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Rising Economies in the International Patent Regime: From Rule-breakers to Rule-changers and Rule-makers

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ABSTRACT

Rising economies face a crucial dilemma when establishing their position on international patent law. Should they translate their increasing economic strength into political power to further developing countries' interests in lower levels of international patent protection? Or, anticipating a rising domestic interest in stronger international patent protection, should they adopt a position that favours maximal patent protection? Drawing on multiple case studies using a most-similar system design, we argue that rising economies, after having been coerced into adopting more stringent patent standards, tend to display ambivalent positions, trapped in bureaucratic politics and caught between conflicting domestic constituencies. We find that the recent proliferation of international institutions and the expansion of transnational networks have contributed to fragmentation and polarisation in domestic patent politics. As a result, today's emerging economies experience a more tortuous transformative process than did yesterday's. This finding is of particular relevance for scholars studying rising powers, as well as for those working on policy diffusion, regulatory regimes, transnational networks and regime complexes.

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Introduction

The rise of emerging economies compels students of political economy to revise some of their traditional conceptualisations about the dynamics of international politics. The international patent regime is a case in point. International patent politics has traditionally been perceived as taking place across a North/South divide; knowledge economies seek to exploit their technological edge by promoting maximally strong patent laws that reinforce the worldwide protection of their inventions (the 'maximalist' position), while developing countries seek weaker (minimal) patent protection in order to facilitate imitation of foreign innovations, to build their technological capacities and to benefit from lower retail prices (the 'minimalist' position).[1] Susan Sell reflects this binary representation when she describes the history of international intellectual property (IP) politics as an 'elaborate cat and mouse game' (2009: 2) in which developed countries chase developing ones. This article challenges the premise that actors have static interests and asks what happens when some of the mice metamorphose into cats.

Categories such as 'developed countries' and 'developing countries' have never been stable and homogenous. Even some of the most advanced economies like the US, Switzerland and Japan were once seen as imitators who attempted to climb the technological ladder by offering weak patent

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protection. Over the years, they have transmuted from being free-riders to being among the strongest proponents of stringent patent protection. To capture this fluidity, it is useful to focus our attention on countries that have been, or are in the process of being, transformed into knowledge-based economies (Yu 2012; Abbott *et al.* 2013).

These rising economies face a crucial dilemma when they experience strong and extended economic growth: should they translate their increasing economic strength into political power to actively contest the maximalist orthodoxy and promote on the world stage an alternative set of (minimalist) patent rules for developing countries? Or, anticipating a rising domestic interest in stronger international patent protection, should they align themselves in intergovernmental forums with developed countries' (maximalist) positions?

The maximalist and minimalist positions reflect the conflicting objectives of incentivising knowledge production through strong patent protection, and disseminating knowledge through weaker and narrower patents with broader exceptions to and exclusions from patent protection (Shadlen 2005). Policy-makers must make tradeoffs between conferring exclusive rights over inventions in order to incentivise innovation and improve economic welfare, and restricting exclusive rights as potential obstacles to innovation and economic development (Haunss and Shadlen 2009). Advanced economies tend to offer (relatively) maximalist protection to patents, with a broader scope of patentability and a stronger protection conferred to patent holders. In contrast, several developing countries offer (relatively) minimal levels of patent protection, providing more exclusions and exceptions to patent protection. In international forums, developed countries often argue for the global diffusion of their maximalist standards to level the playing field, while developing countries typically seek to preserve their capacity to maintain minimalist policies that favour knowledge and technologies transfer. The maximalist position is the prevailing orthodoxy, while minimalist positions are considered heterodox. To build on Krasner's typology (1977: 636), developed countries have traditionally been the rule-makers of the international patent regime and developing countries its rule-takers or rule-breakers.[2] This article extends Krasner's typology and asks: if rising economies are no longer reactive rule-breakers, as conceptualised in Table 1, are they more inclined to be rule-changers, rule-takers or rule-makers (Moon and Szlezak 2013; Sell 2013; Lavenex and Serrano 2016; Serrano 2016)?

This article argues that the international context is a crucial moderating variable that must be taken into account to understand the effect of economic growth on preferences and behaviours in intergovernmental organisations (see Figure 1). In particular, today's international context displays two distinctive features when compared with the 1970s and 1980s. The first feature is the proliferation of sites for the adoption of international rules related to patent protection. For several decades, the World Intellectual Property Organization (WIPO) and its predecessors had been the central forums for international patent rule-making. Considering its membership, its initial mandate and its funding structure, the WIPO bureaucracy itself had long been an actor supporting a maximalist approach (May 2006). In the past decade, however, WIPO has established a Development Agenda along with committees and divisions that, alongside the traditional structure, explore emerging and unconventional issues (Netanel 2009). Moreover, countries have increasingly turned to other international forums to discuss patent-related issues, such as those governing trade, public health, human rights, development, biological diversity, food and agriculture, climate change and indigenous knowledge. In addition to these multilateral settings, an increasing number of plurilateral, regional and bilateral initiatives now address patent law. This proliferation creates a dense

Table 1. Typology of foreign policy towards the international patent regime.

		International behaviour	
		Reactive	Pro-active
International preferences	Maximalist	Rule-taker	Rule-maker
	Minimalist	Rule-breaker	Rule-changer

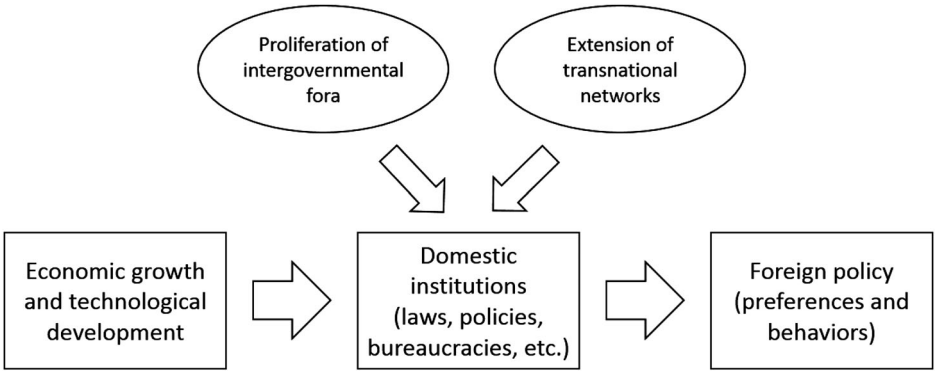

Figure 1. Conceptualisation of two moderating international variables.

institutional environment, known as the international patent regime complex (Raustiala and Victor 2004). Some forums deepen the maximalist orthodoxy, while others crystallise more minimalist approaches to patent law (Helfer 2004; Muzaka 2011).

