
Pak K. Lee and Lai-Ha Chan

In the wake of China’s rapid ascendancy, are there any new rules made by the country in global health governance? This article examines China’s emerging role in the Agreement on Trade Related Aspects of Intellectual Property Rights and finds that China adopts a pro-status quo stance on patented medicines. Aspiring to develop its own pharmaceutical sector to be capable to produce patented medicines on a par with the West, it has little appetite for using the prevailing rules or making new rules that are to the liking of the developing world. Undoubtedly, China is a new player in global health governance but has yet to have agenda-setting intent and capacity. This article argues that China’s behavior and preferences can be explained by its dualistic national identities, the dominant position of realism in both the study of international relations and policy circles, and an underdevelopment of epistemic community in global health governance in the country. Keywords: China, global health governance, TRIPS agreement, national identity, realism.

Does China’s rise inevitably lead to systemic changes in global governance? With a global shift in the balance of power toward the Global South in the wake of China’s rapid ascendancy, one may ask if there are new rules in global health governance. In discussing the role of great powers in global health governance, which he calls post-Westphalian public health, David Fidler argues that on the one hand “the . . . global health governance mechanisms in the SARS [severe acute respiratory syndrome] outbreak provides evidence that the great powers’ influence in post-Westphalian public health is diminished,” while on the other “the context of post-Westphalian public health heightens the importance of the great powers in new ways.” He refers to the fact that, although the Westphalian regime initially built by European powers has fallen apart in the wake of the outbreak of SARS in 2002–2003, a new post-Westphalian regime must be created by the great powers because only they have the required material resources to do so. This claim is given empirical support by the historical development of global health governance. A multilateral public health regime began to take shape in the mid–nineteenth century well before the emergence of the notion of global health governance in scholarly and policymaking circles in the 1990s. The driving force behind
this multilateralism was a handful of major powers in Europe, which took
great pains to stem the spread of contagious diseases from the less developed
Asian, African, and Latin American countries while protecting their own
trade interests. Not surprisingly, the developing world was excluded from
the rule-making process and institutions. Whereas “great powers” were
referred to as the European states and the United States from the mid–nine-
teenth century to the end of the twentieth century, what is meant by “great
powers” in the early twenty-first century?

While it is now common knowledge that China has emerged as a rapidly
growing power on the world stage, China may not be a pro–status quo power
in its participation in global governance since it is often of the view that the
current rules of international institution are systematically weighted against
the interests of the developing world, with the more powerful states imposing
their favored liberal rules on the weak. This seems to confirm a received
wisdom nicely summarized as: “When rising powers join the world system,
they want to remake rules that they did not shape and that they do not see as
serving their interests.” It is therefore interesting and pertinent to ask
whether this emerging power will counteract the established powers in
Europe and North America in the governance of global public health. In this
article, we focus on China’s policies toward the Agreement on Trade Related
Aspects of Intellectual Property Rights (TRIPS agreement), which involves
the members of the World Trade Organization (WTO) and the World Health
Organization (WHO), and aim to account for China’s incentive or disincentive
to forge a new global health regime.

Contrary to conventional wisdom that holds that China, as a rapidly
developing non-Western great power, would likely reshape the making and
implementation of the principles, norms, and rules in the international institu-
tions, we find that by and large China has stayed on the periphery of global
health governance as far as the TRIPS agreement is concerned. It neither
makes use of the flexibilities accorded by the agreement to produce more
affordable medicines for impoverished patients in the developing world nor
takes steps to put forward systemic changes in the agreement in favor of
developing countries. This puzzle drives us to examine closely how China
develops its preferences for the global health regime and how it pursues them.

We first provide a succinct description of the controversial issues of the
TRIPS agreement with regard to public health, followed by China’s responses
to them. Drawing on mainstream international relations perspectives and
adopting an analytic eclectic approach, we then analyze and explain China’s
roles in and preferences for the global health regime. We postulate an argu-
ment that China’s behavior and preferences can be explained by its dualistic
national identities, the dominant position of realpolitik thought in the coun-
try, and a lack of an epistemic community in health governance. Finally, we
use this framework to illustrate China’s agenda in public health and its impli-
cations for global health governance.
The TRIPS Agreement, the Doha Declaration, and Public Health

One of the international public laws that has direct impacts on global public health is the TRIPS agreement under the WTO. In order to ensure that private corporations, mostly from developed countries, have the incentive to invest in research and development (R&D) of new products, the TRIPS agreement sets down the minimum standards for many forms of intellectual property regulations (patent protection) that would eventually apply to all WTO members. However, this patent protection has sparked debates between developed and developing countries (as well as their respective nonstate supporters) on the costs and benefits of intellectual property rights (IPR) to public health.

Under the TRIPS agreement, the pharmaceutical industry has the right to a twenty-year monopoly on its inventions. No one can register a generic product without the patent holder’s agreement during the life of the patent. Although the TRIPS agreement itself allows developing countries to override drug patents by issuing “compulsory licences” to manufacture generic antiretrovirals (ARVs) under Article 31(f), generic drugs produced under a compulsory license “shall be authorized predominantly for the supply of the domestic market of the Member authorizing such use” (emphasis added). In other words, the compulsory licensing provisions would be of little help to most developing countries that do not have sufficient manufacturing capacity to produce ARVs domestically. This outstanding issue could not be resolved in the WTO ministerial conferences in Seattle (1999) and in Doha (2001) and was only noted in Paragraph 6 of the Doha declaration. It was eventually addressed in August 2003 in an interim WTO TRIPS Council decision after a shift in US policy. The interim decision, a waiver to set aside Article 31(f) but not a deletion, was eventually made permanent in an amendment to the TRIPS agreement in December 2005. However, the amendment has yet to take effect, pending ratification by two-thirds of WTO members.

Nevertheless, since its setup in August 2003, the so-called Paragraph 6 system has been successfully used only once for less developed countries, when Rwanda imported generic HIV/AIDS medications from Apotex, a Canadian generic pharmaceutical company. The extremely rare use of compulsory license has spurred another debate on whether the current global patent rules are compatible with public health. During the TRIPS Council meeting on 1 March 2011 members, largely from the developing world, claimed that the Paragraph 6 system was “almost unusable because of complex procedural requirements.” According to Apotex, the procedures taken to manufacture and export the generic medicine “are simply too difficult and complicated” and it “will not use [them] again.”

