

Having Faith in IP: Empirical Evidence of IP Conversions

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The puzzle of global IP politics

The field of global intellectual property (IP) politics is booming. Still seen as esoteric in the mid-1990s, the number of new publications is now rapidly growing. Tellingly, at the 2011 Annual Convention of the International Studies Association, as many as 23 papers presented looked at the global governance of IP.¹

In exploring power struggles underlying the global IP regime, political scientists have built on two of the legal experts' legacies.² The first is a propensity to define the dependent variable in terms of legal standards for IP protection. This focus is exemplified by the few studies that aim at explaining anything other than legal standards, such as preferences, behaviours, practices, principles or worldviews related to IP.³ Concentrating on a single dependant variable, however, is not necessarily a scientific sin. Arguably, a focus on only one dependent variable but eclecticism in the search for significant independent variables is a fruitful strategy to advance a research program.

The second of the IP lawyers' legacies is a strong tendency to picture IP debates as binary oppositions. Political stances are located on a unidimensional continuum opposing the advocates of stronger IP protection with the supporters of weaker protection. The reference point used to define the meaning of the terms "strong" and "weak" evolve as new narratives are constructed to explain the past and to encapsulate aspirations for the future.⁴ At present, the division between "strong" and "weak" seems to be embodied by the Agreement on Trade-Related Aspects of Intellectual Property (TRIPs), which several OECD countries and businesses see as weak and outdated while many developing countries and nongovernmental organisations (NGOs) consider overly strong and unfair. The reality of political debates is obviously more complex than simplistic dichotomies. For analytical purposes, however, binary oppositions are useful heuristic devices to apprehend empirical realities.

¹ To be fair, political scientists are not the only ones researching the field of global IP politics. A number of legal scholars have pioneered the field, including James Boyle, Rosemary Coombe, Peter Drahos, Laurence Helfer and Peter Yu.

² For recent critical reviews of the literature on global IP politics, see S. Haunss and K. Shadlen, "Rethinking the Politics of Intellectual Property" in S. Haunss and K. Shadlen (eds), *Politics of Intellectual Property: Contestation Over the Ownership, Use and Control of Knowledge and Information* (Cheltenham: Edward Elgar, 2009). See also C. May (ed.), *The Political Economy of Intellectual Property Rights* (Cheltenham: Edward Elgar, 2010).

³ For a recent exception, see P. Drahos, *The Global Governance of Knowledge: Patent Offices and Their Clients* (Cambridge: Cambridge University Press, 2010).

⁴ D. Kahneman and A. Tversky, "Choices, Values, and Frames" (1984) 39 *American Psychologist* 341.

We accept and take on the above two legacies. With this article, we aim at explaining why some developing countries adopt US-style IP rules that go beyond those required by the TRIPs Agreement. For example, why does Guatemala authorise the patentability of plants although it does not have a viable biotechnology industry? Similarly, why has Cambodia criminalised the dissemination of technologies intended to circumvent copy protection while this measure solely benefits foreign copyright holders? How can we explain that these and some other developing countries have gone beyond their minimal obligations under the TRIPs Agreement and have adopted US-style rules?

With this article, we contribute to the disentanglement of this puzzling situation in two manners. First, we explore one oft-neglected reason for the adoption of US-style rules, i.e. the socialisation of decision-makers in the adopting country through interactions with experts in US IP law. Secondly, we rely on a more systematic conceptualisation and measurement of variables than has been adopted in many previous studies. Overall, we bring forward strong quantitative evidence that socialisation is a significant force in the export and import of IP rules.

Socialisation as a causal mechanism

For our purposes, socialisation can be defined as the process of internalising the social norms of a given community. Explaining the level of IP protection in developing countries through socialisation implies that interests are not exogenously given but socially constructed. We hypothesise that developing countries adopt US-like IP standards because they came to believe that, after being socialised to US social norms, these standards are appropriate for their own country.