The second and related feature of the current global patent order is the multiplication of transnational networks. Until the 1990s, international patent rule-making was dominated by a handful of legal practitioners who derived their authority from their exclusive understanding of this arcane and highly technical field of law. Working for public administrations or private businesses around the world, they shared generally positive views of the established rules of their profession (Sell and Prakash 2004). Patent law was at times contested, but coalitions of developing countries challenging maximalist views were not supported by transnational networks of any kind. Starting in the mid-1990s, however, alternative transnational networks emerged in conjunction with major public controversies regarding access to medicines and the misappropriation of genetic resources. Today, multiple transnational networks involving NGO activists, indigenous communities, generic producers, consumer groups, academics and civil servants challenge maximalist positions and raise awareness on alternative policy options (Sell and Prakash 2004; Kapczynski 2008; Matthews 2011; Morin 2014).

This article aims to shed light on the impact of these two recent trends – forum proliferation and transnational network extension – on emerging powers' international patent policies (see Figure 1). It is already well-known that some emerging economies took an active part in the creation of new international settings by deploying forum shifting strategies (Helfer 2004). They also, in many cases, aligned with and empowered transnational networks. However, the 'second image reversed' (Gourevitch 1978), or the intervening effect of international trends on emerging economies and their changing foreign policies, has so far been understudied.

We conduct a diachronic comparison of five emerging economies (Japan, Korea, China, Brazil and India[3]) to study the impact of the changing international context on these countries' policies. A multiple case study method is particularly appropriate for the exploration of phenomena, such as the emergence of some developing countries, that do not offer sufficient cases for statistical analysis but provide sufficient empirical ground for generalisable and theoretically informed claims (Lijphart 1971). As a recognised method in international political economy (Odell 2001: 167), it enables us to cover key emerging economies of the past decades while looking deeply into their domestic politics for specific transformative processes.

A successful multiple case study analysis must 'judiciously restrict itself to the really key variables' (Lijphart 1971: 690). The key variable for this study is this moderating effect of the international context on domestic politics and, indirectly, on foreign policy. Relying on the most-similar system design strategy for case-selection, we contrast two rising economies of the past – Japan in the 1970s and Korea in the 1980s – with three more recent cases: China, India and Brazil. We readily acknowledge that these countries differ in many respects beyond the international context at the

time of their rise, but we contend that all of them saw high levels of economic growth and a rapid expansion of their technological capacities for at least one decade (see Table 2). This similarity provides the basis for our comparative analysis.

At the same time, the international context greatly differed at the time of their respective rises, allowing us to compare the domestic effects of the proliferation of international institutions and the expansion of transnational networks. Data for the first two countries mainly come from archival analysis and secondary literature, while our understanding of the latter three relies on archives, secondary literature and interviews with key informants.[4]

Our analysis shows that none of these rising economies experienced a smooth and incremental transition. Clearly, knowledge-economies-in-the-making's preferences and behaviours are not solely a function of their growing GDP. Rather, changes are often uneven, ambivalent and abrupt. This is the case because institutions are sticky; law is a complex system with multiple components; political authority is fragmented; domestic stakeholders are heterogeneous; macro-economic effects of patent regulations are uncertain; and ideas leave long-lasting legacies.

In our five cases, shifts from weaker to stronger patent policies were triggered by exogenous pressures exercised by foreign rule-makers who had become irritated by the combination of rapid economic growth and relatively weak existing patent standards. This pressure led to domestic institutional changes favouring more stringent patent protection: new rules were adopted, regulatory capacity was built, some lobby groups were strengthened and new ideas were circulated. In turn, these processes generated counter-reactions and intensified tensions among rival interest groups and bureaucratic units. Until a new domestic settlement was found, rising economies' stances in international forums were ambivalent, taking no strong stance between maximalist and minimalist positions (Shadlen 2015).

Beyond these similarities in our five cases, we find that there are also important differences. China, India and Brazil have expressed more strongly mixed, rather than ambivalent, stances on international patent protection. Japan and Korea largely retreated from global political struggles and international coalitions at the time of their economic rise. Torn between conflicting interests and ideas, they kept a low profile in international organisations until, ultimately, prevailing ideas and interests leaned more favourably toward stringent patent protection and created endogenous pressure on the government to defend the maximalist orthodoxy in multilateral organisations. In contrast to these base-line cases, the proliferation of international institutions and the expansion of transnational networks have exacerbated the complexity of this transformative process for China, India and Brazil. Domestic actors from all sides can now more easily collaborate with foreign allies and benefit from institutional opportunities in the patent regime complex. This empowerment of domestic actors means that governments are increasingly fragmented and pushed in various directions; while some administrative units subscribe to a maximalist view of patent law and participate in traditional international forums, other units engage in legal innovation and operate forum shifting strategies at the international level. China, India and Brazil have, unlike historical Japan and Korea, simultaneously endorsed the roles of rule-takers and rule-changers. Below we offer a brief account

Table 2. Five rising economies.

	Japan (1965–1995)	Korea (1980–1990)	China (1995–2005)	India (2000–2010)	Brazil (2000–2010)
Average annual GDP growth rate	6.9%	8.6%	9.2%	6.9%	3.8%
Average annual export growth rate	n/a	15.1%	17.9%	20.1%	7.0%
Average annual growth rate in patent applications filed by residents at any patent office	n/a	24.6%	26.8%	17.2%	5.2%
Average annual growth rate in receipts from royalty and licence fee	n/a	165.0%	26.9%	50.5%	20.1%

Sources: World Bank and WIPO statistics.

of lobbying interests, institutions and domestic politics in each of these five countries that help to account for apparent inconsistencies and conflicting priorities and coalitions.

Japan

Prior to its emergence in the 1960s as a rising economic power, Japan was largely an importer of foreign technologies and innovations and resisted maximalist patent protection. Japan's low level of protection of foreign patents allowed the country to strengthen its industrial base through access to foreign technologies. Japanese companies often made slight modifications to foreign innovations, causing Japan to become known, first, as a 'nation of imitators', and then as a 'nation of improvers'. Only in the 1980s would Japan become a 'nation of inventors', widely seen as being on its way to becoming an economic superpower (Ganea and Nagaoka 2009).

As were other emerging economies examined in this study, Japan was subjected to tremendous pressure to adopt foreign patent norms. Its relative seclusion from world politics came to an end following the negotiation of the 'Unequal Treaties' in 1857–8. The first of these, the *Treaty of Amity and Commerce* (the *Harris Treaty*), was negotiated under threat from American war ships as the United States pressured Japan to open up to diplomacy and trade (Atsumi and Bernhofen 2011). At the end of the nineteenth century the treaties were abolished, but only on the UK and the US governments' precondition that Japan accede to the *Paris Convention for the Protection of Industrial Property* (Ganea and Nagaoka 2009: 134). Thus, under pressure, the Meiji government joined the *Paris Convention* in 1899, putting in place basic patent laws. Japan became a rule-taker in the international patent system.

