After Mobile Phones, What? Re-embedding the Social in China's "Digital Revolution"[1]

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 "After Bicycles, What?" was the fundamental developmental question posed to the Chinese by Canadian communication scholar Dallas Smythe at the dawn of China's "reform and open-up" era in the late 1970s. Smythe raised this question in the context of China's search for a socialist alternative to capitalist modernity, with the hope that China would avoid the capitalist path of development. Contrary to Smythe's wish, those who would be considered by him as the "capitalist roaders" took charge in China after Mao's death in 1976, and *ultimately* launched a spectacular "digital revolution" in an attempt for China to not only catch-up with the West, but also to "leapfrog" into the digital age. As the center piece of the Chinese program of market reform and global integration, China's "digital revolution" has been characterized by a well-recognized and seemingly paradoxical feature. On the one hand, information and communication technologies (ICTs) have been progressively promoted, and widely, although unevenly, diffused among the population. From television set in the 1980s to mobile phone in the 1990s, ICT products have replaced bicycles as the hottest commodities for the Chinese. On the other hand, the regime of state control over content and access, from news blackouts to Internet censorship and the temporary suspension of telephone services in the homes of political dissidents, labor activists and other targets of state repression, has been strengthened.

This paper explores the internal logic of this seemingly contradictory Chinese development by re-embedding the analysis of access to and control of ICTs in the social domain. Instead of focusing on the apparent and often de-contextualized dichotomy of freedom versus control, which has framed much of the academic and media discussion about ICTs in China and compelled me to invoke it in the above paragraph as a point of

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entry for this paper, my primary concern is the broader developmental path or techno-economic, social and cultural processes that have underpinned this apparent contradiction in the first place. In particular, I describe the enormous social and cultural tensions that have been engendered by the aggressive lunching of a state-led, market-oriented, and technologically-driven "digital revolution" in the context of regressive developments in the social domain. These have included the dismantlement of state-owned enterprises and undoing of the state socialist regime of guaranteed employment, job security, social welfare for the urban population, the ruthless extraction of the agricultural surplus and the neglect of the social welfare of the rural population, especially education and health care, as well as the retreat of the state's role in controlling extreme forms of class, gender, rural/urban, and regional inequalities in general. The resulting developmental condition of "one country, four worlds" within the framework of a single nation state has posed profound challenges in governance, and thus necessitated the state's relentless efforts in maintaining social stability through a fortified regime of information and communication control. The paper then reviews the multi-faceted struggles that have been waged by various Chinese social forces, particularly industrial workers, farmers, and Falun Gong members, in rearticulating and reinserting a social agenda in the "digital revolution" and discusses the post-Jiang Chinese state's reclaiming of the social in its developmental strategy. As the social contradictions of China's ICT-driven developmental path in the past three decades have amply demonstrated, the developmental values of ICTs, just like the issues of access and control, need to be analyzed in concrete political, economic, social and cultural contexts.

Dallas Smythe's Developmental Question for China

Between December 1971 and January 1972, Dallas Smythe, a pioneer scholar in the political economy of communication, went to China to study ideology, technology, and the Chinese path of development. He decided to probe into the self-proclaimed Chinese socialists' philosophy of technology because he "had a gut feeling… that this could be a problem for China" (Guback, 1994: 228). And, indeed, there was a problem. As he reported, while there was an understanding of the political nature of technology and artifacts on the part of physical scientists and broadcasting officials, the political economists, philosophers, and political scientists he met in China's academic and policy establishments did not agree with him about the socially-constructed nature of technology. Smythe discovered that these individuals regarded "technique and technology as autonomous and non-political," and even worse, "they exhibited a rigidity which even resisted completely the possibility of a dialogue on the subject" (Smythe, 1994: 238).

This inquiry into the Chinese philosophy of technology was not conducted in abstract, nor was it merely a matter of scholarly interest. Instead, Smythe was positing fundamental questions about China's technological and economic policies and the viability of China's search for an alternative to capitalist modernity. As he put it, '[i]t is not clear that the Chinese people have properly identified the political aspects of technique which in the next ten to twenty years will be crucial to the development of "socialist

road" as distinct from the "capitalist road"' (Smythe, 1994: 242). More specifically, Smythe saw an inconsistency in the Chinese rhetoric of building socialism on the one hand and the prevailing Chinese mindset to "catch up with" or "leap frog" ahead of capitalist technology on the other, because the latter "implies that socialist technique can be measured against the accomplishment of capitalist technique" (Smythe, 1994: 243). For Smythe, the success of Chinese socialism hinged on China's ability to reject the blind importation of Western technologies, consumer goods and services, as well as the development of "capitalist consumption relations" in the country. For this to work, "proletariat politics" – the social needs of the vast majority of the Chinese population as determined through popular participation in decision making, as Smythe had imagined what this Cultural Revolution terminology would have meant – would have to take command in the areas of technological innovation and economic production, especially over the question of whether "such-and-such an innovation in consumer goods and services serve the masses collectively or as individuals" (Smythe, 1994: 243). In Smythe's view, western consumer goods are "a trap which capitalism presents to new socialist systems – a trap of which the masses of Chinese peasants, workers, and PLA soldiers should be aware" (Smythe, 1994: 241). Because "there is no socialist road in Western capitalist technological development," Smythe wrote, "to adopt capitalist luxury goods such as private automobiles, family-sized washing machines, family-sized refrigerators, one-way TV, etc. for Chinese production would be to equip Chinese families with that many educational instruments leading to the capitalist cultural road" (Smythe, 1994: 231).

Reflective of the critical perspective on international communication policy at the time, particularly a recognition of the need for developing countries to set up "cultural screens" to filter out Western capitalist cultural flows, Smythe even saw a positive impact in the cold-war era U.S. embargo and the Soviet withdrawal of technical assistance for China, as this "meant that the Chinese would have to depend on themselves for technical development." He wrote:

> As a result the Chinese Revolution firmly established the mass line process for socialist decision-making. Now China is entering the period when it will already have solved the pressing problems of producing enough food, clothing, housing, medical care for everyone. At this point, a gigantic step into Communism is possible. That step would be taken by the decision that the question "after bicycles, what?" should be answered in favour of public goods and services and against goods and services for individual, private use. The policy of "serve the people" can be pursued directly and most effectively by allocating creative talents of the people and resources into the production of things and services which all may enjoy and learn from – parks, museums, science, education, libraries, wild-life refuges, architecture and other arts (including two-way TV) of all kinds (Smythe, 1994: 243).

Smythe wrote up his report, entitled "After Bicycles, What?", and submitted it to the Chinese government as a piece of friendly criticism and advice from a concerned 'family' member within the international socialist movement. Smythe never published his piece during his lifetime, because he felt "an implied obligation to keep my criticisms with the family" (Guback, 1994: 230).

The Chinese government never directly replied to Smythe. Instead, the post-Mao leadership under Deng Xiaoping responded to external Cold War pressures and the profound internal crises of state socialism by brushing aside the "socialist" versus "capitalist" question through the famous "black cat, white cat" mantra. It reconstituted the post-Mao Chinese state after the model of East Asian developmental states and launched a massive market-oriented "reform and open-up" process, unleashing rampant consumerism in China. Moreover, instead of merely importing Western technologies and consumer goods, China turned itself into the "workshop of the world" by making itself the leading recipient of foreign direct investment among developing countries, becoming a major producer and exporter of not only low-end consumer goods, such as shoes and toys, but also consumer electronics and other high-end information age products. Today, Chinese companies and Chinese subsidiaries of foreign companies together control 55 percent of the world market in laptop computers and produces 30 percent of all flat-screen televisions and 20 percent of the microprocessors. The transnationally integrated ICT sector, which has grown three times as fast as China's overall gross domestic product (GDP) in the past two decades, is China's largest export industry, accounting for one-third of China's total exports in 2005 ("Mobile Phone Export…" 2006). Notwithstanding the official rhetoric of "building socialism with Chinese characteristics," China's location as capitalism's "most expansionary growth zone", linked with its embrace of information technology – "capitalism's most dynamic industry" – positions the country as central to the "two poles of growth" for transnational capitalism, as Dan Schiller (2005) has noted.

