

COMPLEX *GUOQING* AND INTELLECTUAL PROPERTY REFORMS IN CHINA

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Introduction

In the past two decades, China has been heavily criticized for its inadequate protection of intellectual property rights. Every year, US industries are estimated to have lost billions of dollars due to piracy and counterfeiting in the country. As the International Intellectual Property Alliance stated in its recent Special 301 Report, copyright piracy in China resulted in \$2.2 billion of US trade losses in 2006 alone (International Intellectual Property Alliance, 2007, p96). Of particular concern is the considerable quantity of infringing products that have been exported to other foreign markets. To protect its industries, the United States has recently requested the Dispute Settlement Body of the World Trade Organization (WTO) to establish a panel to determine whether China has failed to comply with the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement) (World Trade Organization, 2007).¹

Although China was rightly criticized for its piracy and counterfeiting problems, it is important to recognize and appreciate the considerable amount of intellectual property reforms the country has undertaken in the past two decades. Since the reopening of its market to foreign trade in the late 1970s, China introduced its first modern copyright, patent, and trademark laws (Ibid., pp136–141). A decade later, China revamped its intellectual property system in response to US pressure and did so again in preparation for its accession to the WTO (Yu, 2000, pp141–151; Yu, 2006, pp906–923). Today, China is a proud member of many multilateral intellectual property agreements, including the Berne Convention, Geneva Convention, Paris Convention, the Patent Cooperation Treaty, and UPOV (International Union for the Protection of New Varieties of Plants).

Indeed, upon a quick review of these new laws, repeated revisions, and international commitments, one cannot help but question the effectiveness of the harmonization approach taken by developed countries, in particular the United States and the European Communities. As this volume has shown, that approach often results in the creation of one-size-fits-all templates that ignore local needs and conditions. As a result, most of the existing reforms not only fail to target the crux of the piracy and counterfeiting problems, but have led to apathy and reluctance on the part of the local authorities and resistance and resentment among the local populace. If effective and sustainable intellectual property reforms are to be implemented in China, policy makers will need to seriously consider the country's rapidly-changing conditions—or *guóqíng*, as local leaders and commentators put them.

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To illustrate the complexity of China's piracy and counterfeiting problems and the futility of the one-size-fits-all harmonization approach, this chapter begins by highlighting the enormous region-wide and sector-wide disparities within the country and the consequent uneven development of intellectual property protection. The chapter then discusses the country's lack of an enabling environment for effective intellectual property protection. It points out that many of the existing intellectual property reforms in China have overlooked the importance of factors outside the intellectual property regime. To end on an optimistic note, the chapter documents the significant progress China has recently made in the intellectual property area. It nevertheless reminds readers that much of this progress will be found at the microscopic and qualitative levels, rather than the more apparent macroscopic and quantitative levels—the levels at which China's progress is usually measured.

Regional Disparities

The fact that China is not a homogeneous country has been stated repeatedly since Westerners first encountered China many centuries ago. China is large, complex, diverse, and 'sometimes internally contradictory' (Hamre and Bergsten, 2006, pix). The Chinese speak different languages, enjoy different cuisines, grow up with different cultures, and subscribe to different historical and philosophical traditions. Conditions in Beijing are often very different from those in Guangzhou, and the intellectual property strategies that are effective in Shanghai are likely to fail in a village in western China. The trade patterns found in the coastal areas are also very different from those found in the inland areas.

To make things more complicated, during the rapid economic development in China in the past two decades, 'some regions have been positively encouraged to become wealthy before others' (Goodman, 1995). As Deng Xiaoping noted in the early 1980s in response to the country's growing inequality, 'some people have to get rich first' (Bergsten, Gill, Lardy and Mitchell, 2006, p31). As a result, across the country there have been enormous disparities in the levels of wealth and income, the purchasing power of local consumers, and the stages of economic and technological development.

The goods that are in high demand in the inland and rural areas are often very different from those in the major cities and the coastal areas. Because of these differing market conditions, local people in the less developed parts of China understandably are less aware of the importance of intellectual property protection. Nor do they have much need for it. Those places are also likely to present greater structural problems for intellectual property enforcement, such as inefficient administration, low penalties, shortage of funds, local protectionism, and severe conflicts of interests (Maskus, Dougherty and Mertha, 2005, p309). Meanwhile, the limited economic and technological developments in these areas have heavily constrained the local resources devoted to research and development efforts.

Sadly, despite all of these divergent regional conditions and the country's heavily decentralized state, intellectual property developments in China are often analysed as if the country were homogeneous. While it is logical for policy analysts to swap analytical accuracy for practical convenience, the end result unsurprisingly presents only half of the picture—at times a very misleading, if not inaccurate, half. As the Chinese market has expanded further

away from the major cities and the coastal areas, a more complete and deeper analysis of the country's regional economic developments is in order.