Japan became a stronger economic power following the Second World War. As such, the country increasingly became the target of foreign pressure to increase foreign patent protection. This time, in the 1970s and 1980s, instead of resorting to military threats as it had in the twentieth century, the American government used economic coercion to put pressure on Japan; in 1984, Congress amended 'Section 301' to authorise the imposition of sanctions against countries that 'deny adequate and effective protection' of IP (19 USC §2411). This coercive mechanism was used to put pressure on Japan to raise its level of foreign patent protection; Japan was explicitly threatened with unilateral US trade retaliation (Maskus 2002). Reforms were made in 1988 in response to American demands, increasing the rights granted to foreign patent holders (Bransetter and Sakakibara 2001: 4–5).

Support for IP protection also grew inside Japan. The Ministry of Economy, Trade and Industry came to be known for its tendency to favour such support over consumer or user interests in patent protection (Okimoto 1989). The strengthening of IP laws contributed to the economic strengthening of the interest groups that benefitted from IP protection (Morin and Bannerman 2015). This is not to say that Japan fully adopted the US perspective on patents. Japan tailored a patent system that had important differences from the American one, allowing for faster disclosure of strategic information, such as through first-to-file provisions, pre-grant disclosure, pre-grant opposition and different licensing and royalties incentives (Ordover 1991).

Japan remained a backbencher in global political struggles over patents until the 1980s. Japanese delegates played next to no role in the 1958 revision of the *Paris Convention* (BIRPI 1963) and played only a minor role in the failed revision of the *Paris Convention* in the 1980s. These negotiations were initiated by a Brazilian-led coalition of rule-changers who sought amendments to the *Paris Convention* that would allow weaker and more discriminatory patent protection (May 2006: 31). These proposals were strongly opposed by traditional rule-makers, that is, the US and European countries, but Japan kept a low profile.

Japan adopted a stronger stance by the end of the 1980s. It rejected, along with the US, the *Washington Treaty on Integrated Circuits*, arguing that the treaty's term of protection was too short, objecting to the treaty's authorisation of compulsory licensing and deeming the treaty's proposed mechanisms for dispute settlement inadequate (WIPO 1992; Kukkonen 1997). Japan's rejection, along with that of the US, doomed the treaty, which never came into force.

Japan began to act as a rule-maker in international patent law at the launch of the WTO Uruguay Round in 1986. Several Japanese business conglomerates, along with European and American companies, formed the Intellectual Property Committee (IPC), a coalition set up to lobby for maximalist IP. In 1988, the IPC submitted a draft of the *Agreement on Trade-Related Aspects of Intellectual Property Rights* (TRIPs) to their respective governments (Sell and Prakash 2004). No rival transnational coalition of consumers emerged. Those Japanese businesses that would have benefitted from the weaker patent protection had neither a set of organised foreign allies nor the normative support of international institutions. As a result, the IPC position held sway, and the Japanese government, alongside the US and the European Community, promoted many of the IPC's maximalist IP goals during the *TRIPs* negotiations.

The negotiation of the *TRIPs Agreement* saw Japan take up a position among the global advocates of strong patent protection. Now a member of the 'IP5', a cooperative forum of the five largest IP offices in the world, Japan played an important role in the 2011 *Anti-Counterfeiting Trade Agreement*, though the agreement was ultimately rejected by the European Parliament. Japan now includes *TRIPs*-plus requirements in its bilateral trade agreements, sends technical advisors on IP abroad, and provides developing countries with IP-related technical assistance (Deere Birkbeck 2008). In a period of four decades, it has moved from a rule-breaking to a rule-making position.

Korea

Korea was, at one time, impoverished; the country was a recipient of development assistance as late as the 1970s. However, Korea successfully lifted itself out of poverty to become known as an 'Asian Tiger' in the 1980s and a net aid provider. By the 1990s Korea had sufficiently established itself as a developed economy that it left the G77 to join the Organisation for Economic Co-operation and Development (OECD).

Like Japan before it, Korea offered minimal patent protection prior to its economic emergence. In the 1970s, Korea was neither a member of WIPO nor any major multilateral IP agreement. It did not join the *Paris Convention on Industrial Property* until 1980, almost a century after the convention was established. Free from the constraints of international patent obligations, Korea used its low levels of patent protection to build its reverse engineering capacity and to acquire foreign technology (Shi 2010). Korean pharmaceutical firms built their R&D capabilities, beginning as importers of drugs, progressively building up their manufacturing capacity by using imported active ingredients, ultimately seizing the domestic pharmaceutical market and inventing new drug compounds themselves. One commentator observed that, 'were it not for such lax IPRs, it would have been impossible for the local pharmaceutical firms to have achieved so much' (Kim 2003: 5).

Korea's imitative use of foreign technologies was noticed by foreign competitors. American businesses complained that Korean firms were breaking patent rules and accused Korea of being responsible for loss of revenues (USITC 1988). The Reagan administration, in response to these complaints, threatened to use 'Section 301' to coerce Korea into changing its IP laws. The Korean government quickly promised to amend its laws. Korea's rule-taking stance, however, was deemed insufficient, and Korea remained under pressure by the US government.

As is the case for other emerging economies across time and space, exogenous pressure coerced Korea into offering greater foreign patent protection. In response, Korea extended the scope of patentable subject-matter and the duration of patents, increased enforcement penalties, and established an enforcement task force to coordinate the work of various government agencies (Ryan 1998: 76–7). Korea, under US pressure, also acceded to the *Patent Cooperation Treaty* and the *Budapest Treaty on Microorganisms*. However, since these WIPO treaties do not include a most-favoured-nation clause, Korea was able to deny some benefits of its upgraded patent system to foreign inventors other than Americans. Its rule-taking behaviour was clearly conditional on the exercise of exogenous pressures.

This rule-taking behaviour generated intense opposition at home, where the coerced changes to Korean patent law were widely perceived to be contrary to Korean business interests (Morin and Bannerman 2015). The generic pharmaceutical industry, in particular, saw itself as a victim of the reforms and objected vigorously (Ryan 1998: 75). Furthermore, the concept of private property in inventions was alien to Korean culture, and was seen as a departure from local values and practices and a humiliating concession to the US (Park 2009a: 267). Finally, many feared that such reforms would detract from Korean firms' ability to compete with Japan, whose technological dominance was, for historical reasons, regarded as unacceptable (Min and Sullivan 1987: 59).

As a result of the disconnect between Korean patent law, social norms and economic interests, the Korean government remained ambivalent in multilateral settings. However, in contrast to more recent emerging economies, Korea's ambivalence manifested itself by diplomatic isolation. It did not join established coalitions and generally kept a low profile. This was particularly apparent during the revision of the *Paris Convention on Industrial Property* in the mid-1980s. Korea attended these negotiations but did not take clear side, opting instead to remain largely silent. While Korea might have benefited from the measures advocated by the coalition of rule-changers, Korea had recently conceded to American pressure, amending its patent act to become a rule-taker, rather than a rule-changer (West 1983: 137).