In addition, the TRIPS agreement is often blamed by developing countries as well as civil society organizations for making the prices of essential medicines prohibitively high and, as a result, preventing the poor from gaining access to life-prolonging or life-sustaining medications and treatment.
They argue that the patent protection under the TRIPS agreement favors and protects the interests of big pharmaceutical companies at the expense of the protection of human rights. The international outcry on the high cost of HIV antiretroviral medications has drawn growing attention to the importance of access to essential drugs and medications, which has been regarded as part of human rights in health by the WHO. While the TRIPS Council has been revisiting the Paragraph 6 system since October 2010, patents on medicines and IPR remain an unresolved issue driving developed and developing countries apart. More seriously, beyond the WTO framework, the United States and European developed countries have tried to tighten its grip on the global IPR regime and patent laws by pushing forward TRIPS-plus provisions in bilateral and regional free trade agreements that would undermine the flexibilities accorded by the Doha declaration. Given those constraints, a seemingly viable option is to pursue South-South cooperation whereby moderately developed countries with fairly developed pharmaceutical sectors enter into joint ventures with the least developed countries to produce generic drugs locally. On request from Kampala, a $38 million joint venture between India’s Cipla and Uganda’s Quality Chemicals Ltd. was set up in 2007 to produce ARVs in the African country. This venture is hailed as opening up whole new vistas for global health governance. Following on from the India-Uganda model of cooperation, Mozambique is in partnership with Brazil to build a plant to manufacture generic drugs for HIV/AIDS and other diseases.

A key aspect of our study was determining whether China—a relatively new member of the WTO, an emerging power from the South with sufficient manufacturing capability, and a self-proclaimed “responsible developing great power” that is willing to fight for the good cause of developing countries and champions for South-South cooperation—has made any effort to press for a structural reform of the global health regime, or utilize the existing TRIPS flexibilities, or promote South-South cooperation to produce affordable medicines for the least developed countries.

China’s Response to TRIPS
To what extent then has China been using the prevailing rules or making new rules that favor the developing world and contribute to an increased availability of essential medicines for the poor? In this section, we focus on China’s response to compulsory licensing under the Doha declaration and its subsequent changes in 2003 and 2005.

Initiating a Structural Reform Within the WTO?
China joined the WTO in December 2001, a month after the Doha declaration was endorsed. According to Rong Min, China’s representative to the WTO,
China actively participated in all of the negotiation meetings from the beginning of 2002 to 30 August 2003 that eventually led to the adoption of the Decision on Implementation of Paragraph 6 of the Doha Declaration.\(^\text{19}\) In its first major speech after becoming a WTO member, China declared rhetorically that it would serve as a “bridge” between developed and developing countries.\(^\text{20}\) During the negotiations of a post-TRIPS agreement, China allied with developing countries to propose a revision of Article 31(f) to the effect that the WTO should provide more space for these countries to formulate their own public health policy.\(^\text{21}\) Rong even criticizes the Doha declaration for looking like a breakthrough in compulsory licensing but in fact only reflecting an imbalance between rights and obligations for developing members, and states that this imbalance is almost impossible to correct in reality.\(^\text{22}\) This line of argument is often reiterated by other high-ranking Chinese government officials.\(^\text{23}\) Chinese scholars also echo that developing countries have never received any benefit from the post-TRIPS accords.\(^\text{24}\)

On the surface, China is steadfastly opposed to the Western-dominated intellectual property regime. However, its rhetoric differs from its actual policy regarding generic pharmaceutical drugs. While China lends verbal support to developing countries during the post-TRIPS negotiations within the WTO, it does not, however, play a leadership role in transforming or revising the agreement. A detailed study shows that between 1995 and 2007, developing countries made a total of forty-six TRIPS-related submissions about public health to the WTO, of which eleven were from the African Group, eleven from Asia, and the remaining twenty-four from Latin America and the Caribbean. The eleven Asian submissions were from India (three), Indonesia (three), Pakistan (three), and the Philippines (two), indicating that China was not active in the TRIPS revision and global intellectual property reform.\(^\text{25}\) Other studies also point to the same conclusion that Brazil, India, and the African Group—rather than China—played significant roles in the post-TRIPS negotiations.\(^\text{26}\) Furthermore, China did not accept the aforementioned 2005 amendment (i.e., a waiver to set aside Article 31(f)) until November 2007, almost two years after the approval of the change, whereas the United States and Switzerland swiftly ratified it in December 2005 and September 2006, respectively.\(^\text{27}\) China continued this passive posture until the United States, the European Union, Japan, and other developed countries pushed for a strengthening of the enforcement of TRIPS standards by drafting an Anti-Counterfeiting Trade Agreement (ACTA) outside both the WTO and the UN. ACTA is a plurilateral agreement, an agreement between a limited number of like-minded states, and China is excluded from it. Although ACTA principally aims at “combating global proliferation of commercial-scale counterfeiting and piracy,” according to the Office of the US Trade Representative,\(^\text{28}\) it also involves the controversial seizures by an ACTA member of generic drugs in transit between the country of origin and the country of destination and therefore is a matter of
concern for many developing countries. There were high-profile seizures of consignments of Indian-made generic medicines for other developing countries by Dutch, French, and German authorities from 2008 to 2009.

Two months after a draft text of the agreement was publicly released in April 2010, China presented a statement to the TRIPS Council, criticizing both the TRIPS-plus enforcement trend and the “mysterious” ACTA. In particular the statement urges “the IP [intellectual property] chapter or provisions of any RTA [regional trade agreement], FTA [free-trade agreement] and regional IP Agreement to which a WTO Member is a party, shall not be inconsistent with the TRIPS Agreement” and “the enforcements of IPRs by a member in any bilateral, multilateral or regional trade agreement shall not create distortions and impediments to legitimate international trade.” China’s scholars bluntly claim that the design of ACTA is directly aimed at developing countries, and that China is one of the major unnamed targets. Although Chinese generic medicines were also held up by the Dutch customs authorities, there are few signs that China has taken any further action to file a complaint or attempt to challenge TRIPS-plus standards, apart from presenting the aforementioned statement to the TRIPS Council. Compared with India and Brazil, one may wonder whether China’s initial response to ACTA was only rhetoric. China is likely annoyed more by the exclusive approach to ACTA adopted by the United States, which did not treat China as an equal partner, than the seizure of in-transit generic drugs and is concerned more about its exports of intellectual property-intensive goods than the seizure.