In June 2006, the Office of the United States Trade Representative altered its decades-old emphasis on country-based assessments in China. Instead of calling for only information about the entire country, for the first time the Office requested information concerning provincial developments. As the announcement in the *Federal Register* stated, '[t]he goal of this [special provincial] review is to spotlight strengths, weaknesses, and inconsistencies in and among specific jurisdictions' (Office of the U.S. Trade Representative, 2006b).

This new approach not only will promote the interests of US rights holders, but also will help facilitate a better understanding of the divergent protection offered in different parts of the country. To some extent, China is what I have described as 'a country of countries' (Yu, 2006, p963). The economic conditions in different parts of this country are drastically different, and intellectual property protection and enforcement in each of these different parts are unlikely to be the same. Any overall nationwide assessment of intellectual property enforcement is likely to be misleading, if not meaningless.

Since the reopening of the Chinese market to foreign trade in the late 1970s, the country has become heavily decentralized, and problems of local protectionism are now widespread. Today, there are considerable differences between protection at the national, provincial, and local levels (Mertha, 2005, pp93–100). As far as these differences are concerned, the Chinese proverb 'the mountains are high, and the Emperor is far away' (*shān gāo huángdì yuǎn*) could not provide a more accurate description. As Former Assistant United States Trade Representative for Japan and China Joseph Massey recounted, shortly after the signing of the 1992 memorandum of understanding between China and the United States, a senior USTR official 'was told by a senior provincial government leader that "Beijing's agreement" with the US was "mei you guanxi" (irrelevant) in that southern province' (Massey, 2006, p235).

Like the level of intellectual property protection, the level of innovation varies considerably among the different parts of China, adding another factor to this already complicated picture. For example, in 2000, '[r]esidents of Guangdong applied for more than 21,000 patents, while people in Hebei applied for only 3,848' (Maskus, Dougherty and Mertha, 2005, p317). A regional breakdown of 1995 technology data supplied by the State Science and Technology Commission of China showed that while Beijing and Shanghai spent 2.6 and 1.4 per cent of the local GDP on R&D, Sichuan and Liaoning, the provinces that came next, spent only 0.6 per cent (Ibid., p320). Given the inter-relationship between intellectual property protection and economic development, the considerable regional disparities within the country will provide important clues to the future development of intellectual property protection in China.

When China joined the WTO, commentators were divided as to their views of the impact of its accession to intellectual property protection. The so-called China optimists suggested that intellectual property protection in China would improve, because the WTO accession would lead to better economic and living conditions, which in turn would result in greater demand for higher-priced genuine products and luxury goods. When people are poor, they have limited disposable income and are more willing to settle for fake Prada handbags, Gucci shoes, or low-quality video compact discs (VCDs). When they become richer, however, they may start

looking for better and fancier legitimate products, especially when they can distinguish between genuine and fake products (Chow, 2006, p215). Indeed, Ernst & Young recently forecasted that the Chinese luxury market ‘is expected to grow 20% . . . annually until 2008 and then 10% annually until 2015, when sales are expected to exceed US\$11.5 billion’ (Ernst & Young, 2005, p1). Thus, some optimists predicted that ‘pirates and counterfeiters will . . . gradually move into legitimate businesses[,] and the focus of counterfeiting and piracy will shift away from China to lesser developing countries, such as Vietnam’ (Chow, 2002, p254).

By contrast, the so-called China pessimists suggested that intellectual property protection would be likely to deteriorate in China, due to an influx of foreign products, the growing economic disparity within the country, and the increased desire for products that many people could not afford. As these pessimists claimed, the growing access of foreign products to the Chinese market and the increase in foreign investment and trade would enhance the economic conditions that gave rise to piracy and counterfeiting in the first place (Ibid.). Even worse, the reduced restrictions on export privileges and the elimination of state monopoly over trading rights—both results of China’s WTO commitments—would further allow pirates and counterfeiters to trade more aggressively with markets that have ‘a strong appetite for low-priced counterfeit goods’, such as Southeast Asia and Eastern Europe (Ibid.; Chow, 2006, p216). The WTO accession might also create a disincentive for the country to carry out further immediate reforms, while providing China with ‘leverage against any future pressure to improve its piracy problem’ (Chow, 2002, pp253–254). In the end, according to the pessimists, the market for counterfeit exports would grow substantially (Chow, 2006, p205). As Professor Chow summarized:

Recent estimates by the PRC State Council in 2001 indicate that the Chinese economy was flooded with counterfeits valued at \$19–24 billion and that counterfeiting accounted for eight percent of China’s GDP. Multi-national companies in China indicate that fifteen to twenty percent of their brands in China are counterfeit, causing annual losses in the hundreds of millions of dollars. Counterfeits made in China are now exported to markets in all parts of the world; there are indications that exports from China will increase sharply for the foreseeable future. According to some accounts, China now accounts for eighty percent of all counterfeits in the world. Counterfeiting and commercial piracy are vital to the economy of many local municipalities and there are now millions of people in China involved in the counterfeiting industry (Ibid., pp204–205).