IP rules are especially vulnerable to socially constructed beliefs. Notwithstanding the rich literature on the economics of IP, methodological constraints—especially the inability to control for all factors that drive innovation—have prevented the establishment of an optimal depth and breadth of IP protection. This exceptional level of scientific uncertainty leaves room for unexamined assumptions and persistent myths to govern discourse and policy-making.⁵ Moreover, IP lawmakers are guided by their own political values when determining the appropriate balance between short- and long-term objectives, or private and collective interests. These economic uncertainties and political dilemmas lead policymakers to rely on socially constructed norms when designing IP systems.

If IP is a matter of belief, then different faiths compete to convert decision-makers and to become the official creed, sacralised by domestic and international law.⁶ An increasing number of scholars use the concept of “frame” to describe and locate these competing views.⁷ A frame is a socially constructed cognitive filter that enables individuals to select and interpret relevant information in order to understand and respond to external events. Research on IP frames has reached two main findings, both consistent with the broader frame literature. First, frames adopted by decision-makers are usually rooted in pre-established norms, such as human rights, private property or fair trade. The frame that “IP protection = increased trade and investment = economic growth”, for example, attempts to reconcile IP with the

⁵ C. Garmon, “Intellectual Property Rights: Protecting the Creation of New Knowledge across Cultural Boundaries” (2002) 45 *American Behavioral Scientist* 1145; E.R. Gold et al., “The Unexamined Assumptions of Intellectual Property: Adopting an Evaluative Approach to Patenting Biotechnological Innovation” (2004) 18 *Public Affairs Quarterly* 299.

⁶ J. Boyle, “A Natural Experiment: Do We Want Faith-based IP Policy?”, *Financial Times*, November 22, 2004; E.R. Gold and J.-F. Morin, “From Agenda to Implementation: Working Outside the WIPO Box” in J. de Beer (ed.), *Implementing the World Intellectual Property Development Agenda* (Waterloo: Wilfred Laurier University Press, 2009).

⁷ D.J. Halbert, *Resisting Intellectual Property* (London: Routledge, 2005); L.R. Helfer, “Regime Shifting: The TRIPs Agreement and New Dynamics of International Intellectual Property Lawmaking” (2004) 29 *Yale Journal of International Law* 1; A. Kapczynski, “The Access to Knowledge Mobilisation and the New Politics of Intellectual Property” (2008) 117 *The Yale Law Journal* 804; J.-F. Morin, “The Life-Cycle of Transnational Issues: Lessons from the Access to Medicines Controversy” (2011) 25 *Global Society* 227; J.-F. Morin, “Rhetorical Discourses in International Patent Lawmaking: Property, Fairness, and Well-Being” [2008] *Asian Journal of WTO and International Health Law and Policy* 505; V. Muzaka, “Linkages, Contests and Overlaps in the Global Intellectual Property Rights Regime”, *European Journal of International Relations* (forthcoming); J.S. Odell and S.K. Sell, “Reframing the Issue: The WTO Coalition on Intellectual Property and Public Health 2001” in J. S. Odell (ed.), *Negotiating Trade: Developing Countries in the WTO and NAFTA* (Cambridge: Cambridge University Press, 2006); S.K. Sell and A. Prakash, “Using Ideas Strategically: The Contest between Business and NGO Networks in Intellectual Property Rights” (2004) 48 *International Studies Quarterly* 143.

established paradigm of liberalism. Secondly, IP scholars have found that successful frames take advantage of political opportunity structures, such as a crisis or policy failure, to reach out to decision-makers. The frame that “counterfeiting = funding for terrorism = insecurity”, for example, capitalised on the terrorist attacks of September 11.

While IP scholars have well documented the competing frames and the communities that hold them, the micro-processes through which a specific frame makes its way from original norm-entrepreneurs to lawmakers remain unclear. There are at least three different pathways of socialisation, each involving different intermediaries: governmental officials, non-state actors, and members of the local elite.