*Producing Generic Drugs Under the TRIPS Framework?*

Domestically, since its membership negotiations with the General Agreement on Tariffs and Trade (GATT) and the WTO, China has made amendments to its national patent law to incorporate TRIPS flexibilities into the legislation. The first amendment was made in 1992, which removed the statement of “not allowing compulsory license” from the original Article 52. The second amendment was made in 2000 to the effect that government or individuals can apply for compulsory licensing to eliminate or minimize the negative effects caused by a monopoly on patent. After the Paragraph 6 system was approved by the WTO, China’s State Intellectual Property Office (SIPO) promulgated “The Measures to Implement Compulsory Licensing” in 2003 and “The Measures to Implement Compulsory License Related to Public Health Rights” in 2005 and put it into effect on 1 January 2006. The third amendment of the national patent law, made in 2008, primarily serves to fine-tune the country’s patent regulations. Under the new law, the country allows local pharmaceutical firms to manufacture low-cost generic versions of ARVs without the consent of patent holders. In March 2012, by integrating the 2003 and 2005 measures, the SIPO issued a revised version of “The Measures to Implement Compulsory Licensing” which came into effect on 1 May 2012.
With this amended patent law, China can legally use compulsory licensing for local production and export of generic drugs. However, China has neither employed any compulsory licensing nor produced and exported generic ARVs to developing countries. In contrast, Brazil and Thailand are more active in using compulsory licensing. In discussing whether or not China should follow these countries to allow compulsory licensing and parallel importation of patented medicines, Chinese scholars indicate that the cases of Brazil and Thailand could provide enlightenments for China to consider. However, they do not elaborate on how China can utilize the compulsory licensing domestically. On the other hand, other scholars argue that, while both IPR and public health rights are essential, China’s health situation is not a desperate crisis so that it has to use compulsory licensing. Rather, the government may consider using other means to increase domestic access to essential drugs. In fact, it is claimed that China’s revisions of its patent laws in 2012 were aimed at acquiring cheaper ARVs for its HIV/AIDS carriers at home. China announced the revised version of “The Measures to Implement Compulsory Licensing” not long after Gilead Sciences, a US pharmaceutical firm producing Viread (also known as Tenofovir by its generic name) which is recommended by the WHO as part of a first-line cocktail AIDS treatment, signed an agreement in July 2011 with generic drug makers from four countries, China excluded, to share its patent rights. Nevertheless, after China promulgated the new measure, Gilead offered concessions, including donating a substantial amount of Tenofovir to China if the Chinese government continued to buy the same amount.

In sum, China neither has a strong incentive to forge a structural reform within the WTO nor to utilize the compulsory licensing under the Doha declaration to make generic drugs more accessible for developing countries. A puzzle facing us is why China does not utilize the mechanisms available to it to produce more essential medicines, despite the fact that it has sufficient manufacturing capacity in the sector, and its domestic legal framework allows it to do so. In the following section, we explain China’s behavior and its preferences toward the global health governance issue.

Making Sense of China’s Preferences
Why does China not avail itself of the public health safeguards accorded by the TRIPS agreement and the Paragraph 6 system to produce and export its own cheaper generic medicines to help sub-Saharan African countries and people in the throes of public health crises? From both our literature review and field research, we find that the issue is too complex for any single theoretical approach to explain fully. Echoing Peter Katzenstein and his collaborators, we adopt an analytic eclectic approach that incorporates useful insights of different mainstream theories (i.e., neorealism, neoliberal institu-
tionalism, and social constructivism) to account for why China pursues its preferences as it is observed. We postulate our arguments that the causal forces of national identity, realist conception of national interests in terms of material capabilities, and epistemic communities operate in tandem in shaping China’s policymaking.

**China’s Sui Generis Dualistic National Identities**

Often based on social comparison as well as a division between us and them, identity informs people who they are and what they should do in a given environment. If European encounters with the East in the nineteenth century bred a multilateral health regime out of the Western apprehension about Asiatic diseases, China’s national identity was dramatically transformed by its interactions and confrontation with the West since the late 1830s. Many Chinese historians take the Opium War of 1839–1842 as the starting point of modern China. Before that, China believed that it was the “Central Kingdom” at the center of the world, surrounded and respected by less civilized tributary states or kingdoms, which periodically paid tribute to Chinese emperors as sons of heaven. The wars with European and Japanese powers and the defeats in the nineteenth century drastically transformed the long-standing identity of China as a great power into one as a backward country, humiliated by the West in a series of unequal treaties. China’s subsequent modernization efforts as well as the post-Mao reforms have all been aimed at reconstructing the old identity, restoring the glorious past and China’s rightful place in the world. So on the one hand today’s China has to concede that it is still a developing country, but on the other it desires to reclaim its place as a developed one. With a self-belief that it is a victimized or aggrieved power, China is eager to be recognized by the more advanced countries as a respected and full member of the club of great powers on equal footing, regardless of divergent political values and practices. While it seeks support from, and lends a hand to, the developing world in facing accusations of brutal human rights violations by the West and defending their common interests in multilateral negotiations, China neither identifies itself positively with the developing world nor views its current status favorably. China aspires to move into the established powers, a positively valued group of states, forming an in-group with them. An inevitable consequence of this process is to treat other developing countries as members of the corresponding out-group. In the quest for its lost identity and in the rapid transition between a developing country and a more developed one, China lacks ontological security or a stable identity in its international relations.

Against this theoretical background, we may understand why China’s preferences regarding the TRIPS agreement do not necessarily tally with the interests of developing countries while it claims to be a member of the developing world. We assert that this is largely because China straddles the border...
between the developed and developing worlds. In terms of gross domestic product (GDP), China is now the second-largest economy of the world, only after the United States, and is now widely regarded as a rapidly rising power. However, by the measure of GDP per capita, China is only a lower-middle-income country, on a par with Algeria, Turkmenistan, and Ecuador. Sometimes its behavior and preferences are similar to the more industrialized countries, but sometimes China has common interests with developing ones. To compound the problem, it is in a process of proactively shedding its previous negative image as a weak and backward developing country as soon as it can. Key to the process is to achieve rapid economic development by leveraging external resources and markets. A case-by-case study is required to fathom its interests and explain the variations. The purposive content of China’s sui generis national identity as a reemerging power defines that its economic interests with regard to R&D are more in line with the industrial West than with the less industrialized countries.