By now, it is quite clear that regional disparities in China have undermined the forecasts of both the optimists and pessimists. While stronger intellectual property protection and the emergence of intellectual property-based industries in Beijing, Shanghai, Guangzhou, and other major cities and coastal regions have led to greater improvement of protection in the affected places, piracy and counterfeiting have not migrated out of the country. Instead, they have spread to the less developed parts of the country, whose conditions are no different from those of the big cities a decade ago when intellectual property protection began to strengthen. In light of this migration, intellectual property problems are likely to remain in the country in the near future, even if some of these problems have migrated to countries in Southeast Asia. Thus, it is misleading to look for nationwide solutions to China’s counterfeiting and piracy problems, and

the USTR's new provincial review offers a refreshing change for collecting information about intellectual property developments in the country.

That approach is also attractive because it will help reduce the frustration of many Chinese, especially those in regions that have undertaken successful intellectual property reforms or made considerable sacrifices in the transition to a regime that is more respectful of intellectual property rights. While intellectual property protection continues to be a problem for foreign rights holders throughout China, one cannot deny the many important developments in the major cities and coastal areas in the last two decades. Following the introduction in the early 1990s of specialized courts filled with judges who possess intellectual property expertise, courts in the major cities have also been greatly improved. These courts now attract both local and foreign rights holders to use the judicial process in lieu of the alternative approach of administrative enforcement. In 2002, for example, a total of 2,080 patent cases (an increase of 30.24 per cent over 2001) and 707 trademark cases (an increase of 46.68 per cent) were adjudicated (Sun, 2004, p12).

Moreover, a continued insistence on the overall improvement in the country is unrealistic, ineffective, and counterproductive. By ignoring the important successes governments and businesses have made in major cities and coastal areas, such an insistence would create resentment among a large portion of the Chinese, which regard the repeated threats and demands 'as American excesses' (Lam and Graham, 2007, p321). Such insistence would also foster a misimpression among local Chinese leaders that, no matter what they do, the US government and foreign businesses will never be satisfied. This misimpression will only erect further barriers to future cooperation, not to mention the lost opportunities for cultivating local allies.

Finally, regional disparities may affect decisions by foreign investors on which provinces to invest in, how much to invest, what forms the investment should take, and what type of technologies will be used in the facilities in a particular region. As regional and local governments fight hard to attract FDI, the picture we will see in China is likely to be more complicated in the near future than it is today. Because gains in one region may also result in losses in another, many local authorities have been particularly concerned about the unemployment and labour displacement problems created by the closure of pirate and counterfeit factories (Yu, 2006, p954). While the costs of adjustment to job losses and labour displacement are often limited, due to the fact that 'copying is typically done in footloose firms with limited capital requirements . . . [and] that former unauthorized factories are [often] licensed to produce by copyright holders because of their expertise' (Maskus, Dougherty and Mertha, 2005, p305), some regions will certainly suffer more job losses and unemployment than others, due to a lack of skilled labour, education, technological infrastructure, and training facilities (Maskus, 1998, p112). The closures induced by intellectual property reforms therefore may sometimes shift production out of a region or a locality. If problems are likely to linger for a significant period of time, rights holders are likely to encounter severe local resistance and lax enforcement. The divergent protection may even lead to 'interregional disputes over intellectual property infringement and enforcement' (Maskus, Dougherty and Mertha, 2005, p298).

Sectoral Disparities

While regional disparities have greatly affected the analysis of intellectual property protection in China, the country has also experienced divergent sectoral developments that present challenges commonly found in emerging, transition, or less developed economies. Because industries develop at varied paces and not all industrial sectors can simultaneously benefit from strong intellectual property protection, these countries are unlikely to have a coherent national intellectual property policy. Instead, the positions taken by national governments often vary depending on the impact of the proposed protection on their fast-growing industries.

For example, based on its existing developments, China is likely to prefer stronger protection of intellectual property rights in entertainment, software, semiconductors, and selected areas of biotechnology to increased protection in areas concerning pharmaceuticals, chemicals, fertilizers, seeds, and foodstuffs. This rather ‘schizophrenic’ position is understandable because China has fast-growing movie, software, semiconductor, and biotechnology industries. These industries are likely to obtain greater benefits if intellectual property protection is strengthened. Even when policy makers fail to recognize the need for stronger protection, they will provide the information needed to lobby for intellectual property reforms.