If Smythe was correct in noting that his Chinese interviewees in the field of philosophy, economics and social sciences had been misled by capitalist ideology and were mistaken in believing in the neutrality of technology, Smythe himself probably had also been misled by the rhetoric of Chinese socialism.

First, China was not, at the time of his research, as close to solve the problem of providing basic needs to the population as he had thought. The most basic problem of food provision – known in Chinese as *chifan wenti*, remained an acute issue for a large population and an ongoing challenge for the Chinese leadership till the introduction of an agricultural reform program in 1978 as the first step of the post-Mao reforms (Huang, 2005: 5).

Second, Smythe not only took for granted the democratic nature of "proletariat politics," or the "mass line" as a democratic form of decision making process, but also mistakenly assumed that such a process was more or less firmly established. As it turned out, both assumptions were problematic. The "mass line" mode of political communication was profoundly paternalistic (Howard, 1988). Moreover, it was easily subverted from above and from below (Zhao, 1998). The Maoist era ended with a military-assisted coup staged by one political fraction against another shortly after the death of Mao in 1976.

Third, while Smythe was correct in noting the party's self-described "two line struggle" between the "capitalist roaders" and "socialist roaders" as being politically substantive, he failed to grasp the extent to which the Chinese leadership as a whole was compelled to address the most pressing problem of the post-revolutionary regime in the Cold War context: to survive militarily in the age of high-tech wars and nuclear deterrence. The Chinese Communist Party's military legacies, its nationalistic underpinnings, and its historical mission to rejuvenate the Chinese nation came to override the socialist versus capitalist

debate and provided the basis for the full-fledged development of "a military-led Chinese techno-nationalism" under Mao since the early 1950s. This development model not only views technology as being fundamental to national security, economic prosperity, and the position of the Chinese nation in the global order, but also foregrounds "military programs as being concerned not merely with *strategic* weapons but with strategic *technologies* of broader significance and scope" (Feigenbaum, 2003: 29, emphasis in the original). As Feigenbaum (2003) argues, this model, which marked a radical departure from the low-tech "people war" of the pre-1949 era, emerged from the military clashes between China and the United States in Korea, and has since been the driving force behind China's technological policy from the nuclear to information age. It was precisely for this reason that the development of China's strategic weapon programs, especially the nuclear bomb, was not only prioritized above everything else, but also relatively insulated from everyday politics under an organizational structure "that stood in stark contrast to much of the Chinese political economy during the first thirty years of communist rule (1949-79) (Feigenhaum, 2003: 39). In short, Chinese military technological development was more or less placed above the "two line struggles" that Smythe observed and mistook for what it was all about Chinese technological development during the Mao era. This legacy of military-led techno-nationalism has a profound impact on China's "digital revolution" during the post-Mao era.

Finally, although Smythe's point about the politics of technology is well-taken and well-supported in the critical literature on technology (e.g., Williams, 2003; Winner, 1977; 1986), his dichotomization of goods and services as either serving collective needs or individualistic needs requires qualification. While such a distinction is of primary importance both in the technological development and social allocation of goods and services, it is necessary to note that, in some instances and under certain circumstances, the line between collective social needs and individualistic needs is not a clear cut one. This is particularly so in the case of interactive communication technologies such as computers and mobile phones, which were not yet available at the time of Smythe's visit to China. By their very nature, information and communication goods and services are social, and instead of being passive and atomized consumers, various social agents are able to appropriate ICTs for alternative uses, including community-building efforts and even collective actions.

Nevertheless, Smythe's encounter with China should not be seen as just yet another example of an idealistic Western scholar who became disillusioned with his native country and tried to help to create a socialist paradise elsewhere. Even though China's post-Mao developmental path ran against the direction that Smythe had proposed, Smythe's question – now to be more appropriately updated to "After Mobile Phones, What?"– continues to haunt the Chinese. Moreover, as the social contradictions of China's information technology-driven, export-oriented development strategy intensify, the question has assumed new relevance and growing urgency. Notwithstanding Smythe's misreading of the Chinese political economy of the time and the limitations of the socialism versus capitalism framework he used to interpret the Chinese case, his intervention continues to offer a useful point of departure in analyzing not only the deployment and development of ICTs in China during the reform era, but also the broad path of China's post-Mao development strategy and its sustainability. Of particular significance is his concern about the nature of the decision-making process in economics, the value orientation of technological developments, and the stakes of the vast majority of the Chinese population – "the masses of Chinese peasants, workers

and PLA soldiers" in his terminology – in the process of China's ongoing social transformation and global integration.

The Making of China's State-Led and Market-Driven "Digital Revolution" under the Deng Xiaoping and Jiang Leaderships (1978-2002)

China's post-Mao reformers set "electronics," i.e., ICTs, as the "key link" in China's development strategy once they were in power and aggressively launched China's great "digital leap forward" (Mueller and Tan, 1997; Hughes and Wacker, 2003). Just like the first "great leap forward" in 1958, in which Mao aimed to build a socialist society in China through indigenous forms of technological innovation and industrialization, the post-Mao party state under Deng and Jiang aimed to "leapfrog" into the digital age.

It is worthwhile recalling that China's economic reforms began with the leadership's embrace of the "four modernizations": agriculture, industry, national defense, and science and technology. This nationalistic developmental program crystallized 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 humiliations by the technologically and militarily superior foreign imperial powers and to avoid being bullied again in the future was to "catch up with the West." By the mid-1980s, the Chinese state had launched a comprehensive hi-tech development program known as the 863 Plan, a massive military and industrial research and development plan initiated in March 1986 (hence the name of the plan) in response to the Reagan administration's Star War initiative. Aiming to "yolk technological achievements to strategic goal of the state" (Feigenbaum, 2003: 163), this program, which targeted seven "strategic" new technological areas ranging from biotechnology to information technology for prioritized research and development, became the ultimate expression of the Chinese techno-nationalism in the post-Mao era, as popular portrayals of the program underscores (Li, 1997). Moreover, if China's painful direct confrontation with the technologically far-superior U.S. military in Korea sowed the seeds of China's military-led techno-nationalism, the Chinese leadership's commitment to ICTs as a strategic area was reinforced by its experience of being "shocked and awed" as a spectator of the 1992 Gulf War as a "communications war" – both in terms of the centrality of information/news censorship and the management of the imagery of the war and the strategic importance of "3CI" (control, command, communication, intelligence) in the actual execution of the war (Mattelart, 1994: 117-121). By the mid-1990s, the notion of the modern war as first and foremost an "information war" had been extensively discussed in both Chinese military specialist and popular media discourses. ICTs, in short, became instrumental to the state's modernization of its military and surveillance capabilities.

Concurrently, because the post-Mao technocratic and techno-nationalist elite's pursuit of modernization via the acquisition and indigenization of advanced Western technologies and deeper integration with the global market system was undertaken just as this system itself was reconstituting its operations around transnational information networks, the Chinese leadership soon realized the critical importance of ICTs for China's modernization program and elevated "informatization" – the development and deployment of ICTs – to the mother of all modernizations (Zhao and Schiller, 2001). Mesmerized by the ideology of post-industrialism in the West and recognized the central role of ICTs in modern warfare, top leaders embraced the view that, as former Party General Secretary Jiang Zemin declared, "[n]one of

the four modernizations would be possible without informatization" (Zhao and Schiller, 2001). The deployment of ICTs and the informatization of the entire Chinese political economy and social life became the highest priority of the post-Mao Chinese developmental state. Apart from and in conjunction with the explosive expansion of the telecommunication networks, the various "Golden Projects," initiated in the 1990s as a coordinated state effort in information network applications and not surprisingly spearheaded by many of the information technology experts in the 863 Plan (Feigenbaum, 2003: 199), became the central locus of state investment in the "digital revolution." It should also be added that perhaps precisely because theories of information society posit a society detached from the politicized domain of culture as a terrain of struggle within and against capitalism and an economism beyond social division and political conflicts (Schiller 1996; 1997; 20007), or an "end of politics" (Mosco, 2004), the "information paradigm" had a particular ideological appeal to a post-Mao Chinese ruling elite victimized by the excesses of Cultural Revolution politics and its rhetoric of "class struggle." This embrace of the seemingly objective and scientific nature of "information" was well-illustrated in the journalistic reform discourse of the early to mid-1980s, which attempted to redefine news for its "informational" nature, while urging its divorce from its politicized Maoist propaganda function (Zhao, 1998).