*China’s Realist Understanding of Global Health Governance*

Our second observation is that China does not make rules in, and does not accord great significance to, global health governance. We posit that this is because of its realist understanding of global health governance. The struggle for regaining its lost identity as a great power, which has long been understood in terms of material capabilities of the state, produces and reproduces historically rooted realpolitik behavior. One may wonder if China behaves as a realist power. Conventional wisdom holds that due to the deeply ingrained influence of Confucianism, which advocated righteous and virtuous rule, harmony, and conflict management by nonviolent means, China was historically a benevolent power. However, this benign view of China has been subject to mounting challenges in the past two decades or so. According to Alastair Iain Johnston, in reality China subscribed to a realist approach to peace and security and its traditional strategic culture shared the basic tenets with the Western theory of realism; more importantly, Chinese realism was ideational in nature or a learned behavior. This realpolitik worldview has persisted beyond the collapse of imperial China into contemporary China after 1949. Externally China in the Cold War period was highly concerned about its survival in the face of security threats from the Soviet Union or the United States, especially when it was excluded from the United Nations. Maoist China was apt to use force against adversaries in foreign policy crises, especially those concerned with rivaling territorial claims. Regional multilateral institutions in the Asia Pacific played only a little role in maintaining regional peace and security. The Association of Southeast Asian Nations (ASEAN)—centered institutions did not flourish until after 1991. Bilateral great power politics continues to dominate regional international relations. All these factors combine to contribute to an uninterrupted development of a realpolitik
strategic and political culture on the part of China. Successive generations of Chinese leaders have since 1949 internalized the primacy of self-help under international anarchy and put the pursuit of national security, national salvation, and prosperity at the top of the policy agenda, with building “a rich state and a strong army” or more recently increasing the “comprehensive national strength” (zonghe guoli) as its primary development goals.\(^{55}\)

Two impacts in particular are noteworthy for the purpose of this study. First, not surprisingly, Chinese leaders have not attached much significance to the positive roles of international institutions and global governance. Accordingly, Chinese international relations scholars have been less exposed to the narratives of neoliberal institutionalism than to neorealist, statist views. We argue elsewhere that the notion of global governance did not enter Chinese academic discourse until the early twenty-first century, more or less a decade behind the West.\(^{56}\) An overwhelming majority of Chinese international relations articles are about China’s relations with great powers, notably the United States.\(^{57}\) The practice and the study of international relations influence each other through a self-reinforcing process. Second, this realpolitik ideology drives China to respond to calls for global governance and collective action in a realist, self-regarding way.

Unlike the Waltzian balance-of-power realism, this Chinese version of realism does not motivate the country to form military alliances with like-minded states to balance against the United States in the post–Cold War period. Paradoxically, this leads China to adopt a low-profile attitude toward global governance in general and global health governance in particular because China’s primary concern during US hegemony is no longer about security but status.\(^{58}\) China has gone to great pains to capitalize on the most benign external environment since the late 1830s to expedite economic growth and attain the great-power status by strengthening economic and commercial ties with, rather than confronting, the more advanced West.\(^{59}\) Priority is given to attracting foreign direct investment in various Chinese industries as well as maintaining unrestricted access to overseas markets.

Chinese realists, dubbed “China Firsters,”\(^{60}\) are concerned about the relative costs and gains of providing global public goods in global governance. In the words of Yan Xuetong of Tsinghua University, a key proponent of Chinese realism, asking China to take more responsibility for resolving global problems “is a trap to exhaust [its] limited resources.”\(^{61}\) Their voices are hardened by Deng Xiaoping’s famous admonitions of “hiding one’s capacities and biding one’s time” and “not seeking leadership” (taoguang yanghui; buyao dangtou).\(^{62}\) While eschewing confrontation with the United States, China has rejected the US proposal and notion of Group of 2 (G2) because China perceives it as no less than a US burden-sharing strategy whereby a declining United States calls on a rising China to take on greater global responsibilities in order to help maintain US hegemony.\(^{63}\)
In the area of global public health, China has been more involved in bilateral health diplomacy than in multilateral health governance. Since the early twenty-first century when China began to reengage the African continent, its commitment to improving Africa’s public health service has gained pace. Besides continuously sending medical practitioners and medical materials to African countries, it also promises to cooperate with them in the prevention and treatment of infectious diseases as well as building medical-related infrastructure. Nevertheless, its contribution to global health does not seem to measure up to its growing economic wealth and status. While China is now the world’s second-largest economy, its donations to the WHO are not generous at all. Between 2008 and 2009, its voluntary contribution to the WHO was a mere $4.23 million, less than 0.3 percent of the total contributions from all member states, far less than that of the United States or many members of the Group of 8 (G8) countries. It fell to $1.22 million in 2010, lagging far behind some medium and small powers such as Norway, Australia, the Netherlands, Spain, Sweden, and Luxembourg. In terms of the percentage of GDP, Luxembourg’s contribution in 2010 ($10.76 million) was 980 times that of China. China’s contributions to the Global Fund to Fight AIDS, Tuberculosis and Malaria, an international financing institution dedicated to prevent and treat the three infectious diseases, are not commensurate with its economic clout either. As of December 2012, the Global Fund had disbursed a total of $761.56 million to China whereas China had pledged to contribute only $28 million in the period 2003–2013, despite the fact that China holds the world’s largest foreign exchange reserves. This pattern of self-centered, low-profile behavior is also reflective in China’s limited membership in international organizations in comparison with other major and secondary powers in the developed and developing worlds and in various regions. Using selected countries’ membership in intergovernmental organizations as a benchmark, Table 1 shows the relatively low degree of China’s engagement with global governance and institutions. In short, China stays on the periphery of global governance.

On the one hand, China is fearful of being isolated from the international community and wants to earn acceptance as a great power on a par with the Western powers, but on the other it is not yet motivated by any desire to (re)shape the architecture of global governance. Seen in this light, the promotion of Margaret Chan as director of the WHO should be interpreted as a tactic to salvage its tarnished reputation and status in the wake of the SARS fiasco, portraying China as a force for good, rather than as part of China’s grand strategy of remoulding global health governance.