By contrast, in fields concerning pharmaceuticals, chemicals, fertilizers, seeds, and foodstuffs, China is unlikely to benefit from greater protection, due to its huge population, continued economic dependence on agriculture, the worries about public health issues, and concerns about the people’s overall well-being. Indeed, because stronger intellectual property protection in these areas is likely to drain the country’s limited economic resources, local leaders would hesitate to use their hard-earned political capital to introduce reforms that would provide benefits primarily for foreign rights holders and their export countries. The likelihood of success for the intellectual property reforms in these sectors is also greatly reduced by the increased frustration among the local people who would bear the costs of increased protection and by the development of organized efforts against increased protection.

Politics aside, it makes good economic sense for policy makers to develop intellectual property protection that is in line with the country’s economic development. For example, economists have shown that the ‘length of protection for a given product should be inversely related to the elasticity of demand and the social rate of discount, and positively related to R&D returns’ (Frischtak, 1993, p97). Edwin Mansfield also found that ‘[t]here is often little correlation between one industry’s evaluation of the strength or weakness of intellectual property rights protection in a particular country and another industry’s evaluation of the same country’ (Mansfield, 1994, p19). As he pointed out in his study for the World Bank, intellectual property protection played a major role in the chemical, pharmaceutical, machinery, and electrical equipment industries, but has only marginal significance for the transportation equipment, metal, and food industries (Ibid., p2). Likewise, Keith Maskus found that ‘[i]nvestment in lower-technology goods and services, such as textiles and apparel, electronic assembly, distribution, and hotels, depends less on the strength of IPRs and relatively more on input costs and market opportunities. Investors with a product or technology that is costly to imitate may also pay little attention to local IPRs in their decision making’ (Maskus, 1998, pp131–132).

In recent works, Dan Burk and Mark Lemley have shown how policy levers in patent law have allowed courts to take account of the different types of innovation in different industries (Burk and Lemley, 2003). As they noted, ‘there is no reason to assume that a unitary patent system will optimally encourage innovation in the wide range of diverse industries that it is expected to cover’ (Ibid., p1577). Likewise, Michael Carroll and Glynn Lunney each highlighted the problem of uniformity cost in intellectual property law (Carroll, 2006; Carroll, 2007; Lunney, 2004). As these commentators have recognized, the divergence of protection in different industrial sectors will allow a country to better tailor its intellectual property system to the needs of local industries. Such tailoring, in turn, would allow the country to take better advantage of its comparative and competitive advantages. After all, a country that has a strong pharmaceutical industry is more likely to benefit from an intellectual property system tailored to that industry’s needs than one that is designed to support a strong software industry.

In addition, the problems an industry faces vary according to the nature of its products. In China, for example, ‘copying rates vary considerably across types of goods, with business applications software experiencing the highest rates and entertainment software next . . . [and] music recordings and motion pictures hav[ing] lower copying rates’ (Maskus, Dougherty and Mertha, 2005, pp303–304). Thus, at least for China, there may be more urgent needs to strengthen the protection for business software applications than that for music recordings and motion pictures.

Under the TRIPs Agreement, countries are prohibited from offering discriminatory protection in the patent area. Article 27(1) states specifically that ‘patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced’. The TRIPs Agreement therefore prohibits countries from deciding whether they want to offer protection to the pharmaceutical industry without offering protection to the biotechnology industry. Put differently, countries cannot pick and choose; they have to offer protection to all industries as long as they remain members of the WTO.

Nevertheless, article 27 allows all members, including those with great sectoral disparities, to carefully tailor the country’s protection to local needs. Because the TRIPs Agreement covers only minimum standards of protection offered by each WTO member, it does not dictate the scope of protection beyond what the TRIPs Agreement requires. The Agreement also does not require countries to offer protection of equal scope and strength to all industries. As long as countries do not discriminate between national and foreign rights holders and between the different types of industries, countries are free to introduce legislation that provides additional protection to benefit local industries.

In fact, the preamble of the TRIPs Agreement recognizes ‘the special needs of the least-developed country Members in respect of maximum flexibility in the domestic implementation of laws and regulations in order to enable them to create a sound and viable technological base’. Article 8(1) of the agreement states that ‘Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement’. Moreover, as Professor Heald pointed out:

Nothing in the TRIPS Agreement prevents other countries from similarly favoring local creators of sub-patentable innovation by protecting their work. Although a developing country is unlikely to have numerous strong sectors in its economy, it may have some modest innovators worthy of special protection from competition. For example, if a country has a strong textile industry that occasionally improves its dyeing and weaving techniques, protection of new (but obvious) methods should tend to favor local firms, even if protection is not discriminatory on its face (Heald, 2003, p270).