Furthermore, because reform-era technological developments were driven equally, if not more, by civilian uses and the imperative of economic development and industrialization, ICTs soon became the most popularized and commercialized area of hi-tech development in China. By 2001, the Chinese leadership had written the strategy of using informatization to carry forward industrialization, thus taking advantage of late development and achieving leapfrogged development in the society's productive force, into China's 10th Five-Year-Plan (2001-2005). In another unprecedented move in 2001 China became the first state to officially establish a national informatization index (National Informatization Evaluation Center, 2001), which included twenty statistical indicators such as:

- Household penetration rates for computers, television sets, and Internet connections;
- Number of broadcast hours per one thousand population;
- Amount of bandwidth per capita;
- Length of long distance trunk lines;
- Number of satellite ground stations;
- Volume of e-commerce;
- Number of college graduates per one hundred population;
- Percentage of investment in research and development (R&D);
- Rate of contribution to growth of GDP by the IT sector.

The 16th Party Congress in November 2002 further entrenched this information technology focus by positing IT applications as the "logical choice" for accelerated industrialization and modernization. As Jiang Zemin, who perhaps not accidentally happened to be an electronic engineer by training and a one-time Minister of Electronic Industry, stated in his report to the Party Congress that "It is … necessary to persist in using IT to propel industrialization," consequently, "[w]e must give priority to the development of information industry and apply IT in all areas of economic and social development" (Jiang, 2002).

If the Chinese Communist Party led a popular social revolution in the first half of the 20th century by mobilizing China's subaltern social classes and championing the cause of anti-imperialism, the post-Mao reformers installed China's "digital revolution" from above by relying on the country's technocratic elites and rearticulating China's political economy to transnational capitalism. Instead of "proletariat politics," technocratic rationality, elite interests, and above all, what the elite define to be China's "national interest" dominated China's informatization drive (Zhao, 2000). Unwittingly, Liu Ji, a former vice-president of the Chinese Academy of Social Sciences, gave perhaps the most lucid articulation of the elitist and anti-democratic nature of the Chinese "digital revolution." As a top adviser to former President Jiang Zemin and arguably one of China's most powerful pro-establishment intellectuals in the 1990s, Liu saw the relationship between "socialist democracy" and the "information superhighway" in the following way:

> The goal of political system reform is clearly to build socialist, democratic politics… But how do we reach this goal? We have to start from China's reality. For example, we now have about 200 million illiterates… Do you give such a person the right to vote? Of course you should. But is his vote worth as much as the vote of a PhD who has returned from America? Or of a university professor? Or of a government official? They are not equal. Someone who is illiterate does not have the ability to choose… If we gave everybody a vote, when their votes are of different value, then a lot of good resolutions put forward by intellectuals would never pass, because intellectuals are in a minority…To build an information superhighway costs a lot of money. Intellectuals would immediately pass such a resolution unanimously. But the attitude of the 200 million illiterates would be: "what is an information superhighway? What has it got to do with me? My first demand is to hurry up and give me food to eat. And then let me study at the primary-school level." As for the vote, he'd be likely to vote against the information superhighway, and want to solve poverty first (cited in Lawrence, 1998: 26, 28).

Liu used the term "intellectuals" loosely for "the educated" (i.e. those with post-secondary education), and he apparently confused universal suffrage with direct referenda on particular issues. Still, Liu's thinking is typical of the technocratic mentality of the Chinese ruling elite and he revealed the social bias of the information technology-driven development strategy in China (Zhao, in press). Moreover, Liu's remarks stand in stark contrast to those who believe in the magic of information-led development and the virtue of using the information superhighway to deliver the latest educational materials and the best classroom instructions in Beijing to remote villages. To invest in the information superhighway or to invest in basic education are different policy priorities and development strategies, and the Chinese state had apparently made a clear choice between the two (Zhao, 2000; Zhao, 2002). While China recorded one of the fastest rates in communications network buildup in the world during the reform period, Chinese state investment in public education as a proportion of GDP has consistently been the lowest among Asian countries (Mukherjee, 2006). Moreover, just as railways were built in the peripheries of global capitalism during the colonial era in order to serve the interests of metropolitan capital, reform-era developments in Chinese ICTs, most significantly the development of China's civilian telecommunication networks, have been prioritized to coordinate with the shift of transnational capital to flexible production by connecting it with the vast labor pool congregated in China's special economic zones and coastal regions. By the end of 2004, China's 10 coastal provinces had received a total of 110.2 billion yuan in investment in

telecommunications, compared with 57.94 billion yuan for the 21 provinces and regions in central and western China (Zeng and Xi, 2006).

Because China's "digital revolution" was launched during the reform era and the massive build-up in the ICT sector has been occurring at a time when the Chinese state is progressively liberalizing the Chinese economy and promoting market forces, market orientation has been its other defining characteristics. If Smythe had specifically warned the Chinese to avoid the consumerist trap in the development of goods and services, this is precisely the dominant principle for the development of ICTs in China. With the deepening of market reforms and the state's embrace of a digital economy, information, apart from, and sometimes in tandem with its strategic and political importance, is recognized as a commodity, and the communication and information industries have been re-organized according to this market logic and have turned into platforms of capitalistic accumulation. For example, the market criteria, or in the official language, an "insistence on market orientation," was listed as the most important consideration in a set of guiding principles announced at the inaugural meeting of "the state leadership group on informatization," China's top level ICT strategy coordinating body, in December 2001 (He, 2001).

The explosive growth of the mobile phone market and the business trajectory of China Unicom are illustrative of the market-driven development of communication goods and services in China. China Unicom was formed in 1994 as a result of bureaucratic rivalry and a manifestation of telecommunications liberalization with Chinese characteristics – a means by which government ministries other than the then Ministry of Post and Telecommunications (which had monopolized telecommunication services) secured entry into the lucrative telecommunication service market. Not surprisingly, China Unicom, which was mandated to meet "unmet" needs in telecommunications, chose to import the latest available Western communications technology and focus on the highly profitable area of mobile phone service. Unicom brought competition to the mobile phone industry in China and played an instrumental role in the spectacular growth of the Chinese mobile phone market. Because a mobile phone is typically, if not exclusively, the second or third phone in affluent urban or rural households, the explosive growth of mobile phones, and other value-added wireless services, is as much about meeting the "unmet" communication and informational needs of the vast majority of the Chinese population as it is a manifestation of the rise of China's "middle class" as the champion consumers of the nation.