The Korean government also appeared ambivalent during the negotiation of the *Washington Treaty on Integrated Circuits* (WIPO 1992). The Korean semiconductor industry was booming, and invested significantly in R&D, but nevertheless lagged behind its American and Japanese counterparts, the main rule-makers of the negotiations (Kim 2006). In this period of transition, the Korean government took no strong position as to whether its interests were better served by stringent or by flexible protection. The stakes were high and the Korean government sent more delegates to the 1989 diplomatic conference than did several other major players, such as the USSR and the UK. Even so, Korea rarely went on record with a position, and when it did, did so only cautiously, vaguely and reactively. At times, it supported developing countries, and at other times, it supported the advanced economies, for example on the procedural rules to adopt the treaty. It stayed off record on the most controversial issues, including the term of protection exceptions for research.

The Korean government also sat near the sidelines during the *TRIPs Agreement* negotiations. It was neither a member of the G-10, which pressed for the exclusion of IP from the trade negotiations, nor of the G-14, the larger group of developing countries which attempted to limit the scope of the *TRIPs Agreement*. During the negotiations, Korea claimed that its interests as a 'newly industrializing country' overlapped with 'those of both developed and developing nations, yet [did] not coincide with those of either camp' (GATT 1994). The few suggestions put forward by the Korean delegation were, for the most part, ignored. This included Korea's proposal for the establishment of a dispute prevention system on technology transfer, and its opposition to the most-favoured-nation clause (GATT 1991). At that time, there were hardly any other international forums in which Korea could articulate and sustain such proposals and, consequently, its rule-changing proposals remained modest and short-lived.

It was clear by 1991 that the *TRIPs Agreement* would force Korea to alter its IP laws by extending its term of patent protection to 20 years (Song and Kim 1994). It was also clear that these changes would be of little immediate economic benefit to Korea. According to a World Bank study, Korea was one of the countries most negatively impacted by *TRIPs* because of the reliance of its economy on foreign technologies (2002: 133). Yet, the Korean government was far from leading the charge against *TRIPs*.

American pressure explains Korea's reactive stance during the TRIPs negotiations. The American government used Section 301 against Korea during the early days of the *TRIPs* negotiations in a successful effort to 'separate Korea from other developing country opponents in the GATT' (Ryan 1998: 75). American coercion influenced Korea's negotiating priorities; ensuring that the newly established WTO would limit the use of American coercive unilateralism became the Korean government's primary objective. Korean representatives condemned unilateral pressure during the negotiations, and insisted that any disputes over IP protection should be brought under a multilateral dispute

settlement mechanism (GATT 1989, 1994). In short, Korea attempted to limit US opportunities for forum shopping and to centralise the patent regime complex around the WTO, which provided some form of predictability.

It was also politically feasible for the Korean government to adopt a reactive rule-taking role as the *TRIPs Agreement* was not yet publicly controversial. Prior to the widespread use of the Internet by NGOs, there were few transnational networks across developing countries that could call for the creation of a broad coalition of rule-changers. It was only later, at the end of the 1990s, that *TRIPs* became the source of public controversies in the global South.

To be sure, some Korean businesses were opposed to TRIPs. As a result of patent reforms, several Korean businesses that had been engaged in duplicative imitation were forced to either shut their doors or adjust their business models (Kim 2003; Park 2009a). The Korean government actively supported the transformation from labour-intensive to technology-intensive activities through generous public investment in higher education and scientific research, the creation of public research institutes and the construction of one of the most advanced telecommunication networks in the world. These interventions facilitated the political acceptance of difficult patent reforms.

In response to this supportive environment, R&D expenditure grew faster than GDP, and the ratio of R&D to GDP surpassed the OECD average. Endogenous patent activity soared. Interest groups that benefitted from strong IP protection were strengthened, just as those benefiting from weak IP protection were weakened. Some Korean companies thus became 'effective preachers of appropriate protection for IPR' (Shi 2010: 495).

The economic changes brought what Ji-Hyun Park has called a 'shift in cultural attitude among Koreans' (2009a: 268). IP awareness campaigns were run in schools, the public administration and the private sector (Park 2009b: 141). Changing perspectives, along with shifting economic interests, favoured increased patent protection. Korea, as Wei Shi notes, was once a rule-breaker, but had become 'a genuine believer and supporter of IPR' (2010: 495).

Today, the Korean government is more pro-active in multilateral institutions than ever. At WIPO, the Korean delegation also often joins coalitions of advanced economies to submit joint proposals, and now makes ambitious proposals of its own. In 2011, Korea signed the *Anti-Counterfeiting Trade Agreement* with other established rule-makers of the patent regime. It also co-funds the 'IP5 framework' along with the US, Europe, China and Japan. In parallel, Korea has established a number of bilateral trade agreements with developing countries, as well as educational programmes encouraging the adoption of stronger patent protection, making full use of forum shopping opportunities and transnational governmental networks. Clearly, Korea is no longer an isolated rule-taker. It has become part of the rule-making coalition, engaged in the institutional proliferation of the patent regime complex.

In the course of this transformative period, Korea expressed its ambivalence, like Japan before it, by remaining isolated from broad coalitions of rule-changers. It jumped from being a reactive rule-breaker to a pro-active rule-maker in a short period of time, without really attempting to change the rules of the patent regime complex.

The rapidity of the Japanese and Korean transformative processes could hardly be reproduced today. First, the US Special 301 has lost part of its coercive power, since Article 23 of the WTO Understanding on the Settlement of Disputes and a subsequent ruling by the Dispute Settlement Body limit the capacity of the US to apply unilateral sanctions against another WTO member (although the use of this instrument has not disappeared) (Morin and Gold 2014). Second, several mercantilist policies put in place by the Japanese and Korean governments to support nascent industries would be fiscally and financially perilous in today's world, if not plainly prohibited by international agreements. Third, it is hard to imagine contemporary policy reforms of this social and economic magnitude, implemented in several countries under exogenous pressure, that would not trigger organised public opposition by transnational advocacy networks. With weaker coercive pressure, reduced compensation to patent

reform's victims and stronger social resistance, the Japanese and Korean transformative process would certainly have been bumpier.

China

China has followed the state-led high growth path of Japan and Korea since Deng Xiaoping launched his reforms in the late seventies. It is now the world's second-largest economy in nominal terms and, despite a recent slowdown, still accounts for around 40 per cent of global economic growth. The growth in Chinese patent filings in the last decade has been unprecedented and higher than that of the US, EU and Japan. This growth is particularly remarkable, as China is a relatively new 'user' of the international patent system. It was only in 1980 that China became a member of WIPO, acceding in 1984to WIPO's *Paris Convention for the Protection of Industrial Property*. China joined the WTO in 2001.