For example, commentators have described the benefits of offering *sui generis* or utility model protection, which offers protection of limited duration to minor or incremental innovations that involve low levels of novelty (Commission on Intellectual Property Rights, 2003, p21; Maskus, 2000, p148; Maskus, Dougherty and Mertha, 2005, p299; Reichman, 1997, pp62–74).² ‘[S]tudies in Brazil and the Philippines suggested that effective systems of utility models can promote innovation. Another study demonstrated econometrically that Japan’s system of utility models and widespread licensing of new technologies contributed positively and significantly to its postwar rise in productivity’ (Maskus, 2007, p164).

In sum, if we are to fully understand the relationship between intellectual property protection and economic development, we need to pay attention to the different forms of intellectual property and the varying scope of each form of protection. It would be misleading to explore the impact of intellectual property protection as if all of these various forms of protection are based on identical models, offer protection of similar scope and characteristics, and incur similar social costs. With increasing *sui generis* protection for new subject matters and technologies, a clear understanding of the impact on each industrial sector becomes even more important.

Moreover, in China, the protection for different forms of intellectual property varies according to the *xitǒng*, or functional bureaucratic system, that governs each form of protection. As a result, the philosophies behind such protection and the support it receives from related industrial sectors may affect the level of protection in a particular area. As Andrew Mertha pointed out in his book, *The Politics of Piracy*, a better understanding of the different *xitǒng* will enable one to understand better the effectiveness of the protection involved, and the potential resistance confronting the push for greater protection in the area (Mertha, 2005, p15). In fact, because of the different degree of effectiveness of each form of protection, rights holders and their attorneys often have to plan which form of protection they want to use to protect intellectual assets. As Keith Maskus, Sean Dougherty, and Andrew Mertha recounted:

One person involved in enforcement claimed that although 90 percent of his investigations involve trademark allegations and 10 percent involve patents, up to 60 percent of these cases could be patent violations. However, enforcement is easier if the case is pursued as a trademark violation. One reason for this bias seems to be that, to date, Chinese authorities have been reluctant to entertain patent cases, evidently in the belief that patent infringement embodies technology transfer and helps meet national technology development goals (Maskus, Dougherty and Mertha, 2005, p310).

The differences inherent in each *xitong* may further affect the pace of reforms for each form of intellectual property. Out of the three dominant forms of intellectual property, trademarks present the least problems for legal reforms (Yu, 2006, p995). By contrast, copyrights encounter the greatest challenge because of their association with propaganda, thought work, and information control (Mertha, 2005, p140).³ Patents are somewhat in between, due to their considerable impact on technology transfer and the potential for slowing down the country's modernization efforts by draining foreign exchange reserves in the form of royalty and license fee payments (Yu, 2006, p995). As Professor Mertha explained, '[t]he copyright bureaucracy . . . is embedded within a *xitong* that concerns itself with cultural, ideological, and value-laden media and is therefore involved in a more politically sensitive environment, even if technical copyright issues themselves are no more or less "political" than those pertaining to patents or trademarks' (Mertha, 2005, pp133–134).

Thus, it is no surprise that trademarks have been protected even during the Cultural Revolution. When China reopened its market to foreign trade in the late 1970s, the trademark law was also the first to be (re)introduced. Meanwhile, the patent law was filled with compromises, while the copyright law was the last to be enacted. Had there not been continuous pressure from the US government and the intention to rebuild international ties after Tiananmen, China might not have introduced the new copyright law as early as in 1990.

In sum, like regional disparities, sectoral disparities greatly affect the analysis of the relationship between intellectual property protection and economic development. At times, sectoral disparities are the partial result of regional disparities. Taken together, regional and sectoral disparities not only affect the types of industry that are fast-growing in the region, but also the types of pirated and counterfeit products that will become available there. As one commentator suggested:

According to the China United Intellectual Property Protection Centre (CUIPPC), a private business that has been representing Western companies like Coca-Cola, Microsoft and Kodak in China since 1994, there are even regional centres of counterfeiting expertise: imagine Silicon Valley for fakes. So if you are manufacturing in Chaosan, in Guangdong Province, your specialty is likely to be electronics, cigarettes, pharmaceuticals or CDs. For car parts, it's more likely you'll be in Wenzhou City or the Pearl River Delta. In Yuxiao County, the expertise is in manufacturing fake cigarettes; in Jintan City, it's pesticides (Phillips, 2005, p59).