**Lack of a Chinese Epistemic Community in Health Governance**

As a corollary, the dominance of Chinese international studies by the realist school, which focuses more on great-power politics (especially Sino-US relations) than on international institutions and global governance, results in a
lack of capability to form an indigenous knowledge-based epistemic community, and engage the established global epistemic communities, about access to essential medicines as well as global health governance.67 In a globalizing world of growing complexity and uncertainties, networks of knowledge-based experts, according to international regime theory, can exert influence over four phases of policy process—namely, policy innovation, policy diffusion, policy selection, and policy persistence—by shaping political actors’ understanding of the issues and making them prone to choose one set of norms and rules over the others.68 The TRIPS agreement is an international law agreement with enormous implications for public health that are embedded in the operations of pertinent international organizations, including the WHO, the WTO, the World Intellectual Property Organization (WIPO), the Joint UN Programme on HIV/AIDS (UNAIDS), and the UN Development Programme (UNDP) as well as international nongovernmental organizations. Two expert groups in particular were influential in shaping the access norm, national policymaking, and international policy coordination. They were the UK Commission on Intellectual Property Rights (CIPR) and the WHO Commission on Intellectual Property Rights, Innovation and Public Health (CIPIH). In the CIPR there were six commissioners, of which two were from the developing world (Carlos M. Correa of Argentina and Ramesh Mashelkar of India), and the rest from the United States and the United Kingdom. The commission visited five major developing countries, including China, organized ten workshops and a conference (in February 2002), commissioned eleven study papers by specialists, and organized an online open forum inviting comments before delivering its final report in September 2002.69 Subse-

---

Table 1  China’s Participation in International Organizations Compared with Other Major Developed and Developing Countries (in descending order), 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Membership in Conventional Intergovernmental Organizations (types A–D)</th>
<th>Total Membership in Conventional International Nongovernmental Organizations (types A–D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>92</td>
<td>4,317</td>
</tr>
<tr>
<td>France</td>
<td>96</td>
<td>4,270</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>79</td>
<td>4,076</td>
</tr>
<tr>
<td>United States</td>
<td>67</td>
<td>3,279</td>
</tr>
<tr>
<td>Japan</td>
<td>64</td>
<td>2,625</td>
</tr>
<tr>
<td>Russia</td>
<td>75</td>
<td>2,366</td>
</tr>
<tr>
<td>Brazil</td>
<td>67</td>
<td>2,313</td>
</tr>
<tr>
<td>India</td>
<td>62</td>
<td>2,156</td>
</tr>
<tr>
<td>South Africa</td>
<td>56</td>
<td>1,931</td>
</tr>
<tr>
<td>China</td>
<td>53</td>
<td>1,814</td>
</tr>
</tbody>
</table>

sequently, the WHO set up in May 2003 the CIPIH, which in comparison with CIPR was focused more on the impact of intellectual property rules on innovation and access to medicines. Correa and Mashelkar continued to serve on the WHO commission alongside three experts from the developing world (Egypt, South Africa, and Thailand) and five from the industrialized West. Akin to CIPR, CIPIH engaged its target audience by commissioning twenty-one background papers by experts, holding workshops and one conference, accepting submissions from the public, and organizing an open forum. The two commissions concluded that the intellectual property regime does not make much contribution to stimulating pharmaceutical innovation that would meet the pressing health needs of developing countries. The reports of these expert groups set an evolution of a new norm that stresses both innovation and access (I+A) in motion.

Apart from serving on the international commissions, the epistemic community’s influence can also be shown in the rapidly growing research on global health governance in the West, much of it done by a community of international law or international relations scholars. One of the research foci is how informal norms of access to essential medicines and the right to health, which are not codified into formal international law, take root and shape and generate transnational social movements, political contestations between developed countries and firms and the developing world, and long-lasting policy effects in international trade and global health governance. In stark contrast, our research finds that there are only a handful of social science experts in China on the issues of the WHO, the WTO, and access to essential medicines, and Chinese literature on the issue areas is limited if not scant. Chinese experts were barely present in the activities of the CIPR and CIPIH. This lack of expertise in the relevant fields of global health governance has undermined Chinese policymakers’ grasp of the controversies surrounding the debates and norm changes about access to medicines as well as Chinese scholars’ ability to communicate and work in cooperation with a transnational epistemic community of global health governance. All in all, they hamper a diffusion of new ideas and norms into China, and policy coordination between China and other developing countries and stakeholding actors.

China’s Agenda: Incubating Its Nascent Pharmaceutical Industry

Can our conceptual framework help us understand China’s grand strategy regarding the public health sector and its wider implications for global health governance beyond compulsory licensing? Similar to other developing countries, China has been facing the pricing problem of patented HIV/AIDS medicines. It can produce only limited supplies of generic drugs locally, but they are less effective and with strong side effects. There have been calls for the
Chinese government to make use of compulsory licensing to increase the availability of generic versions of HIV/AIDS medicines for Chinese patients. In response, Wen Xikai, a SIPO official, was quoted as saying that “theoretically, China can declare that the country is in an emergency situation and imposes compulsory licensing to allow it to make generic drugs. But we have to take some economic factors into consideration. Imposing compulsory licensing reduces but does not eliminate cost. We should offer satisfactory compensation to the drug makers who own the patents.”

Chinese scholars also state that the country’s pharmaceutical industry is in the process of transition. Although China has legislated compulsory licensing to produce generic drugs in the event of a public health crisis, they argue it will be myopic if China focuses only on producing generic drugs. A long-term solution to any public health crisis must rely on the ability to develop new drugs.

Anonymous experts, cited by the China Daily, also echo that compulsory licensing would both “encourage [Chinese] pharmaceutical manufacturers to produce generic drugs rather than develop new ones” and “discourage pharmaceutical manufacturers in developed countries from developing new and more effective drugs.” In other words, stimulating R&D should be the first priority for China.

An examination of China’s investment in pharmaceutical R&D over the past decade reaffirms that China shares little immediate interests with many sub-Saharan African countries in the matter of patents. Due to rapid economic growth and a soaring domestic demand for Western medicines, China has successfully lured multinational pharmaceutical firms to establish partnerships and research centers in China. China has opened its doors to foreign investment and has made investment in R&D a high national priority. Some WTO and WHO officials in Geneva have argued that China wishes to maintain good relations with developed countries as well as major pharmaceutical companies from the West because Beijing intends to make patent or intellectual property work for the country’s economic development. While many developing countries have sought help from the WHO to address problems with intellectual property, China has never asked for assistance.