Reforms in Chinese legal and institutional patent structures were prompted by substantial external pressure, in particular from the US. In the early 1990s, key constituencies in the US were worried about China's low level of protection, and China was put on the United States Trade Representative's (USTR) Priority Watch List in 1989, 1990 and 1991. This led to painstaking negotiations, and while China showed significant initial resistance (Cheung 2009), in 1992 it updated its patent law with longer terms of protection and a wider scope of patentability. These reforms proved insufficient to settle the matter. The US pressure continued; the American government, among other things, threatened to impose retaliatory tariffs on Chinese exports and to veto China's bid for WTO membership (La Croix and Konan 2002). Over the years, the US did manage to win substantial concessions, including the adoption and enforcement of new IP legislation, and strengthened administrative capacities of the Chinese Patent Office (Cheung 2009; Stoianoff 2012).

Overall, China's quest to join the WTO gave significant leverage to the US and the EU. They both made China's WTO accession conditional upon changes to existing Chinese practices, including those on patents. It took China 15 years to attain WTO membership, and China, like other countries that acceded to the WTO after its founding in 1995, was not granted the developing countries' grace period for implementing *TRIPs*.

Since China became a member of the WTO, the US has channelled its pressure through the WTO dispute settlement mechanism (Stoianoff 2012). The EU has also used the WTO's Trade Review Mechanism to exert pressure, and has intervened as a third party in dispute settlement procedures brought against China. In addition, the US and the EU have established a dense web of cooperation initiatives with China in the area of IP legislation and enforcement, such as the EU-China IP Dialogue launched in 2004 and the US–China IP Cooperation Dialogue set up in 2013.

In meetings of the TRIPs Council, China tends to be rather subdued. China has been keen on pointing out the potential negative impact of IP rights on standardisation and international trade and has urged for international cooperation on these issues at the WTO (2006). It has also supported public health concerns. In the Doha Round negotiations, China is not vocal in its own right, but is active in the Asian developing members group (WTO 2012) and in the W52 sponsors group. The latter has sought 'modalities' on the disclosure of origin of genetic resources and traditional knowledge in patent applications (WTO 2008). These positions reflect changes in Chinese domestic rules, as well as in the language adopted in recent Chinese free trade agreements.

At WIPO, China has been more active, though not as active as India and Brazil. It has not sided with the Friends of Development, nor is it a part of the Development Agenda group. China has in fact often shared a mainstream 'North' view on the law of patents. It has, however, adopted a strong position on the protection of genetic resources, traditional knowledge and folklore, including a proposal to include these in the negotiated *Substantive Patent Law Treaty* (WIPO 2005, 2013). This is the only patent-related aspect in which China's behaviour follows that of other developing countries in rule-changing initiatives. Thus, China has been more active in the Intergovernmental Committee

on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore than in the Standing Committee on the Law of Patents.

Outside the WTO and WIPO, China has become one of the main participants in transgovernmental cooperation on IP, in particular through exchanges with the 'trilateral hub', the patent offices of the US, the European Union and Japan (Drahos 2010). As a result, China has largely followed and supported the IP framework promoted by established rule-makers.

Several factors sustained this evolution. At the bureaucratic level, the State Intellectual Property Organization (SIPO), founded in 1985, has been part of Deng Xiaoping's efforts to create a market economy. As such, its modernisation faced less resistance than bureaucratic actors found in other emerging economies. These administrative capacities were reinforced by supportive domestic industries. As in the cases of Japan and Korea, China's industrialisation has led to endogenous forces in favour of stronger IP protection. In particular, China's attempts to develop indigenous innovation capabilities have led to a myriad of policies that significantly increased the number of patents filed both domestically and abroad (USITC 2011). Contrary to the caricature of China as a country with an omnipresent state and top-down policy-making arrangements, lobbying is a central feature of Chinese economic policies and common to all industries (Kennedy 2005). The renewable energy, information technology, automotive and aerospace sectors favour strengthening the patent system. Domestic diversity behind China's schizophrenic position towards patents and innovation has been identified by Peter Yu as a main characteristic of China's IP regime (e.g. Yu 2006).

The absence of ideological opposition to SIPO's objectives at the central level (State Council) played an important role in furthering a stronger patent regime. SIPO rapidly became a leading agency both domestically and internationally. Unlike India, where academics and legal practitioners have linked with transnational activist networks to promote more flexible patent frameworks, no similar development can be observed in China. In India, ideology and a higher number of veto players have constrained the capacity of actors seeking stronger patent rules. In 1994, China became the first developing country office to obtain the status of 'International Search Authority' under the *Patent Cooperation Treaty*. In fact, SIPO could soon become the largest patent office in the world (Reynolds and Sell 2012).

At the same time, China continues to be labelled among the main patent infringers by both the US and the EU (USITC 2011; IP Commission 2013). The main reason for this lies in the challenges China has faced in implementing its patent reforms, as well as general problems with the rule of law. The weakness of the central government in enforcing rules and inadequate checks and balances on enforcement actions have contributed to this perception. China has one of the smallest (as a proportion of GDP) central governments among other large economies, and its internal market tends to be highly fragmented. SIPO has attempted to improve this situation by reforming patent law in ways that strengthen its own administrative capacities, as well as the role of the courts. These tensions between local governments (*kuai*) and central functional bureaucracies (*tiao*) are reflected in efforts by central bureaucracies to re-centralise authority, shifting *tiao/kuai* relations (Mertha 2005).

We find in China a mutually reinforcing cycle in which government priorities aimed at autonomous innovation further industries that have a keen interest in developing a strong patent regime and exert pressure for regulatory improvements in this area. This demand for a strong patent regime underpins governmental efforts towards strengthening administrative capacities that are in turn partially achieved through transgovernmental cooperation with the 'trilateral hub'.

In many respects, China follows the path taken by Japan and Korea and moves from a rule-breaker to a rule-taker. This may be explained by the significant pressure exerted on China due to its late WTO entry, but also due to endogenous factors, such as lobbying from domestic industries in favour of stronger patent regime and reformist technocratic elites that have been embraced, and to an extent socialised by, transgovernmental policy networks. At the same time, local bureaucracies that tend to oppose maximalist patent positions have been prevented from engaging with transnational activist networks and other supportive international actors due to China's closed political system.

This is not to say that China and the established rule-makers see eye-to-eye in all domains. A notable exception is in the field of access and benefit sharing of genetic resources, an area where both local and central interests in China converge. On this issue, China has supported the efforts of other developing countries to ensure the sharing of benefits in the utilisation of genetic resources. Here, we observe a case of rule-changing behaviour. This differs dramatically from our first two cases; during their transformative processes, Japan and Korea were never so bold as to attempt to change the rules of multilateral forums against American preferences.

