. *The Third Wave*. New York: Bantam Books.
- Waters, Harry J. 1997. *China's Economic Development Strategies for the 21st Century*. Westport, Conn.: Quorum Books.
- Webster, Frank. 2002. *Theories of the Information Society*. London: Routledge.
- Woo, Wing Thye. 2003. China: Confronting Restructuring and Stability. In S. Yao & X. Liu (eds.), *Sustaining China's Economic Growth in the Twenty-First Century*. London: Routledge.
- Yardley, Jim. 2008, March 12. China Re-tool Its Government in Efficiency Push. *New York Times*. <<http://www.nytimes.com/2008/03/12/world/asia/12china.html?ex=1363060800&en=2145be2659b128b0&ei=5088&partner=rssnyt&emc=rss>>
- Zeng, Douglas Shihua. 2005. China's Employment Challenges and Strategies after the WTO Accession. World Bank Policy Research Working Paper 3522.
- Zhao, Yuezhi. 2000. Watchdogs on Party Leashes? Contexts and Implications of Investigative Journalism in Post-Deng China. *Journalism Studies* 1, 2, 677-697
- Zhao, Yuezhi. 2007. After Mobile Phones, What? Re-embedding the Social in China's Digital Revolution. *International Journal of Communication* 1, 92-120.