China’s twelfth Five-Year Plan (2011–2015) has designated seven strategic emerging industries (zhanluexing xinxing chanye) as the primary drivers for, and the backbone of, China’s future economic development. Beijing has set a goal of increasing the contributions of the seven strategic emerging industries to the national economy from 5 percent of GDP in 2010 to 8 percent by 2015, and 15 percent by 2020. Biotechnology is one of these key strategic emerging industries. The plan supports the development of innovative biotech products, high-end medical devices, and patented medicines. According to the consultancy firm APCO Worldwide, the central and local governments and private sector are expected to spend more than 14 trillion yuan ($2.16 trillion) in those five years. In line with this development strat-
egy, China’s National Development and Reform Commission amended in December 2011 its “Industry Catalogue for Foreign Investments” whereby foreign investments in pharmaceutical distribution business, covering both wholesale and retail, are removed from the “restricted” category and the manufacturing of novel vaccines is added to the “encouraged” category.\(^8\)

Beijing also has lofty ambitions for registering and protecting patents. In November 2010 the SIPO released a National Patent Development Strategy, in which China set the annual filings of 2 million domestic patents as its target for 2015. In 2012 the SIPO granted 1.26 million patents to domestic and overseas applicants after receiving 2.05 million applications from them.\(^8\) Accordingly, China’s patent cooperation treaty (PCT) applications to the WIPO have been growing rapidly, rising from 2,512 filings in 2005 to 16,406 filings in 2011. China’s share of the total PCT applications grew from 2 percent to 9 percent in the same period. In 2010, while the advanced countries, such as the United Kingdom and the Netherlands, reduced their total number of PCT filings, China had an astonishingly high growth rate of 33.4 percent (see Table 2). This high growth rate can be partly explained by the fact that China started from a low base: in 2005 it had the lowest number of filings among the countries under comparison, and partly because China is eager to catch up with the need to protect its commercial interests in competition with other innovation-intensive countries. China is now among the top five sources of international patent applications.\(^8\) It is anticipated that China will be a major force in producing patented products, including medicines, in the coming years.

### Table 2  Top Ten Patent Cooperation Treaty Applications by Country of Origin, 2005–2009

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>46,858</td>
<td>51,280</td>
<td>54,043</td>
<td>51,638</td>
<td>45,617</td>
<td>44,890</td>
<td>48,596</td>
<td>26.7</td>
<td>8.0</td>
</tr>
<tr>
<td>Japan</td>
<td>24,870</td>
<td>27,025</td>
<td>27,743</td>
<td>28,760</td>
<td>29,802</td>
<td>32,180</td>
<td>38,888</td>
<td>21.4</td>
<td>21.0</td>
</tr>
<tr>
<td>Germany</td>
<td>15,987</td>
<td>16,736</td>
<td>17,821</td>
<td>18,855</td>
<td>16,797</td>
<td>17,558</td>
<td>18,568</td>
<td>10.2</td>
<td>5.7</td>
</tr>
<tr>
<td>China</td>
<td>2,512</td>
<td>3,942</td>
<td>5,455</td>
<td>6,120</td>
<td>7,900</td>
<td>12,295</td>
<td>16,406</td>
<td>9.0</td>
<td>33.4</td>
</tr>
<tr>
<td>South Korea</td>
<td>4,689</td>
<td>5,945</td>
<td>7,064</td>
<td>7,899</td>
<td>8,035</td>
<td>9,668</td>
<td>10,447</td>
<td>5.7</td>
<td>8.0</td>
</tr>
<tr>
<td>France</td>
<td>5,756</td>
<td>6,256</td>
<td>6,560</td>
<td>7,072</td>
<td>7,237</td>
<td>7,288</td>
<td>7,664</td>
<td>4.2</td>
<td>5.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5,096</td>
<td>5,097</td>
<td>5,542</td>
<td>5,466</td>
<td>5,044</td>
<td>4,908</td>
<td>4,844</td>
<td>2.7</td>
<td>–1.0</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3,294</td>
<td>3,621</td>
<td>3,833</td>
<td>3,799</td>
<td>3,671</td>
<td>3,728</td>
<td>3,999</td>
<td>2.2</td>
<td>7.3</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4,504</td>
<td>4,553</td>
<td>4,433</td>
<td>4,363</td>
<td>4,462</td>
<td>4,078</td>
<td>3,494</td>
<td>1.9</td>
<td>–14.0</td>
</tr>
<tr>
<td>Sweden</td>
<td>2,887</td>
<td>3,336</td>
<td>3,655</td>
<td>4,137</td>
<td>3,567</td>
<td>3,314</td>
<td>3,466</td>
<td>1.9</td>
<td>4.6</td>
</tr>
</tbody>
</table>

In order to encourage innovation in the pharmaceutical industry, the protection of intellectual property on drugs is deemed essential; hence, China is careful not to utilize compulsory licensing for the production of generic drugs as it pleases. A typical case was that of Guangzhou Baiyunshan. When the Chinese pharmaceutical firm applied for a compulsory license in 2009 to produce a generic version of Tamiflu, the most promising treatment for avian influenza produced by the Swiss company Roche, its application was not approved. According to Chinese scholars on medicine and patent laws, Baiyunshan had a legal right, granted by Article 49 of the national patent law, to request a compulsory license, and the company had sufficient capability to manufacture the drug as it had effectively developed a generic product of Tamiflu, named Futai, in 2005. However, in discussing the net benefits of employing compulsory licensing, Chinese scholars tend to argue that the disadvantages outweigh the advantages due to the likelihood that China would face a backlash from international pharmaceutical firms. China cannot ignore the mounting pressure from patent holders and should consider the aftermath of issuing compulsory licenses for the long-term development of the country’s pharmaceutical industry. A Chinese scholar on global health governance argues that, while China should not be fearful of trade sanctions or retaliation from the West, its first priority seems to suggest that this mechanism should be reserved for curbing the most threatening infectious diseases inside the country; namely, hepatitis B and tuberculosis. Up to 120 million Chinese people have been infected with hepatitis B.

Owing to its rapidly growing R&D sector and the potential commercial benefits, China’s interests in patent protection align more with the industrialized West than with the developing world. It has little incentive to lend solid support to African countries on relaxing patent requirements under the TRIPS agreement. Unlike Brazil, Thailand, and those African countries with high HIV prevalence rates, China has largely complied with the intellectual property rules since its entry into the WTO in 2001, and has shown little sign that it has any intention of overturning the current patent regime on medicines. Likewise, there are few reports on China’s participation in South-South cooperation in generic drug manufacturing.