India

India recently became one of the fastest growing economies in the world. Like Japan, Korea and China before it, India's economic growth has gone hand in hand with significant growth in patent applications and in receipts from royalties and licence fees (see Table 2). India is nevertheless a more recently emerging country and still lags behind China in terms of innovativeness and technical know-how (Kennedy 2016). Less than 30 per cent of patent applications filed at the Indian Patent Office, for example, come from Indian residents, while in the case of China's SIPO the share of domestic applications has been above 50 per cent since the early 1990s. The number of domestic applications registered at the Indian Patent Office is growing fast, but does not yet surpass the growth rate of foreign applications.

India's history with externally dictated IP rules can be traced back to British colonial rule. Even in the post-colonial era, Indian patent policies have remained subject to intense external pressure from the western world. This pressure was particularly acute at the end of the 1980s and early 1990s during the negotiation of the *TRIPs Agreement*. India was one of the most vocal developing countries opposed to the *TRIPs Agreement*, and it obtained important concessions from the US, in particular in the field of compulsory licensing. It also secured a 10-year transition period to implement the *TRIPs Agreement*, including the requirement to accept the patentability of pharmaceutical and chemical products. India made full use of this time. Yet, on many important issues, notably those related to the patentability of chemicals and pharmaceuticals, India failed to achieve the demands it made in the final stages of negotiation (Ganesan 2015).

In the post-TRIPs period, the US has continued to use a mix of unilateral, bilateral and multilateral pressures to influence Indian patent law and policies. India's inclusion on the USTR priority watch list has served to put unilateral pressure on India. The US has also attempted to pressure India in bilateral negotiations, in particular with regard to changes in the pharmaceutical sector. Multilaterally, the US has made good use of the WTO dispute settlement process, winning one of the few and seminal cases under TRIPs against India (WTO 1997).

The European Commission has chastised India for its weak enforcement efforts as well as its opposition to advancing IP protection in international forums. One of the EU's main concerns has been related to the application of restrictive patentability criteria coupled with broad exceptions to the exclusive rights conferred by patent protection (European Commission 2009). The EU has pressed India on these matters through the negotiation of a bilateral free trade agreement, which began in 2007, and in the forum of the High Level Trade Group, active as of 2005. The EU is also one of the main sponsors of training and capacity-building offered to the Indian Patent Office, which is considered to be a means of socialising patent examiners and key patent administrators.

Many of these US and EU efforts have been futile. Despite foreign pressures, cooperative actions and socialisation efforts, India remains overall critical of international patent law. The presumed causal relation between strong patent protection and innovation remains highly contested in India's policy circles (Netanel 2009). On the international scene, India often appears as an outspoken rule-changer. At WIPO, India supported minimalist positions in the debates on the reform of the *Patent Cooperation Treaty* and the negotiations on the *Substantive Patent Law Treaty*. At the WTO, India has been a leading voice endorsing the use of the flexibilities left available under the *TRIPs Agreement*. It also joined a coalition of developing and least-developed countries in successfully

extending the moratorium on non-violation complaints under the *TRIPs* (WTO 2015) – in spite of the campaign led by the US and Switzerland against this extension.

India's rule-changing behaviour is particularly apparent on two highly controversial issues (Park and Jayadev 2011). The first is the misappropriation of traditional knowledge, genetic resources and traditional plant varieties. On this matter, the Indian government has challenged foreign companies' patents on the grounds that they may be based on pre-existing traditional knowledge and biological material. It has also created a digital library of traditional knowledge, which aims to provide information to international patent offices, so as to pre-empt foreign patenting on the grounds of lack of novelty. A related concern has been ensuring that the *TRIPs* provisions on the protection of plant varieties do not affect farmers' rights to keep and trade seeds (so-called 'farmers' rights' as opposed to 'breeders' rights'). This debate has become particularly salient since the Indian Parliament passed the *Plant Variety Protection and Farmers' Rights Act* in August 2001.

The second controversial issue is access to patented medicines. Ever since the negotiation of *TRIPs*, India has taken a vocal approach against international efforts to strengthen the protection of pharmaceutical products (Watal 2015). This stance relates to India's post-independence decision to revoke the patent system inherited from the British colonial administration and to develop an independent pharmaceutical industry (Kher 2013; Kapoor and Sharma 2015). This policy has led to one of the world's most successful generics industries (11 Indian companies are among the top 50 generic drug manufacturers worldwide), which remains a powerful domestic actor in favour of flexibilities in the patent system. Domestically, we observe in India a sort of tailoring of patent law, which, while remaining *TRIPs*-consistent, endorses innovative legal solutions, such as that contained in Section 3(d) of the *Indian Patent Act*, which bans patents on new uses and forms of known substances that do not enhance 'efficacy', and thus substantially limits the scope of patentability (Kapczynski 2009). Internationally, India was one of the most active WTO members advocating for additional exceptions and limitations to patent protection, especially in the process that led to the 2001 *Doha Declaration on the TRIPS Agreement and Public Health*, the 2003 WTO decision on public health and the 2005 amendments to the *TRIPs Agreement*, which finally came into force in January 2017.

India's rule-changing stance on these two controversial issues has been greatly facilitated by transnational activist networks. On the one hand, activists played a crucial role in encouraging generics producers to overcome fears related to earlier negative experiences in exporting to developing countries by reshaping the generics market; activists linked to the Clinton HIV/AIDS Initiative negotiated with Indian generics producers, convincing them to lower prices by organising and pooling demand. They also changed the incentive-structure for generics producers Cipla, Ranbaxy and Matrix by turning the market from a scattered, into a low-prices/high-volume one (Kapstein and Busby 2013: 157–8).

On the other hand, transnational networks, consisting of NGO activists, academics, policy advisors and legal practitioners, contributed to the salience and politicisation of patent law. In India, delegating delicate issues to private actors, such as think-tanks and boutique legal firms, has been one way of solving inter-ministerial disputes and improving legal capacities. In turn, these actors, who are strongly interwoven with transnational networks, have been able to provide an alternative interpretation to that traditionally offered by governmental networks like foreign patent offices and the WIPO. For example, on the issue of misappropriation of traditional knowledge and genetic resources, the Indian activist Vandana Shiva travelled around the world in the 1990s to make her rule-changing position globally known, promoting domestic groups' policy preferences. Likewise, when the issue of access to patented medicines was debated at the WTO, the Indian generic producer Cipla strategically campaigned alongside Médecins Sans Frontières International, Knowledge Ecology International, Oxfam and other NGOs, and their partnership enhanced the credibility of rule-changers, both domestically and internationally (Sell and Prakash 2004; Watal 2015). More recently, these transnational activist networks have also publicly supported India, in the media and in hearings, for its controversial governmental measures and court decisions favouring access to patented medicines.