Inadequate Enabling Environment

With the expansion of intellectual property protection and the growing interdependence between different bodies of law, a focus on intellectual property laws and enforcement alone often does not fully account for the full extent of such protection. Instead, one may need to understand better the political, economic, and judicial environments that enable effective intellectual property enforcement—something I describe here as the enabling environment for effective intellectual property protection. This enabling environment is important, because it provides the key preconditions for successful intellectual property law reform, including a

consciousness of legal rights, respect for the rule of law, an effective and independent judiciary, and a well-functioning innovation and competition system.

So far, commentators have underscored the importance of these complementary factors. Edwin Mansfield noted that ‘one should recognize that a country’s system of intellectual property protection is inextricably bound up with its entire legal and social system and its attitudes toward private property; it involves much more than the passage of a patent or copyright law’ (Mansfield, 1994, p20). Robert Sherwood reminded us that ‘some things cannot be legislated’ (Sherwood, 2002). As he put it bluntly, ‘until judicial systems in developing and transition countries are upgraded, it will matter little what intellectual property laws and treaties provide’ (Ibid., p42). Paul Heald stated that ‘a rational strategy for developing countries must not only consider compliance options, but must also account for institutional competency—legislative, judicial, executive, and diplomatic—in order to make the most of available options’ (Heald, 2003, p252). As Maskus, Dougherty, and Mertha summarized in the Chinese context:

Upgrading protection for IPRs alone is a necessary but not sufficient condition for th[e] purpose [of maximizing the competitive gains from additional innovation and technology acquisition over time, with particular emphasis on raising innovative activity by domestic entrepreneurs and enterprises]. Rather, the system needs to be strengthened within a comprehensive and coherent set of policy initiatives that optimize the effectiveness of IPRs. Among such initiatives are further structural reform of enterprises, trade and investment liberalization, promotion of financial and innovation systems to commercialize new technologies, expansion of educational opportunities to build human capital for absorbing and developing technology, and specification of rules for maintaining effective competition in Chinese markets (Maskus, Dougherty and Mertha, 2005, p297).

As they noted, the effectiveness of intellectual property protection in expanding economic growth and promoting technology development not only depend heavily on economic circumstances and the existence of a sufficiently developed technological base and infrastructure, but also on such complementary factors as ‘further structural reform to increase entrepreneurship and flexibility of enterprises; expanded liberalization of restrictions on trade, investment, and technology agreements; and additional steps to ensure competition in domestic markets among firms and across regions’ (Ibid., p307).

In China, the oft-cited barriers to intellectual property reforms include ‘the difficulties in monitoring a large territory, in collecting evidence of infringement, and in collecting judgments, widespread corruption, abuse by government officials, different values placed on intellectual property infringement, the indistinguishability between public and private entities, local protectionism, and the decentralization of government’ (Yu, 2000, pp230–231). Ironically yet crucially, none of these barriers is directly covered by the TRIPs Agreement or by the many international intellectual property treaties China has ratified.

As I pointed out elsewhere, one of the major defects of the United States’s WTO complaint against China over its lack of enforcement of intellectual property rights is the inability by the United States to show that China’s enforcement in the intellectual property area is worse than its enforcement in other areas (Yu, 2006, p935). Article 41(5) of the TRIPs

Agreement stated specifically that a WTO member state is not required to devote more resources to intellectual property enforcement than to other areas of law enforcement. If China were able to show that their enforcement problems with piracy and counterfeiting were no more excessive than their problems with, say, tax collection (which are very serious), China would be likely to prevail.⁴ After all, it is hard to imagine any country putting intellectual property protection ahead of tax collection. Nor does the WTO require it to do so.

Finally, it is important not to ignore the additional protection that is offered outside the intellectual property regime. To protect their intellectual assets, rights holders have increasingly relied on mass-market contracts, such as shrinkwrap or clickwrap licenses (Yu, 2007, pp91–94). They have also used alternative technological protection measures, such as encryption technology for protecting copyrighted works in digital media (Yu, 2006b), genetic use restriction technologies (GURTs) for protecting seeds (Swanson and Goeschl, 2005), and RFID (radio-frequency identification) tags and holographic labels for protecting against counterfeiting (Scafidi, 2007, p124). Whether this additional protection will help protect the important intellectual assets will ultimately depend on the additional legal protection in the contract area, or in related areas that govern the circumvention of technological protection measures.

In sum, one has to look beyond the intellectual property system to examine the various complementary factors that are needed to build an enabling environment for effective intellectual property protection. Although the addition of these factors will complicate the analysis and make it more difficult to clearly identify the determinants for economic development, such addition will also provide a more complete analysis that will assess intellectual property enforcement more accurately and realistically.