Echoing what has been claimed that “most industrialized countries adopted product patent protection systems once they had already reached a high degree of economic development,” China’s pharmaceutical industry, a relatively advanced industrial sector in more developed urban areas, is in favor of enhanced patent protection. The national agenda is to nourish its emerging pharmaceutical industry to develop its own patented medicines that are as good as the West’s to address its domestic pressing health issues. This is to be accomplished by making the industrial sector appealing to major producers in the more advanced West to invest in China. This policy can be understood as part of China’s self-regarding realpolitik strategy to pursue
wealth and power and to regain its past glory. The fluidity of national identity has a direct bearing on the positioning and preferences of the nascent pharmaceutical industry. It remains to be seen whether or not increased supplies of patented medicines by Chinese drug makers will indirectly lead to a corresponding enhanced access to essential medicines by the developing world. However, promoting greater availability of medicines for life-threatening pandemics such as HIV/AIDS in sub-Saharan Africa obviously is not high on China’s agenda. One cannot also rule out the possibility that, under the imperative to acquire wealth and to restore to global preeminence, Chinese-made patented medicines might be targeted at the lucrative market of the developed world.

Conclusion

Conventional wisdom has it that China would avail itself of the flexibilities accorded by the TRIPS agreement, the Doha declaration, and the Paragraph 6 system to increase the supply and availability of affordable HIV drugs for the benefit of the poor in the Global South. This is so because the rules were not made by China and they have not been seen as serving the interests of China as a developing country and a rising power. However, the reality is that China has been unwilling to do so. A simple answer to this puzzle is that the TRIPS agreement and its emphasis on intellectual property suit China’s primary interests in seeking long-term innovation-intensive economic modernization and regaining its lost status as a great power. As shown in this study of the country’s pharmaceutical industry, Chinese policymakers attach much significance to higher value-added industrial sectors and to attracting external investments in them. Apart from refuting the received wisdom, the contributions of this article are not only about how China pursues its material interests, but also about how it identifies and develops its interests.

By employing an analytic eclectic approach to explaining the puzzle, we first postulate that a key factor that influences China’s engagement with global health governance is its sui generis national identity. It straddles the developed and developing worlds. As a rapidly emerging power but having up to 30 percent of its population living in poverty, China’s external behavior and interests are not always in agreement with either the developed or the developing worlds. In order to attract foreign direct investment and to promote its own nascent higher value-added pharmaceutical industry, an engine of capital-intensive economic growth, China does not want to challenge the existing intellectual property regime. While supporting other developing countries rhetorically, it has been playing a low-profile role in the fight for transformative change in the global health regime, without taking a leadership role in the attempts by the South to revise the TRIPS agreement. Still in the throes of a struggle with ontological insecurity, China is primarily a sta-
tus-seeking and self-centered emerging power that remains essentially concerned about national rejuvenation to cleanse its inferior identity as an economically backward and militarily weak country. Of paramount importance to regaining its rightful great-power status is the leveraging of external resources for its own economic development during the time when its physical security is not in great jeopardy. Waving the flag of the developing world in managing global health affairs is a low priority for present-day China.

China’s craving for great-power status and identity adds force to the realist school of thought in both scholarly and policy circles inside the country. The Chinese isolationist view on global health governance can be attributable to the realist concern over the costs and benefits involved in managing global governance. The traumatic experience that many Chinese underwent in the “Century of Humiliation and Shame” has given rise to a stronger voice of statist realism than other schools of thought in China. Under the strong influence of a historically driven realpolitik ideology, China always conceives of great powers in terms of material capabilities, downplays the positive roles of international institutions and global governance in its quest for security and status, and now elects a low-profile and self-help path toward involving itself in global health governance. Harboring a view that China’s increased engagement with global governance is beyond its material capabilities and it would only fall in a trap set by the West for it, a sizable segment of the Chinese realist school argues for a modest degree of Chinese participation. Being able to keep its house, with more than 1.3 billion people, in good order is often considered by the Chinese as already a major contribution to global health governance.92

According to neoliberal institutional knowledge-based regime theory, the ascendancy of the norm about access to medicines is due partly to the growth of an epistemic community in global health governance in the West, which elucidates the politics, domestic and international, behind the TRIPS agreement and the succeeding developments, and helps to reframe the issue as a matter of human rights and galvanize the calls by civil society organizations for reforming the rules about patented medicines. We have found, however, that there is no Chinese counterpart of the global health epistemic community. The study of global health governance by Chinese social scientists is underdeveloped owing to the dominance of the realist school. This inhibits the diffusion of novel norms into China’s policymaking process as well as policy coordination between China and other major generic medicine-producing countries.

We began this article by asking if the rise of China will inevitably lead to structural changes in global governance. Our study suggests that this is not necessarily the case. As far as global health governance is concerned, China is a pro-status quo and reactive power. To reiterate our earlier caveat, a case-by-case study is required to fathom China’s changing identities and interests.
in other issue areas and explain the variations. An implication, however, is that despite the media hype about when China would overtake the United States as the world’s largest economy, the country has a long way to go before it can become a genuine great power that can make new rules for the rest of the world in global governance. 

Notes
Pak K. Lee is senior lecturer in Chinese politics and international relations in the School of Politics and International Relations at the University of Kent, United Kingdom. His recent major publications are China Engages Global Governance: A New World Order in the Making? (2012) and “China in Darfur: Humanitarian Rule-maker or Rule-taker?” Review of International Studies 38 (2012): 423–444 (both coauthored with Gerald Chan and Lai-Ha Chan).

Lai-Ha Chan is senior lecturer in the School of Communication, Faculty of Arts and Social Sciences at the University of Technology, Sydney, Australia. She is author of China Engages Global Health Governance: Responsible Stakeholder or System-Transformer? (2011) and coeditor of China at 60: Global-Local Interactions (2012).

The authors wish to acknowledge the generous financial support from the Centre on Global Health Security at Chatham House, London, which made possible their field research in Geneva, Beijing, and Shanghai. Special thanks go to David Heymann, head of the Centre on Global Health Security, and Kelley Lee. For their useful and constructive comments on earlier versions of this article, the authors are grateful to Gerald Chan, David P. Fidler, and the anonymous reviewers. The superb research assistance provided by Ming Tang is also gratefully acknowledged.