The proliferation of international institutions in the patent regime complex has also empowered Indian rule-changers. On the issue of traditional knowledge and genetic resources, India has benefited from the normative platforms offered by the Food and Agriculture Organization, the Convention on Biological Diversity, the Nagoya Protocol on Genetic Resources and WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. On access to patented medicines, the World Health Organization provided an important forum to echo and amplify the Indian rule-changing position, legitimising claims in support of Indian policies.

That being said, as in the case of Japan, Korea and China, India's position has also undergone transformation over time. Endogenous interests in favour of more stringent patent protection have arisen and, as a result, the Indian government has not displayed a consistent preference for rule-changing (Kher 2013; Kapoor and Sharma 2015). Since the early 1980s, India has sought to develop a biotechnology industry and has made substantial R&D investments in this sector. The Council of Scientific and Industrial Research has been a main beneficiary of these efforts and became domestically one of the strongest voices for a tougher patent regime with the alleged aim of promoting innovation. Yet, this has not been sufficient to overcome the powerful generic pharmaceutical industry and has not led to any significant strengthening of the Indian domestic patent system. According to interviewees, the burgeoning industry of patent-based companies and government-funded research institutes are the main reason why India did not co-lead the Brazilian-Argentine launch of the Development Agenda at WIPO in 2004, one of the most prominent rule-changing initiatives of past decades. The reluctance of India to lead the charge on the Development Agenda is an apt illustration of how rising powers' positions are sometimes in flux.

Thus, despite strong exogenous pressures, Indian authorities moved their government from the role of a rule-breaker to that of an intermittent rule-changer, empowered by transnational activist networks and alternative international sites of contestation (Basheer 2005). The fact that India seems reluctant to behave as a docile rule-taker arises from several factors, including the multiplicity of domestic veto players, the weakness of the central government, persistent levels of poverty, active media, activist courts and a post-colonial ideology (Chatterjee-Miller 2013). As a result of this complex domestic dynamic, India's position appears at times ambiguous and inconsistent. It is nevertheless evident that India has accumulated important capacities over the years to actively engage in the international patent complex, making use of both formal and informal venues. The example that India sets – on the one hand, as a developing country resisting substantial pressure exerted by major powers, and on the other hand, as a legal innovator in the field of patent law, will be an interesting one to observe in the years to come. The case of India stands out in this sense, and stands in contrast to the cases of Korea and Japan.

Brazil

Brazil has experienced periods of strong economic growth and economic stagnation in its recent history. During the 1960s and 1970s, real GDP growth was similar to that of the other cases covered in this study, averaging almost 8 per cent. The debt crisis that struck the Americas in the 1980s led to a 'lost decade' of hyperinflation and economic turmoil. The 1990s saw a slow recovery on the back of economic reforms and the Real Plan, which, after several failed attempts, finally brought inflation under control. In the beginning of the twenty-first century, Brazil experienced renewed rates of high economic growth as a result of a commodities boom, strongly linked to China's economic growth. This period came to an end as Brazil entered a slowdown in 2011, followed by what has become one of the worst recessions in its history. Despite this uneven trajectory and its more recent dependence on primary resources, such as agricultural and iron ore exports, the country has managed to produce world-class businesses in knowledge-intensive sectors, such as aerospace and automotive manufacturing.

Brazil was one of the leading countries that, in an attempt to encourage technology transfer, opposed US efforts to include IP in a new round of multilateral negotiations in the 1980s (Drahos

1997). This opposition led Brazil to be one of the first countries to be listed on the USTR Priority Watch List. It also led to threats of US trade sanctions. In the context of the Uruguay Round, these US threats were part of a deterrence strategy, as the Brazilian market was small enough not to wield any counter-retaliatory power but large enough to set an example to other countries (Marques Moreira 1990). However, Brazil resisted this pressure on the grounds that it did not acknowledge the extraterritoriality of US laws. It maintained this position even when the US retaliated with economic sanctions, and it submitted the case to the GATT in the hope that a multilateral setting could mitigate the power asymmetry vis-à-vis the US. Brazil eventually withdrew its complaint.

A decade later, with a larger economy, Brazil was willing and able to renew its opposition to maximalist patent initiatives. It became one of the most vocal detractors of maximalist patent policies in multilateral and regional arenas. It initiated development agendas in different forums, *inter alia*, WIPO, the World Health Organization, the United Nations High Commissioner for Refugees, the United Nations Development Program and the United Nations Environment Program. In so doing, Brazil engaged in the strategic use of normative debates (Sell and Prakash 2004), particularly on the negative effects of *TRIPs* on development and on public health (Drahos 1997; Correa 2000; Shadlen 2005; Deere Birkbeck 2008). It also used its regional weight within Mercosur to torpedo the US-led Free Trade Area of the Americas initiative in order to block the envisaged TRIPs-plus provisions (Carranza 2004).

Yet, Brazil has also adopted strong patent legislation that goes well beyond TRIPs' minimal requirements. For example, it made pharmaceutical products patentable ahead of the TRIPs deadline and it allows for the patentability of a new use of a previously patented invention. Brazil's paradoxical position as both a rule-taker and a rule-changer reflects domestic ideological cleavages. For several decades, the Brazilian economic elite has been divided between those in favour of developmentalist policies and those favouring more liberal positions (Montero 2014). On patents, perhaps the most notable division has been between the Brazilian Patent Office (INPI), known for its liberal and maximalist preferences, and the Foreign Affairs Ministry (Itamaraty) and the Health Ministry, espousing developmentalist views and acting as guardians of the fundamental constitutional right to health.

This bureaucratic rivalry has been amplified by foreign and transnational actors. In particular, the economic importance of foreign direct investment in Brazil and the dominance of transnational corporations in the Brazilian pharmaceutical industry lend the latter significant influence in the Brazilian Congress. There are also lively informal networks of market-oriented policy-makers and a group of academics known as *técnicos*. These academics played a key role throughout the 1990s as part of the pro-market reforms and they now favour maximalist rule-taking patent policies, which they see as crucial ingredients to promoting innovation and achieving long-term economic development. The joint effect of the pharmaceutical industry's lobbying efforts and *técnicos'* intellectual influence helps explain the passing of maximalist legislation, which was not in line with Brazil's positions expressed in multilateral forums.

However, interest groups in favour of minimalist policies include domestic and international NGOs with strong ties to the health ministry, the executive and its powerful advisory board (*Casa Civil*), as well as the left-leaning Workers' Party. As a result, important informal networks and exchanges between policy-makers espousing developmentalist ideas, NGO activists, diplomats and academics have come to influence Brazilian patent policies towards a minimalist approach and a rule-changing position.