Micro-level, Quantitative Improvements

Bilateral intellectual property discussions are inevitably state-centred. As a result, documents emanating from these discussions tend to overemphasize developments at the macroscopic level, rather than the microscopic level. In February 2006, for example, the USTR completed a ‘top-to-bottom review’ of US–China trade relations (Office of the U.S. Trade Representative, 2006). Although the importance of undertaking this comprehensive study cannot be ignored, the top-down approach used in conducting the study is somewhat misguided.

First, studies that are conducted using the top-down approach often contain quantitative analyses that rely on the use of basic indicators as proxies for the effectiveness of the country’s intellectual property protection. For example, Section 301 submissions or similar reports are filled with information about which laws have been enacted, which new taskforces have been established, how many patents or trademarks have been applied or granted, how many intellectual property cases have been brought or tried, how cases have been disposed of, and how many criminal prosecutions the local authorities have pursued or completed. Likewise, reports supplied by the Chinese authorities are filled with similar, and often impressive, statistics as well as ‘war stories’ about the efforts these authorities have launched or completed to crack down on piracy and counterfeiting.

To be certain, proxy measures are sometimes needed, and basic indicators can be selected in a way that will tell not only ‘on the books’ stories, but also how written laws have been

translated into practice (Commission on Intellectual Property Rights, 2003, p21). In fact, these statistics may provide important and useful information about recent intellectual property reforms in China. Nevertheless, just like indices used for ranking intellectual property protection in empirical surveys, the basic indicators are unlikely to ‘fully capture the complexities and multiple dimensions of modern IPR systems’ (Primo Braga and Fink, 1998, p180). An overemphasis on quantitative analysis therefore will lead researchers to overlook the important developments that can be revealed only through qualitative or case-by-case analyses.

Indeed, as seasoned China observers have pointed out, many of the most interesting developments in China were not taking place at the macroscopic level, but rather at the microscopic level. For example, commentators have suggested how village and township elections have provided hope for China’s democratic reforms (Horsley, 2003), while the proliferation of bulletin boards, chatrooms, and web logs has resulted in an expansion of free expression and political discourse in the country (Liebman and Wu, 2007). One might even remember David Sheff’s insightful observation in his book about the transformation of mass communication in China, in which the ringing mobile phone in the backroom of a Chinese restaurant belonged to a waiter, rather than the businesspeople inside (Sheff, 2002, p91). Had researchers focused solely on top-down developments or the statistics supplied by governments or industry groups, they would have missed these important developments.

Like other reforms in China, the most interesting developments in the intellectual property area are now taking place at the microscopic and qualitative levels. For example, many of today’s copyright- or patent-based piracy cases are no longer disputes about verbatim copies of protected goods, although such disputes still exist and piracy of music, movies, and computer software remains rampant in the country. Many of these cases also do not involve underground or fly-by-night operations, but rather legitimate businesses that either are ignorant of intellectual property laws or are testing the limits of the law (Yu, 2006, p977). This line of disputes include those concerning the unauthorized translation or adaptation of copyrighted works, or the infringing use of patented processes in the manufacture of competing finished products.

Moreover, although many of today’s intellectual property disputes may sound like traditional piracy stories, they have more complex storylines. Elsewhere, I have discussed how the recent invalidation of Pfizer’s patent on Viagra by the State Intellectual Property Office, which was subsequently overturned by a Chinese court, has shown a promising development in which local pharmaceutical manufacturers took the legal route to challenge the patent owned by a major foreign company. In the past, local manufacturers were likely to ignore the law and rely on counterfeits to compete (Ibid., p986).

Similarly, the celebrated dispute between General Motors and Chery Automobile Company, in which General Motors claimed that the Shanghai-based carmaker copied its Chevy Spark in designing the Chery QQ, was far from a typical intellectual property dispute. That dispute included complicated legal issues raised by the territorial nature of intellectual property rights, General Motors’s lack of patents in China, and the complexity created by General Motors’s acquisition of Korea-based Daewoo Motor (Ibid., p950). Had the dispute been a simple infringement case, one has to wonder why it eventually took three years and required the ‘assistance’ of the Chinese government to reach an out-of-court settlement to end the dispute.⁵

In addition to the nature of the disputes, one can explore whether and to what extent the consciousness of intellectual property rights has grown among the Chinese populace. One of the more promising copyright-related developments is the growth of private collective copyright administration bodies. The first of these bodies, the Music Copyright Society of China, was established on 17 December 1992. Today, it represents more than 2,500 ‘local stakeholders’, including Chinese singers, composers, music adaptors, heirs, music publishers and recording companies of Chinese nationality (Sun, 2004, p63). Meanwhile, a few other collective bodies have been established since 2000 (Ibid.). With the recognition of these private administration bodies in the recently revised copyright law, their number is likely to grow substantially.⁶ In fact, one commentator has recently suggested the possibility of the institution of a private levy system in light of the country’s changing conditions (Priest, 2006).