To be sure, the traditional statist objective of network expansion and the strategic role of telecommunications for military and state surveillance purposes, not the market criterion, continue to play a role in shaping the development of China's information infrastructure and the diffusion of ICTs. In both broadcasting and telecommunications, state-organized projects for "connecting all the villages" have been instrumental in expanding the network coverage in remote rural areas. Although the state's strategic policy to direct investment towards the urban and coastal areas has led to much faster growth in these areas than in the interior and rural areas, telecommunication authorities continued to set general network expansion as a goal and prioritize the military use of radio frequencies, to the disfavor of market-oriented telecommunication strategists. Similarly, the consideration for national integration has led the Chinese state to undertake network building efforts in the sparsely populated Western region of Xinjiang and Tibet. The pursuit of economic development as the highest form of politics during the reform era has meant that,

in some places, telecommunication authorities and local governments, eager to drive up their informatization indicators as an indicator of their political performance, have even managed to oversell telephone subscriptions. In some provinces, "telephone villages" – where every household has a phone connection – were prematurely established, and some farmers, after having been lured into installing a telephone line at attractive rates, found that a private telephone line was not only of little use, but was also a financial burden. Consequently, it is not uncommon for poor villagers, after having installed telephones, either to have no usage of the phone at all, or to simply disconnect themselves (Du, 2002: 16; Zhao, 2007). Political and bureaucratic incentives for network expansion, together with downward market developments resulting from market competition as well as the real unmet needs of the Chinese population (including the diffusion of pre-paid phone card services, short-message services, and the flourishing of "little smart" phones – a more affordable and "more appropriate" limited range mobile service), has made China one of the most successful countries in network expansion and ICT diffusion. By the end of 2005, China boasted 350.433 million fixed telephone lines, and 393.428 billion mobile phone subscribers, with a penetration rate of 27.0 percent and 30.3 percent respectively. Further, 97.1 percent of Chinese administrative villages had telephone services by the end of 2005 ("Ten Major Events", 2006), and the number of Internet users reached 110 million (Ministry of Information Industry [MII], PRC, 2006a).

The Vengeance of the Social: Social Conflicts and Perils of a Market Authoritarian "Digital Revolution"

The Chinese success story with economic growth and the diffusion of ICTs would have been an uncompromising one if only China was not ranked 159th among 167 nations in the Reporters without Borders' "2005 World Press Freedom Index," or 144th among 191 countries in the World Health Organization's *World Health Report 2000* in terms of health improvement, government responsiveness, and fairness in the allocation of health resources. Of course, the situation is much more complicated than such simple rankings can identify, or what is represented by the ongoing Western news flashes about the Chinese state's jailing of yet another Internet activist or the promulgation of yet another draconian piece of media regulation. As outlined above, China's "digital revolution" is inspired by a deep-rooted technocratic and techno-nationalist rationality and driven primarily by an overlapping military and industrial imperative and the convergent interests of domestic bureaucratic and international corporate capital, along with the consuming priorities of China's urban middle class. For this reason, it has been intrinsically connected to the deepening economic inequality and pervasive social injustice facing tens of millions across China.

As China becomes super-wired and well-connected technically and as the Chinese telecommunications sector as a "jewel in the crown of the socialist market economy" (DeWoskin, 2001: 630) contributed to China's wealth and prestige, Chinese society has become fragmented, polarized, and deeply divided along class, region, gender, ethnicity and other cleavages. As the Chinese economy has grown exponentially and telecommunications market expansion repeatedly surpassed state planners' expectations throughout the 1990s (Lu and Wong, 2003: 5-6), so has inequality. Today, China's richest 20 percent of the population possesses 55 percent of the country's wealth, while the poorest 20 percent share just 4.7 percent between them. The Gini coefficient index, which measures inequality on a scale of

0.001 to 1 (where 1 reflects absolute equality), saw China changed from a score of .28 in 1981 to a score of .447 in 2005, making it (which still claims to be a socialist country) more inequitable than the United States (.408) (Bulard, 2006), and one of the most inequitable societies in the world – ranking 90th among 131 countries in a UN assessment (Manthorpe, 2006). As Tsinghua University sociologist Sun Liping (2004) has noted, Chinese society since the mid-1990s has become a "fractured society" characterized by profound social divisions and imbalances. Consequently, rather than speaking of "China," it is more meaningful to speak of many "Chinas." In fact, Hu Angang and others have depicted China in terms of "one country, four worlds". The ultra-modern and high-income Beijing, Shanghai, and Shenzhen constitute the first world, large and middle-sized cities and small cities in the coastal areas and high income rural areas the second world, middle and low income rural areas the third world, and minority and border areas and extremely low income rural areas the fourth world (Hu, Zhou and Li, 2001: 167). Although the Chinese Communist Party has tried to hold the residents of the different Chinas together by reinventing itself as a corporatist party claiming to represent the interests of all sectors of Chinese society, it has not found a coherent answer to the challenges of reconciling social interests that are fundamentally incompatible with the Marxist framework that it officially still espouses (Madsen, 2003: 109).

If the 1980s ended with the single event of the state's crackdown on the 1989 pro-democracy movement, the 1990s and early 2000s have been characterized by intensified and dispersed social conflicts among different social forces between and within the different Chinas on an everyday basis (Perry and Selden, 2003). As the processes of social stratification, class polarization, and cultural displacement have accelerated, the frequency and velocity, as well as the breadth and scope of conflicts and resistance have also intensified. For example, the number of officially recorded "mass incidents" - unauthorized protest events – reached 87,000 in 2005 (Magnier, 2006), up from 74,000 in 2004, 58,000 in 2003, and 10,000 in 1994 (Dyer, 2005). Despite the state's relentless repression and its pervasive and ever-expanding information and communication control regime, various Chinese social forces, from Falun Gong members to workers and farmers, are communicating their social struggles with or, more often, without the aid of the most advanced ICTs. I offer an overview of these struggles and discuss how they have brought back the social to the fore of Chinese development agenda in the aftermath of China's "digital revolution," leading the current Hu Jintao leadership to rearticulate a developmental path that foregrounds human relationships and reemphasizes the state's redistributive role, a topic I will turn to in the last section of this paper.

Falun Gong and the Crisis of Meaning

Precisely because ICTs in themselves are not capable of fostering social interconnectivity, creating community, let alone endowing meaning to life, it is perhaps not surprising that the first most well-organized form of Chinese social contestation in the post-1989 era emerged in the form of the massive subjective revolution of the quasi-religious Falun Gong movement. Falun Gong's proliferation in China in the 1990s reflects the profound social and cultural contradictions of the party's technocracy-oriented modernization and informatization drive and China's embrace of consumerism – something Smythe had warned against. It responded to the deep and widespread ideological and identity crises that followed the suppression of the pro-democracy movement in 1989 and post-Mao China's search for a democratic alternative to state socialism. In 1992, Deng called for an end to debates about the socialist or

capitalist nature of the economic reforms and for accelerated capitalistic developments by urging the entire population to plunge into the sea of commercialism and the pursuit of material wealth and national power. Falun Gong, in contrast, insisted on the search for meaning and called for a radical transcendence of materialism.

Since I have discussed both the broad social background for Falun Gong's spectacular rise, its substantive dimensions as an alternative meaning system, its communicative strategies, as well as its relationship with China's state-controlled communication system in greater detailed elsewhere (Zhao, 2003; see also Thornton, 2003), I will only briefly recapture my analysis here. As an alternative meaning system, Falun Gong promised to address the multifaceted concerns of a general population going through a drastic social transformation. It met physical needs for health, which assumed a new sense of urgency after 1992, as the collapse of the state socialist healthcare system made care increasingly unaffordable to a large proportion of the population. As well, the processes of modernization and urbanization accelerated after 1992, leading to drastic social dislocations and an increasingly atomized society. Falun Gong's group exercise activities built affinities and provided a sense of community among its participants. On a moral level, Falun Gong, with its celebration of the virtues of truthfulness, benevolence, and forbearance, and its condemnation of corruption, moral decay, excessive materialism and the ruthless pursuit of wealth and power, offered a powerful critique of the ideological and moral bankruptcies of the Chinese reform program.

Perhaps most importantly, as the Chinese manifestation of a worldwide backlash against capitalist modernity, Falun Gong testifies to the importance of meaning in the digital age. It underscores the "power of identity" that Manual Castells (1997) has written about. True to Castells' observation, such a "resistance identity" is generated by "those actors that are in positions/conditions devalued and or/stigmatized by the logic of domination, thus building trenches of resistance and survival on the basis of principles different from, or opposed to, those permeating the institutions of society" (Castells, 1997: 8). Indeed, Falun Gong leader Li Hongzhi addressed actors and aspects of subjectivity bruised in the Chinese pursuit for modernization – from bicycle riders struck by reckless car drivers to unemployed workers, and provided an alternative meaning system for individuals to come to terms with their lived experiences. The intensity of the identities and the multitude of unfolding struggles match both the velocity and intensity of the social transformation in China. Like many forms of religious fundamentalism, Falun Gong is not a purveyor of "a social project" (Castells, 1997: 106). Yet, it has turned out to be the most politicized and highly mobilized form of social contestation in China in the digital age.