Such minimalist positions have sometimes been challenged from within. This is particularly noticeable in debates on genetic resources and associated traditional knowledge. During the negotiation of the Convention on Biological Diversity, adopted in Rio in 1992, Brazil was a strong advocate of benefit-sharing policies in favour of generic resources providers and traditional knowledge holders. Within the government, the main sponsors of these policies have been the foreign and environment ministries. However, some indigenous groups in Brazil, supported by domestic and transnational activist groups, claim that the commodification of genetic resources and traditional knowledge would go against the traditions of many indigenous groups. As a result, Brazil has at

times shifted its international position, expressing concerns about the negative effects arising from benefit-sharing policies.

Coming from the opposite side of the spectrum, the agro-industrial sector has also expressed criticism of benefit-sharing policies. The sector is a crucial part of the Brazilian economy and an influential actor with strong representation in the Brazilian Congress (*bancada ruralista*). In interviews conducted for this research, the agro-industrial sector was mentioned as one of the main reasons for Brazil's failure to ratify the Nagoya Protocol on Genetic Resources and the failed attempts to adopt national benefit-sharing legislation.

Despite such challenges, the Brazilian governmental agency dealing with benefit-sharing issues, the *Conselho de Gestão do Patrimônio Genético*, was able to circumvent obstacles in Congress by securing the adoption of a number of executive orders on this matter. Thus, even if Brazil has not ratified the Nagoya Protocol, it remains an active participant in the benefit-sharing system. On this issue, like on many other patent-related debates, Brazil's global rule-changing activism has often been a way to introduce domestic changes, or to maintain and legitimise current practices.

Conclusion

This article asks how emerging countries adjust their preferences and behaviours to their changing position within an evolving global environment. It echoes a current debate about emerging economies' expected attitude toward the prevailing liberal order. While some scholars and practitioners expect emerging countries to build an alternative set of international institutions that better serve their interests (Barma *et al*. 2007), others argue that they will not directly contest the set of multilateral institutions that have enabled their rise (Ikenberry 2011: 57). We investigate this question by conducting a diachronic comparison of five emerging economies within the international patent regime.

Although each of our five countries started out as, to some degree, challengers of international patent norms, their positions have shifted over time. These changes were triggered, in the first instance, by exogenous pressures. In particular, coercion and treaty negotiations forced emerging countries to adopt rules initially believed to be economically, and in some cases culturally, detrimental. To different degrees, this initial coercive phase led to fragmentation of views in the state apparatus and in domestic business communities, placing those who saw maximalist rules as opportunities to spur innovation or to create rent for themselves in contestation with those who saw these policies as economically or socially detrimental, benefiting mainly foreign rule-makers. As a result of these domestic tensions, changes were neither clear-cut nor linear. All five countries studied here appeared ambivalent and at times endorsed simultaneously rule-taking and rule-breaking behaviours.

Perhaps more interestingly, significant differences appear among these non-linear transformative processes. Japan and Korea expressed their ambivalence by keeping a relatively low profile in multilateral settings and by shying away from state coalitions. They only became more pro-active once domestic constituents in favour of stronger patent protection grew in influence and pushed their governments to actively align themselves with rule-makers. China, in contrast, displayed a more complex position, with technocrats at the central level being more favourable towards maximalist policies, which several local/provincial governments often failed to implement due to the economic benefits for local businesses of a more minimalist IP system. More recently, in India and Brazil, powerful interest groups still strongly resist maximalist policies, although the intensity of this opposition fluctuates across time and across issues. Consequently, Indian and Brazilian ambiguities are expressed by what outsiders might perceive as inconsistencies. Rather than endorsing mainly rule-taking and rule-breaking behaviours, as Japan and Korea did when they were still ambivalent, India and Brazil (and, to a lesser degree, China) have also been, at times, vocal rule-changers.

The changing international context played a key role as a moderating variable affecting the preferences and behaviours of emerging countries. In particular, the adoption of the 1994 *TRIPs Agreement* was a turning point, sparking both international institutional proliferation as well as the growth of transnational activist networks. The creation of the WTO and the single undertaking left few

options for developing countries than to accept TRIPS provisions or risk losing access to main export markets. However, once adopted, countries that were coerced into accepting TRIPs sought to widen the policy options available to them by filling the gaps left in the agreement at other forums (Helfer 2004). Simultaneously, transnational networks played an increasingly important role in raising awareness of alternative policy options. While these groups existed before the *TRIPs Agreement*, the formation of TRIPs acted as a catalyst, consolidating a broad coalition encompassing activists, generic pharmaceuticals producers, consumer groups, academics and civil servants (Muzaka 2011). At the same time, other actors – in particular transgovernmental policy networks acting through bilateral exchanges – helped to diffuse maximalist policies.

We argue that these domestic–international linkages have led to a much more fragmented and polarised environment for more recent emerging economies. As a result of the proliferation of intergovernmental forums and the extension of transnational networks, emerging economies' domestic reforms have been more difficult to undertake, and their foreign policies have appeared to be more incoherent than ever. To be sure, Japan, Korea, China, India and Brazil differ in many different ways, including in their political system, industrial structure and ideological inclination. These domestic variations undoubtedly affected their different trajectories and we must remain careful when drawing conclusions from this cross-case comparison. Our findings nevertheless suggest that forum proliferation and network extension were contributing factors to recent emerging economies' more tortuous transformative process.

Two main theoretical conclusions, both related to non-linearity, can be inferred from this cross-case comparison. First, considering the changing international context, processes that were witnessed in the past might not be applicable in the future. This useful reminder of the importance of the historical context is of particular relevance for policy diffusion scholars: mechanisms that were once widespread might not be applicable in a different context and might be substituted by a variety of other mechanisms (Morin and Gold 2014). Second, the increasing complexity of international politics, involving an ever greater number of actors and institutions interacting in an ever greater number of ways, is not without consequences for foreign policy. While some scholars debate whether international complexity most benefits weak or powerful actors (Helfer 2004; Drezner 2009), our analysis suggests that international complexity seems to feed on and be nourished by the equally increasing complexity of domestic political systems. As such, international complexity not only enables and constrains actors, but it can also affect their internal dynamics. Forty years after scholars started discussing interactions between the second and third image of international relations (Gourevitch 1978), nascent complexity theory provides opportunities to reinvigorate this discussion under a new light.

Notes

1. We use the terms 'maximalist' and 'minimalist' in a relative sense. No country advocates for infinite patent term, nor for the total abrogation of the patent system.
2. Alternatively, rule-makers can be called 'hegemonic actors', and rule-breakers 'counter-hegemonic actors'.
3. Korea and Japan have become highly innovative economies. China's transformation is still ongoing; Brazil and India's is less certain.
4. We conducted interviews with academics, diplomats, policy-makers, activists and private sector representatives. For the case study of China, 16 interviews were conducted in Geneva and Beijing. For the case study of India, 14 interviews were conducted in Geneva and New Delhi. For the case study of Brazil, 15 interviews were conducted in Brasilia and Rio de Janeiro.

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