6. The Doha Declaration on the TRIPS Agreement and Public Health of 2001 was adopted by the WTO Doha ministerial meeting in November 2001.


12. The WHO defines “essential medicines” as “those that satisfy the priority health care needs of the population,” which “are intended to be available within the context of functioning health systems at all times in adequate amounts, in the appropriate dosage forms, with assured quality, and at a price the individual and the community can afford.” World Health Organization, “Essential Medicines,” n.d., www.who.int/medicines/services/essmedicines_def/en/index.html, accessed 15 February 2013.


17. SEATINI, CEHURD, and TARSC, “Overcoming Barriers to Medicines Production Through South-South Co-operation in Africa,” p. 3.

18. This paragraph draws on Chan, *China Engages Global Health Governance*, p. 114.

19. Rong Min, “Zhongguo zhuzhang: geiyu fazhanzhong chengyuan zugou de zhiding gonggong jiankang zhengce kongjian [China’s Propositions: Giving Develop-
ing Members Enough Space to Formulate Their Public Health Policy],” 


22. Rong Min, “Zhongguo zhuzhang.”

23. Chen Zhu, China’s then minister of health, said in a 2012 paper, “Developed countries should honor their international commitments as soon as possible and provide more support and assistance to developing countries in areas such as technology transfer and the promotion of drug accessibility and affordability.” The Chinese and English versions of Chen Zhu, “China’s Health Diplomacy: Sharing Experience and Expertise” (May 2012), are available at www.gov.cn/gzdt/2012-05/25/content_2145204.htm, accessed 30 November 2012.


25. Deere, \textit{The Implementation Game}, p. 121. Although Deere also says that China “became an active member after its accession” (p. 122), she provides no reference to the claim.


27. The major emerging economies apparently are not eager to approve the amendment. India approved it in March 2007, Mexico in May 2008, and Brazil in November 2008. South Africa has yet to accept it.


31. The draft text is available at the website of the Office of the United States Trade Representative at www.ustr.gov/webfm_send/1883, accessed 1 December 2012.


43. The eclectic approach is particularly suitable for dealing with policy-oriented research questions. With the aim of improving our understanding of substantive complex real-world issues while not claiming to provide a single “correct” answer, analytic eclecticism explores how various mechanisms and processes drawn from


46. The period between 1839, when the first Opium War broke out, and 1945, when the war against the Japanese came to an end, is commonly known in China as the “Century of Humiliation and Shame.”


49. The World Bank uses gross national income (GNI) to measure individual country’s economic size. In terms of the market exchange rate between the US dollar and the Chinese currency, China’s GNI per capita in 2010 was $4,270, ranked 121st. Using purchasing power parity rates, China’s GNI per capita in the same year was $7,640, ranked 120th. World Bank, *World Development Indicators 2012* (Washington, DC: World Bank, 2012), pp. 20–22.

50. The content of collective or social identities may take four non–mutually exclusive forms; namely, normative, purposive, relational, and cognitive contents. The purposive content encourages an actor to “engage in practices that make the group’s achievement of a set of goals more likely.” See Rawi Abdelal, Yoshiko M. Herrera, Alastair Iain Johnston, and Rose McDermott, “Identity as a Variable,” *Perspectives on Politics* 4, no. 4 (2006): 695–711, at 698.


forces aggressively; when it was militarily inferior, it sought accommodation with neighboring powers. Confucian pacifism had little bearing on shaping traditional China’s security policy. David Kang also points out that endemic wars occurred between China and the nomadic tribes on its northern and western borders in the period 1368–1841. Kang, *East Asia Before the West*, p. 10.


55. For an account of how prominent Chinese political and intellectual figures from the nineteenth to the early twenty-first century have addressed the fundamental question of how to enrich the state and strengthen its military power, see Schell and Delury, *Wealth and Power*.


59. It is similar to what Jonathan Mercer argues that “the best way to compete is by cooperating.” Mercer, “Anarchy and Identity,” p. 233.

60. Shambaugh, *China Goes Global*, p. 31.


62. For an account of the origin of the guiding principle, see Shambaugh, *China Goes Global*, pp. 18–19.


66. China began in April 2003 to receive grants from the Global Fund. The sixteen grants to China totaled $815.43 million, and 93.4 percent was disbursed up to the time


70. The work of the commission is shown at www.who.int/intellectualproperty/en, accessed 16 July 2013.


73. For a recent study, see Hein and Moon, Informal Norms in Global Governance.

74. Major writers are Gong Xianqian of the Beijing Institute of Technology and Jin Jiyong who is a former postdoctoral research fellow at Zhejiang University, but it is open to debate whether they can form an epistemic community in global public health in China that has the government’s ear. As a matter of fact, the Beijing Institute of Technology is not one of the most prestigious universities in the country, and Jin is an early career researcher after earning his PhD in international relations from Fudan University, Shanghai, in 2009. At the time of this writing, he is an Oxford-Princeton Global Leaders Fellow, living outside China. His profile is at www.globaleconomicgovernance.org/dr-jiyong-jin-oxford-princeton-global-leaders-fellow, accessed 8 July 2013.

75. The only exception was a background paper to CIPIH by Qian Jia on the contributions of traditional Chinese medicine. See CIPIH, “CIPIH Study Summaries,” pp. 32–33, www.who.int/intellectualproperty/studies/StudySummaries.pdf, accessed 16 July 2013.


80. WTO and WHO officials, interviewed by the authors, Geneva, 22 and 26 November 2010.

81. A high-ranking official in the WHO, interviewed by the authors, Geneva, 26 November 2010.


86. Yang Jian, “Yaopin zhuani liangzhi xuke zhidu yu woguo yingdui gonggong jiankang weiji de zhengce daoxiang.”


88. Zhang Qi, “Baiyunshan ban ‘dafei’ yu chuang ‘zhuangli liangzhi xuke’ guan [‘Tamiflu’ Baiyunshan Version Wants to Break Through the Barriers to Compulsory


91. According to a 2008 survey, the latest available, 13.1 percent of China’s population lived on less than $1.25 a day and 29.8 percent on less than $2.00 a day, in 2005 purchasing power parity terms. World Bank, *World Development Indicators 2012*, p. 69.