In short, the Falun Gong group's adept uses of ICTs in both internal and external communication expose the contradictory nature of China's leapfrogged modernization and its accelerated integration with global communication networks. Both are heralded as liberatory and progressive, but in this specific case, not only are these processes facilitating an unprecedented challenge against a repressive state, but they are also engendering a quasi-religious fundamentalist movement with apparent anti-modern and conservative sensibilities. Such are the contradictory social and cultural consequences of the Chinese "digital revolution." Although the Chinese state has been able to more or less suppress the Falun Gong movement through a ruthless campaign since 1999, underground and overseas-based Falun Gong members continue to wage a militant and protracted propaganda war against the Chinese state. Moreover,

the flourishing of other forms of "cybersects" (Thornton, 2003) and the exponential growth of underground religiosity in general since the 1990s underscore that fact that Fulun Gong is merely the tip of a much larger iceberg that has crystallized the profound social and cultural contradictions of China's much celebrated "digital revolution."

Labor Struggle

Another major social force that has contested the terms of Chinese "digital revolution" and exposed its social deficit has been China's industrial workers. As Chinese communication scholar Lu Xinyu has pointed out, the postcolonial condition in China has meant that the Chinese working class gained its subjectivity through national liberation and the establishment of a national industrial base within the framework of a socialist nation state (Lu, 2005). This historically specific subjectivity – the presumed "master" status in the state socialist household – was inextricably and problematically linked to the project of state socialism and industrialization under a vanguard party. While the working class's material gains were real and historically significant, as Yiching Wu has observed, "the political form of the new state largely reproduced and maintained the expropriated status of the working classes" (2005: 48). Without popular democratic control of the post-revolutionary state, public ownership of the means of production existed largely as "a legal fiction" and "the subordinate working classes were at best to be the dependent beneficiaries of a paternalistic bureaucracy—not to mention that such hard-won benefits can be easily taken away as political circumstances may change" (Wu, 2005: 49).

This was exactly what has happened. With the massive privatization of state-owned enterprises and the party's embrace of information technologies and the new digital elite as the "advanced productive force," China's industrial workers have quickly lost any control of the production and technological innovation processes they had gained under the "proletarian politics" of the pre-reform era. Older industrial workers have been laid off en-mass in the traditional industries. Younger ones, mostly recruited from the ranks of rural migrant population and typically female, assemble the latest ICT gadgets in sweatshop conditions. As ICTs have spread, so has unemployment – some 40-60 million people became unemployed between 1998 and 2003 (Bulard, 2006). Those who are employed in the assembly lines and involved in the production of the latest ICT gadgets can hardly earn a living wage. As the *New York Times* reported as late as 2004, high economic growth rates and expanded multinational production capacities in China "depend on a flexible work force that actually grows cheaper by the year" (Kahn, 2004).

Consequently, the most basic form of "class struggle," the struggle for redistribution of wealth by Chinese workers – ranging from oppositions against the privatization of state-owned enterprises to demands for the payment of unpaid wages and pensions – has become the focal point of working class mobilization in digitizing China. Despite the regime of official propaganda and the state's relentless attempts at prohibiting the use of ICTs for independent working class communication and organization, Chinese workers – from laid-off workers in traditional heavy industries to new workers assembling the latest ICT gadgets in foreign invested factories, have sustained militant struggles to contest the terms of China's "digital revolution" (Zhao and Duffy, forthcoming). Rather than pacifying the working class, blunt propaganda statements by government officials have even provoked workers to protest. For example, in March 2002, when Gong Shangwu, an official at the unemployment-stricken industrial rust-belt city of

Liaoyang, went on television to proclaim that "there was no unemployed" in the city, thousands of "furious workers, first from six factories and then from as many as twenty, marched in the streets, shouting 'Hooligan Government'" (Lee, 2003: 83). Although the fear of state repression was so intense in Liaoyang that protest organizers from one factory insisted on excluding workers of other factories from participating in planning meetings and the nucleus of the protest leadership, workers managed to communicate their grievances and demands, as well as the time and date of protests by flyers posted on their own factory buildings and residential quarters. Interpersonal networks and ironically, regular visits to the city government to petition for redressing workers' grievances by workers' representatives from different factories, served as additional means of cross-factory communication about the protests planned by one factory (Lee, 2004: 13-18). As a result, as many as 30,000 workers from 20 or more local factories joined together for mass protests. These protests, together with other protests by laid-off industrial workers elsewhere in the country, continue to pose a major threat to social stability in China.

Nor are China's young and typically female migrant workers, who fill 68.2 percent of jobs in electronics manufacturing (Bulard, 2006), as docile as they have often been assumed to be. Although their struggles, like those of laid-off state enterprise workers, are limited both in scope and levels of organization, their political significance is not to be underestimated in the context of China's fragile and volatile political environment. The potential coalesce of working class politics and the nationalistic politics of China's urban middle class, for example, may not be too far-fetched. In April 2005, as mobile phones, emails and short messages helped to organize anti-Japanese protests by students and urban residents in major Chinese cities, including Shenzhen, more than 10,000 workers at Uniden Electronics, a Japanese-owned factory in Shenzhen that makes cordless phones for Wal-Mart, started a strike against Japanese management for refusing to allow them to unionize, for dismissing fellow workers who had organized a strike in November 2004, and to demand improved working conditions ("Two Thousand Workers," 2005). The *China Labor Bulletin* wrote about the significance of this strike and the potential danger it posed for the Chinese state:

> The present strike, following on the heels of walkouts on November 29 and December 10, 2004, contains echoes of the strikes directed at Japanese enterprises that exploded in the 1920s fuelling nationalist and revolutionary movements. It also evokes the Chinese government's worst fears during the 1989 movement upsurge: that workers might join the protests on the side of students and intellectuals (China Labor Bulletin, 2005).

Similarly, although harsh state repression, social stratification, and a deep-rooted social division between mental and manual labor have contributed to segregate China's industrial workers from the rising strata of post-industrial Chinese "knowledge workers", there are signs of potential linkages between China's industrial workers and the members of the Chinese educated strata, particularly "Old Left" and "New Left" intellectuals and lower level "knowledge workers" whose material interests are sometimes convergent with those of the broad working class (Zhao and Duffy, forthcoming). Moreover, there is evidence that China's white-collar or "knowledge workers" – from journalists in a Shenzhen newspaper to ex-employees of two of China's state banks – have recently joined the ranks of China's industrial workers

in protesting against illegal labor relations and unfair dismissals as the restructuring and downsizing of state administrative organs, media and financial institutions (Chen, 2006).

Most significantly for this paper, since the early 2000s, China's cyberspace, the fruit of China's "digital revolution" and techno-nationalist drive, has become a key site for the revival of Chinese leftism, the potential re-articulation of working class consciousness, and the formation of a potential counter-hegemonic alliance between Chinese workers and intellectuals (Hu, 2006). On the one hand, neo-Marxist intellectuals, together with the self-proclaimed "true" defenders of the Chinese revolution and "authentic" socialists and communists have developed devastating critiques of "capitalist restoration" in China, even offering strategic political advice to Chinese workers. On the other hand, workers in the frontline of the struggle for economic survival have also used the Internet to report their activities and appeal for help (Zhao, forthcoming). Thus, despite, and perhaps precisely because of, the apparent nationalistic achievements of the Chinese "digital revolution," elite and popular online leftist oppositions against the negative social consequences of the reform program, have continued to surface at every turn of the reform process throughout the 1990s and early 2000s. In fact, some leftist websites have not only become quite influential in providing "uncensored news about worker unrests" ("China and the Net", 2006), but also gained influence as forums that contribute to the re-articulation and re-formation of working class consciousness (Zhao, forthcoming). Not surprisingly, in February 2006, the authorities, fearful of the mobilizing potentials of online leftism, ordered the closure of the China Workers' Net and Communist Net, as well as the latter's bulletin board, Worker-Peasant Solider BBS (Zhao, forthcoming; see also, Hu, 2006). If Smythe had perhaps underestimated the importance of nationalism in communist party politics in China, China's post-Mao techno-nationalists who wished to bid farewell to class struggle have certainly been haunted by the specter of "proletariat politics."