Finally, it is important to analyse the impact of changes in the intellectual property system on consumers, in both tangible and intangible forms. Are consumers getting products of better quality and higher reliability? Are they getting products that are more suitable or desirable? Do they have more confidence in shopping in the open market? Do they have more product choices? Do they respect others’ legal rights more than they used to? To some extent, finding the answers to some of these questions is just as difficult as examining whether Mark Twain was right that stronger copyright protection in nineteenth-century United States would have prevented young Americans from being polluted by foreign novels that ‘fill[ed] the imagination with an unhealthy fascination with foreign life, with its dukes and earls and kings, its fuss and feathers, its graceful immoralities, its sugar-coated injustices and oppressions’.⁷ Nevertheless, a better account of the many intangible improvements in intellectual property protection is likely to enhance the quality of the overall economic analysis.

In the near future, the type of intellectual property infringement in China is likely to be as important as the amount and frequency of the infringement. Thus, the use of the top-down approach and the reliance on basic indicators are likely to be of limited use. Instead of questioning how often infringement takes place, one also has to examine what type of infringement has occurred. Because policy compromises are needed to respond to regional and sectoral variations within the country, region-based, sector-specific, micro-level, qualitative analyses are likely to be more illuminating than those focusing on nationwide, cross-sector, macro-level, quantitative developments. In fact, if researchers continue to use a top-down, nation-based approach, they will not be able to fully account for the progress China has made in recent intellectual property reforms.

Conclusion

Today, piracy and counterfeiting problems remain widespread in China, and foreign rights holders continue to be frustrated by the lack of enforcement of intellectual property rights. However, at some point in the near future, China may reach a crossover point at which it will find it in its self-interest to offer stronger intellectual property protection. Indeed, similar transformations occurred in Japan in the 1970s, in Hong Kong, Singapore, South Korea and Taiwan in the 1980s, and even in Germany and the United States many decades ago.⁸ It is only a matter of time before China joins its more developed neighbors in championing the cause for stronger intellectual property protection. Whether policy makers can push for reforms that help

accelerate this beneficial transformation process will depend on their understanding of China's *guóqíng* and their ability to design intellectual property reforms accordingly.

Notes

1. For discussions of the United States's potential WTO complaint against China concerning a lack of general enforcement of intellectual property rights, see Yu, 2005; Yu, 2006, pp923–946.
2. For a recent study of utility models, see Suthersanen, 2006.
3. For a discussion of the Chinese censorship and information control policy, see Yu, 2001, pp28–32.
4. For discussions of China's tax collection problems, see Chan, 2003, p103; Jackson, 2003, p27; Yang, 1995.
5. As reported, 'GM and Chery extended their appreciation to Chinese government for helping to resolve the dispute' (China IP Express, 2005). Although Chery agreed not to use the 'Chery' trademark in the United States, which is likely to be confusingly similar to General Motors' 'Chevy' trademark, Malcolm Bricklin, Chery's American partner, claimed that 'Chery [was] not required to pay any compensation to GM under the settlement agreement . . . [and that] the agreement clears the way for a smoother introduction of the newly designed, Chinese-made, vehicles into the United States, starting in 2007'.
6. Article 8 of the revised copyright law provides that copyright holders 'may authorize an organization for collective administration of copyright to exercise the copyright or any copyright-related right'.
7. As Mark Twain wrote in *Century Magazine* in 1886:

The statistics of any public library will show that of every hundred books read by our people, about seventy are novels—and nine-tenths of them foreign ones. They fill the imagination with an unhealthy fascination with foreign life, with its dukes and earls and kings, its fuss and feathers, its graceful immoralities, its sugar-coated injustices and oppressions; and this fascination breeds a more or less pronounced dissatisfaction with our country and form of government, and contempt for our republican commonplaces and simplicities; it also breeds a longing for something 'better' which presently crops out in the diseased shams and imitations of the ideal foreign spectacle: Hence the 'dude' (Vaidhyanathan, 2001, p61).
8. As one commentator noted:

From the start of the industrial revolution, every country that became economically great began by copying: the Germans copied the British; the Americans copied the British and the Germans, and the Japanese copied everybody. The thrust of the TRIPS Agreement is to ensure that this process of growth by copying and learning by doing will never happen again (Kingston, 2005, p658).

Similarly, Assafa Endeshaw noted that '[h]istorically, each of the advanced countries today was determined to industrialize first before . . . "opening up" to forces and interests that they might

previously have dreaded and before calling for a stronger international IP system' (Assafa, 1996, p120).

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