Farmers' Resistance

Displaced and dispossessed Chinese farmers comprise a third and no doubt more massive and more explosive social force that have contested the terms of the Chinese state's information technology-driven and export-oriented development strategy. Although agriculture only contributes 14 percent of China's GDP, the agrarian population still accounts for more than 60 percent of the total Chinese population as China entered 21st century. Notwithstanding all the digital age rhetoric, as Chinese rural expert Wen Tiejun puts it, "China's problem is basically the developmental problem of a peasant society with a large population and scarce resources in pursuit of industrialization" (2003: 17). Despite their status as the most underrepresented and least-wired group in China, Chinese farmers have managed to develop their own autonomous and indigenous channels of information gathering and dissemination in their struggles for economic survival and social justice. They have done so in ways that defy any conventional understanding of what constitutes relevant and empowering information and appropriate technology. Moreover, they are developing autonomous forms of social organization through their struggles for redistributive justice. Chinese sociologist Yu Jianrong's case study of farmers' resistance against excessive tax burdens imposed by local governments in one county in Hunan province in the early 2000s is particularly illustrative. Here, farmers' most empowering and even subversive communicative activity had been organized around the voluntary dissemination of official party policies with regard to agricultural taxation most commonly and provocatively in the form of reading central party documents through loud speakers in public markets, at village entrances and other public spaces (Yu, 2003: 6-7). In

doing so, they were exploiting a disjuncture between central policies, which are often hollow, moralistic and have no enforcing teeth, and local government practices which often ignore, suppress, or simply violate central and provincial policies in their practices. The mastering and propagation of these policies provided the farmers with a powerful means to challenge local officials and to defend their own economic interests.

The gathering and dissemination of government policies and the identification of common issues of concern have facilitated horizontal communication and the formation of communities of common interests among farmers. Just as workers' representatives' petition trips to the same government office served to establish horizontal communication between different factories and led to the massive cross-factory strike in Liaoyang in 2002, farmers on the common path of petitioning to higher-level government authorities in their struggle for economic and social justice learned new policies and identified new "problems" – that is, new areas of contestation, from each other. Furthermore, these communicative activities facilitated the formation of horizontal linkages. Perhaps reflective of the network age, these horizontal linkages between farmer in different localities have been referred to by farmers themselves as *lianwang* – that is, "linking up with the network" (Yu, 2003: 5). As Yu writes: "because there is a countywide network, as soon as one burden reduction representative acquires central and provincial documents about a given 'problem' and finds evidence about the existence of such a 'problem,' representatives from other townships normally will put this 'problem' on the agenda of their resistance without the need to identify the 'problem'" (2003: 6). In other words, farmers have formed collaborative relationships to gather information, define issues, and set the substantive agenda of their resistance. According to Yu, unofficial farmers' unions and other forms of autonomous organizations have emerged on the basis of groups formed specifically to communicate official documents to farmers, often under harassment and violent repression of local officials.

As the penetration of capitalistic social relations in Chinese rural communities deepen, and as the negative social, cultural, and ecological consequences of China's hyper-modernization bring more havoc to rural communities, the substance and forms of farmers' resistance have evolved since the late 1990s and early 2000s. And with these, changes in the dynamics of communication and network structure also took place. Since China entered the new century, the focal points of farmers' protests have centered more and more on the issues of land appropriation, environmental protection, and accountability and transparency in village governance and electoral politics. In 2005 alone, for example, major cases of villagers/official confrontation that have made international news headlines include: the environmentally related "April 10 incident" in Huashui Village, Dongyang City, Zhejiang Province; the land seizure related "June 11 incident" in Shengyou Village, Dingzhou City, Hebei Province; the electoral struggles in Taishi Village Guangzhou City, Guangdong Province that spanned from late July to October 2005; and in December 2005, the struggle against police brutality in Dongzhou township in Guangdong, where local armed police shot several people to death in an attempt to suppress villagers' organized resistance against land seizure (French, December 2005). Although the specifics of these struggles differ, they share similar patterns of communication.

First, the diffusion of information and communication technologies made it possible for villagers to capture their struggles in video, on cameras, and even to post their stories on the Internet. Of course,

mere access to these technologies alone does not guarantee the circulation of farmers' struggles. Cultural capital and social networks are necessary, and it is precisely in these areas that today's Chinese farmers are no longer the peasants of the Mao and Deng era (Yu, 2003: 15). Many are educated, some have been in the army, while others have worked or lived in the cities. They not only have acquired a growing consciousness of their rights and mustered officially available symbolic resources, but also have managed to establish social linkages outside their villages and develop the capacity to use modern communication technologies in their struggles. In the "June 11 Incident" in Shengyou, for example, a villager was able to record on video a murderous demolition attack on villagers protesting against the construction of a power plant and pass it on to the *Washington Post.* The worldwide release of the video helped to highlight a struggle that has been waged by Chinese farmers all over the country. As UK journalist David McNeill puts it, with the video, "the world got a rare glimpse of the deadly, mostly unseen war between Chinese developers and the poor who stand in their way," and it "brings more unwelcome attention for Beijing on the enormous social tensions created by China's explosive economic growth" (McNeil, 2005). Although it is still rare for a village event to make international news headlines, the widespread nature of these struggles, the fact that these struggles often involve an entire village and are thus more collective in nature, as well as the central and coastal locations of many of these struggles, have all made it more likely for Chinese farmers to communicate their struggles to the outside world. The highly dramatic and symbolic nature of many of these struggles, especially the extensive involvement of women, including the strategic positioning of elderly females in the front-lines, has made these struggles particularly communicative. The Taishi Village case is a prime example. In this case, villagers exercised their democratic rights by following the state's Rural Villagers Organization Law and launched a recall campaign against an unpopular elected village leader who villagers suspected might have mismanaged the village's land sales. This attempt, however, was resisted by the township government which mobilized hired thugs and a police force to intimidate villagers. During the self-organized village deliberations which led to the recall motion, the photo of an 80-year-old grandma, Feng Zhen, standing on a pile of rocks and giving a speech on village affairs through a bullhorn while being propped up by two younger women (one at each side) became the iconic image of an emerging Chinese farmers' public sphere.

Second, unlike early struggles around family planning and arbitrary fees imposed by local officials, farmers' struggles on environmental issues, land use, and electoral issues have more resonance with China's new urban middle class, especially socially active local journalists, lawyers, university professors, democracy activists, and even sympathetic officials. In the area of environmental protection, farmers' struggles to protect a livable environment have begun to resonate with an emerging urban middle-class consciousness for environmental protection. The 2003-2004 struggles against the dam project on Nu River in Yunnan province, that eventually forced the central government to suspend construction in 2004, served as a prime example. In this case, journalist-environmental activists in official media organizations such as Wang Yongcheng, who is both a reporter at China National Radio and a leader of the environmental NGO "Green Homeland" and Zhang Kejia, a reporter with the *China Youth Daily* and a leader of the environmental NGO "Green Island" played instrumental roles in helping farmers to articulate their voices and frame their concerns (Zhang, 2004). Similarly, urban-based lawyers are increasingly involved in rural land dispute cases. The Taishi village electoral recall event, for example, drew the attention and direct involvement of urban-based democracy and civil rights activists and local and international journalists almost from the very beginning. One of the initial village public forums was

attended by journalists and even legal experts from Guangzhou. The widely circulated image of grandma Feng Zhen ensured widespread Internet and international media coverage and the mobilization of solidarity on the Internet, including a supporting statement signed by hundreds of political and civil rights activists both from inside and outside the country and a letter of appeal to Premier Wen Jiaobo written by prominent feminist scholar, An Xiaoming (Fan, 2005; "Taishi Elections," 2005). These solidarity essays by urban intellectuals, in turn, provoked enthusiastic responses among villagers who not only widely circulated them but also presented them to township officials as "study materials" for their lesson in democracy.

Finally, because of the increasing scale of these protest events and because some of these events have involved extensive Internet and international media coverage, mainstream domestic media, which as a matter of principle are prevented from reporting on these events, have on occasions been compelled to provide coverage. Since most of these events happened at the village level and typically involved a confrontation between villagers and local authorities, they did not directly challenge provincial and central level authorities. Consequently, liberal and outspoken central and provincial media outlets have, on occasions, been able to provide sympathetic coverage. The Taishi Village story, for example, received sympathetic reporting in the *Nanfang Rural Journal*, the *Nanfang Metropolitan News*, and the *China Youth Daily*. The *People's Daily*'s South China edition, the *Southern China News*, even published a page 2 opinion piece on September 14, 2005 entitled "Democracy on Top of A Pile of Rocks", calling this the site of a "public sphere," and praising the villagers for their initiative in recalling an unpopular village official through legal procedures and for promoting democracy (He, 2005). More often, however, local media outlets publish official accounts of these events in an attempt to quell unofficial news and rumors, which often exaggerate what actually happened, and repair the tarnished political image of local officials. These reports are usually published in the aftermath of a popular unrest, often being framed in terms of how an uninformed village mass had been misled by a few individuals with "ulterior motives," how local officials have successfully resolved the issue, and how villagers were appreciative of the order and stability that had been restored with government intervention. The result is that the Chinese village has become a site of struggle for competing versions of "what actually happened" (Manthorpe, 2005). Still, official media reports, even within their typical official frame, have invoked oppositional readings and helped to spread the news, leading villagers in other locations to articulate their own issues and mount similar struggles. For example, in Zhejiang Province, local newspaper reports of villagers' success in their struggles to shutdown polluting factories in Huashui village in Dongyang, inspired villagers in nearby Xinchang to escalate their struggle against industrial pollution (French, July 2005). As the *New York Times* put it, "Despite tight controls on news coverage of the incident, the riot in Dongyang, where the chemical factory remains closed months later, has firmly entered Chinese folklore as proof that determined citizens acting en masse can force the authorities to reverse course and address their needs" (French, July 2005). Although the government has recently attempted to tighten control of unauthorized media reporting of "sudden events" by proposing a law that imposes heavy financial penalties on such reporting (Kahn, 27 June 2006), the challenge of containing the spread of news about social unrests in the digital age remains formidable.

Beyond ICTs: Re-embedding the Social in China's "Digital Revolution"?

China's "digital revolution" in the context of regressive social developments has brought the country once again to the verge of social upheavals. By 2004, the leadership had openly acknowledged for the first time that social instability had reached "the red line" (Manthorpe, 2006). Although consumerism has offered an alternative to state socialism, a developmental strategy that is based on low salaries for workers has meant that not everybody has the ticket to the paradise of consumption. As Martine Bulard (2006) puts it, "Out of a population of 1.3 billion, some 900 million Chinese cannot hope to enter the temple of consumerism they dream about and others enjoy." Moreover, as recent riots by university graduates and their growing challenge of finding employment demonstrated, the ability of the digital economy to continue to enfranchise the urban educated strata can no longer be taken for granted. By 2006, an estimated 60 percent of the 4.1 million university graduates were having trouble finding employment (Kahn, 22 June 2006), a politically and socially dangerous signal for the party leadership. If the lack of telecommunications and other infrastructural facilities were once identified as the "bottleneck" of China's further economic development, today, over-investment, overcapacity, and under-consumption have threatened the continuing sustainability of the current path of Chinese economic development.

The telecommunication services market has been no exception. Growth in the telecommunication service sector, which has recorded annual growth rates ranging from 31.4 percent to 59 percent between 1991 and 2000 (compared with annual GDP growth rates of between 7.1 percent and 14.2 percent during the same period) (MII, 2005), has slowed down significantly in the past few years. In the first quarter of 2005, China's telecommunication service industry reported a growth rate of 8.8 percent – a single digit rate for the first time since 1990. As the Ministry of Information Industry (2006b) acknowledged, further market expansion in this sector has been limited by two interrelated factors: on the one hand, the coastal regions and the urban middle class market have reached a point of saturation; on the other hand, in western regions and in the vast rural market, "real consumption power is limited, and there is no effective demand". Inadequate domestic consumption, coupled with U.S. pressures on China to address the massive U.S. trade deficit with China which reached a record level of $202 billion by 2005 ("China Bashing," 2006:31), threatens the continuing sustainability of China's ICT-driven, export-oriented growth strategy. As Dan Schiller has concluded, China and information technology as the intertwined solutions to global capitalism's problem of stagnation and profit decline and the resulting tendency of manufacturers to relocate to China and to dictate global prices seem likely "to accentuate the continuing condition of overproduction, not merely in China, but throughout the world economy." Consequently, it is possible that "the successful exploitation of these two poles of growth will contribute to a resurgence of the very economic crisis that promoted their own prior development" (2005: 96).

Within China, intensified struggles by various Chinese social forces, including the resurgence of various strands of leftist criticisms of economic reform online, discussed above, have forced the new party leadership under Hu Jintao to deal with a profound crisis in legitimacy and governance. To be sure, the new leadership, inaugurated in late 2002 and found itself having to consolidate power in the midst of a profound public health crisis resulting from the spread of the SARS epidemic in early 2003, has not in any way renounced China's "digital revolution," let alone its high-tech pursuits in general. Nevertheless, there have been readjustments in the party's technologies of governance and its policy priorities. On the one

hand, notwithstanding a temporary shift in the state's information management strategy during the SARs crisis (Fewsmith, 2003), it has stepped up the control of China's information and communication networks especially by suppressing both the extreme right in the news media and the radical forms of online leftism, leading one foreign observer to identify the attempt as "a campaign of media repression unprecedented for nearly 20 years" (Manthorpe, 2006). On the other hand, the state has been compelled to pay attention to the social and cultural deficits of the "digital revolution" by rearticulating its socialist ideological doctrines and revising its growth-oriented development strategies. Among other initiatives, including the reduction of tax burden for Chinese farmers and increased attention to rural development in the discourse of "constructing a socialist new countryside," the new leadership has propagated two new doctrines for development and governance since 2003. The first centered on promoting the so-called "scientific concept of development," that is, a people-centered development approach which is comprehensive, coordinated, and economically, socially and environmentally sustainable. This idea was officially entrenched in the party's "Resolution on Several Problems in Perfecting the Socialist Market Economic System," passed at the Third Plenum of the 16th Party Congress on October 14, 2003. The second doctrine centers on the notion of "constructing a harmonious socialist society," elaborated in the "Resolution on Strengthening the Party's Governance Capabilities", passed at the Fourth Plenum of the 16th Party Congress on September 19, 2005. The concept's utopian, or perhaps more appropriately, Orwellian, vision is revealed in Party General Secretary Hu Jintao's declaration that such a society is one that "should feature democracy, the rule of law, equity, justice, sincerity, amity and vitality" ("Hu", 2005).

Clearly, rather than continuing to pursue single-minded GDP growth, which had defined the development path of the reform era, the Hu Jintao leadership has been forced to pay attention to sustainable development, the management of social relations, and the stabilization of the social field. Thus, the year 2005, which was initially envisioned by Premier Wen Jiabao and neo-liberal economists as a year when more neoliberal reform steps would be taken to further capitalistic developments, became the year when the public began to openly question the path of post-Mao capitalistic development under the rubric of "the reform." Viewed in this context, the Chinese government's statement at the Tunis phase of the WSIS in November 2005 that "the information society should be a people-centered, development-oriented and highly inclusive society… featuring extensive public participation and harmonious regional development" ("Statement," 2005) is not only an exercise in "political correctness" at a global forum, but also perhaps reflective of these newly articulated principles of development and governance inside the country.

In short, the ways ICTs have been developed and deployed in the past three decades have contributed to China's impressive growth on the one hand, and its extreme form of uneven social development on the other. Whether ICTs can be harnessed to promote sustainable development and economic and social justice in the post-reform period remains an open question. To be sure, Chinese media, policy and development circles have started to note the "digital divide" and embrace the discourse of "poverty-reduction through information" (*xinxi fuping*). The archetypical storyline in such discourses revolves around a farmer, who, after having gained access to market information through the Internet, learnt what to produce and where to sell his or her product, thus becoming an effective market agent. While such stories are probably real and much more could be done in this regard, the mere provision of

more market information to individual Chinese economic agents are unlikely to contribute to addressing the glaring social deficits of China's ICT-driven and export-oriented development strategy.

James Deane has argued that a mere preoccupation with the "economic value of information and communication" rather than "its fundamental political role" is clearly inadequate in development policy (2005: 57). This point is especially relevant in the Chinese context. After all, the biggest problem for Chinese farmers as a social group is not the lack of market information with regard to what to grow and where to sell, but the seizure of the very land where they grow in the first place. Similarly, while there are few opportunities for farmers to "get rich fast," underinvestment in and the commodification of basic social services such as medical care and education has meant that many rural households are getting poor fast in the event of illness and/or a child passing the national college entrance exam. In September 2005, as the People' Republic prepared its national day celebrations, Chinese and international media were agonized by the tragedy of a rural woman, Li Fenxiang, who, like so many others in her population group which has one of the highest suicide rates in the world, communicated her desperation through suicide. The burden of paying the medical bills of her disabled husband and college tuition fees of her daughter was simply too heavy for her (Spencer, 2005).

Likewise, the main difficulty facing China's laid-off and migrant workers today is not that they do not have a phone number through which prospective employers can reach them, nor that they cannot transmit their remittances back to the countryside quickly enough. Even the men and women who squat in the open-air labor market to sell their labor power are usually spotted a mobile phone (Bulard, 2006). The problem, instead, is the lack of jobs, low wages, and even worse, employers' failure to pay a wage in the first place. Here again, a story is more telling than statistics. On May 11, 2005, Wang Binyu, a 27-year-old migrant worker, after having been repeatedly frustrated by the state's legal and administrative apparatuses and humiliated by his boss and other individuals in his struggles to get his unpaid salary, went on a rampage and killed four people before turning himself to the police (Song, 2005). When the Xinhua News Agency reported the case on September 4, 2005, the event shocked the nation. The ensuing media and Internet debates, especially one-sided sympathetic Internet opinion toward Yu and Internet-based mobilization to save Yu from the death penalty, including neo-Maoist critique of the class nature of Wang's case, threatened to shake a fledgling liberal legal regime of criminal justice. Popular opinion crystallized on a crucial point: although Wang needed to be brought to justice, what about the class-based economic and social justice of the 100 million rural migrants that Wang symbolizes? Afraid of the political implications of public opinion mobilization around Wang, especially leftist attacks against "capitalist restoration" and the reform program's failure to deliver class-based economic and social justice for the tens of millions of workers such as Wang, Wang was quietly and swiftly executed in October 2005. Media and Internet forums were banned from further reporting on and discussing the case. Once again, the case fully exposed the contradictory nature of the Chinese "digital revolution": the promotion and production of ICTs on the one hand and the blockage of information and the curtailment of communication about fundamental social issues on the other.

Conclusion

Although terms such as "capitalism," "socialism," and "proletariat politics" seem to have become the ideological relics of a bygone era, the issues these terms address, that is, the nature of the political decision making process, the setting of developmental priorities, the ordering of social relations, as well as the value orientations of technological innovations, remain as relevant as ever. In fact, by early 2006, the Chinese debate on "socialism versus capitalism" or the "two-line struggle" that Smythe observed in the 1970s, the suppression of which by Deng paved the way for China's explosive nationalistic and market-oriented "digital revolution," had returned to Chinese politics with a vengeance. As the *New York Times* reported, the March 2006 meeting of the National People's Congress, China's Parliament, "is consumed with an ideological debate over socialism and capitalism that many assumed had been buried by China's long streak of fast economic growth" (Kahn, March 2006). Similarly, at a time when "Civil Society" has become a "partner" of governments and businesses in the dominant global discourse on the information society, I cannot help but feel awkard and unfashionable in bringing the militant Chinese workers, farmers, Falun Gong believers, and indeed, even the murderous Wang Binyu into this discussion. But these are the social forces that have been on the forefront of contesting the terms of China's "digital revolution," and such is the unevenness and incommensurability of the digital age.

ICTs, developed and deployed in a market authoritarian political context in China to fulfill a Chinese techno-nationalist agenda while simultaneously and paradoxically contributing to the expansion of transnational capitalism, have had ambiguous implications for Chinese society. Although the re-organization of the Chinese political economy around the ICTs in the past three decades has boasted China's global standing and enriched and empowered certain domestic and transnational social strata, this reorganization has also disenfranchised and disempowered other social groups. Just as techniques have a politics, as Dallas Smythe reminded his Chinese hosts, to cite Robin Mansell, "whether by virtue of their presence or their absence – or indeed the specific nature of their presence – ICTs have a 'politics' and these politics affect every one" (2005: 84). Precisely because of this, a truly people-centric developmental path requires that decisions regarding development priorities be made with the democratic participation of various social forces, that is, in a manner that is exactly the opposite what Liu Ji had described. It is clear that there will not be a "socialist democracy" at the end of a Chinese "information superhighway" built under market authoritarianism. The current global order, in which China continues to perceive a need to strengthen its strategic military capabilities vis-à-vis the U.S. and its allies in Asia, makes the issue of democratic decision-making regarding technological development even more complicated.

The Chinese case underscores the importance of the distinction between information and communication technologies as economic goods, information as a resource for decision-making, and communication as social and cultural processes. Although the Chinese developmental strategy promotes network expansion and the production of ICT goods and services for economic development, it endeavors to block the circulation of information that is detrimental to dominant political economic interests, and to curtail communication for autonomous social organization and for the effective expression of competing social interests and development priorities. While an ICT-led development strategy has generated growth, the exclusion of China's vast majority in the country's political decision making process has inevitably created explosive social tensions and engendered multiple forms of social contestation, with and often

without the aid of the most advanced ICTs. In turn, these struggles – be it the well organized Falun Gong movement or the individualistic and fatalistic actions of Li Fenxiang and Wang Binyu – have posed fundamental questions about the value orientations and developmental priorities of Chinese society.

As the social and cultural contradictions of China's ICT-driven development path in the past three decades have amply demonstrated, the developmental values of ICTs need to be analyzed in concrete political, economic, social and cultural contexts. This is particularly the case when communication networks and ICTs are deployed and developed not to meet basic human needs, but to serve as technologies of power by a Chinese state aiming to secure its military and strategic position and maintain its territorial integrity in a profoundly unstable global order, and by competing Chinese state bureaucracies to make a profit by exploiting consumerist drives and prioritizing such technologies at the expense of other crucial areas of human development such as education, health care, and environmental protection. While the digital divides are real and they need to be narrowed at a time when the entire world is not only under the curse of the protracted war on terrorism – a more fully developed "information war" in all its multifaceted dimensions (Schiller, 2006) – but also facing profound social, cultural, and environmental crises, the 21st century version of the Dallas Smythe question, "After mobile phones, what?" has become as relevant as ever, not only for the Chinese, but also for the entire world.

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