First, beliefs that are dominant in the United States could migrate to a developing country through direct contact between officials of both countries. In other policy domains, recent studies show that direct contact within intergovernmental organisations generates norm transfer.⁸ This is rather unlikely at either World Intellectual Property Organization (WIPO) or the World Trade Organization (WTO) as controversies are currently so intense at the multilateral level that they impede socialisation.⁹ Meaningful contact between US and developing countries officials are more likely to occur bilaterally. Training activities labelled as “technical assistance” or “capacity building” are especially well-suited for socialisation as they offer informal, confidential, insulated and technical settings.¹⁰ The WIPO Development Agenda has recently drawn attention to the policy implications of capacity building activities and many authors repeatedly warn against their potential adverse consequences.¹¹ Methodological limitations, however, have impeded a full assessment. Participant observation and archive analysis are out of reach because training sessions are usually confidential. Some studies rely on semi-structured interviews or surveys but with limited benefit as socialisation often leaves the “socialiser” and the “socialisee” unconscious of belief transfers. If both are convinced of the appropriateness of US-style IP norms for developing countries, the former would deny any malicious intention and the latter would refute being the passive victim of US capacity building. Given these methodological hurdles, the UK Commission on Intellectual Property Rights and others have renounced studying the impact of capacity building activities despite the frequent but still unproven claim that they are a major driver of socialisation.¹²

Secondly, non-state actors can serve as belief carriers. The vast majority of the above-mentioned framing literature follows the general trend of constructivism and focuses its attention on NGOs and their normative influence. The frames held by NGOs unquestionably have had a major impact on issues such as access to patented medicines and protection of traditional knowledge. Businesses, however, are engaged in

⁸ D. Bearce and S. Bondanella, “Intergovernmental Organisations, Socialisation, and Member-State Interest Convergence” (2007) 61 *International Organisation* 703; X. Cao, “Network of Intergovernmental Organisations and Convergence in Domestic Economic Policies” (2009) 53 *International Studies Quarterly* 1095; B. Greenhill, “The Company You Keep: International Socialisation and the Diffusion of Human Rights Norms” 54 *International Studies Quarterly* 127; J.C. Pevehouse, “Democracy from the Outside-in? *International Organisations and Democratisation*” (2002) 56 *International Organisation* 515.

⁹ M. Check, “The Limits of Informal Regulatory Cooperation in International Affairs: A Review of the Global Intellectual Property Regime” (2001) 33 *George Washington International Law Review* 307; J.-F. Morin and A. Orsini, “Complexity Is What States Make of It: The Case of Genetic Resources” (forthcoming).

¹⁰ J. Checkel, “International Institution and Socialisation in Europe: Introduction and Framework” (2005) 59 *International Organisation* 801; J. Checkel, “Why Comply? Social Learning and European Identity Change” (2001) 55 *International Organisation* 553.

¹¹ J. de Beer and C. Oguamanam, *Intellectual Property Training and Education: A Development Perspective* (Geneva: ICTSD, 2010); C. Deere Birkbeck and R. Marchant, *The Technical Assistance Principles of the WIPO Development Agenda and Their Practical Implementation* (Geneva: ICTSD, 2010); Drahos, *The Global Governance of Knowledge* (2010); Drahos, *The Global Governance of Knowledge* (2010); P. Drahos, “Trust Me: Patent Offices in Developing Countries” (2008) 32 *American Journal of Law and Medicine* 151; M. Kostecki, *Intellectual Property and Economic Development: What Technical Assistance to Redress the Balance of Favour of Developing Nations?* (Geneva: ICTSD, 2006); M. Leesli and T. Pengelly, *Assessing Technical Assistance Needs for Implementing the TRIPs Agreement in LDCs* (Geneva: ICTSD, 2007); D. Matthews, “TRIPs Flexibilities and Access to Medicines in Developing Countries: The Problem with Technical Assistance and Free Trade Agreement” (2005) 27 *EIPR* 420; D. Matthews and V. Munoz-Tellez, “Bilateral Technical Assistance and TRIPs: The United States, Japan, and the European Communities in Comparative Perspective” (2006) 9 *Journal of World Intellectual Property* 629; C. May, “Learning to Love Patents: Capacity Building, Intellectual Property and the (Re)production of Governance Norms in the ‘Developing World’” in E. Amann (ed.), *Regulating Development: Evidence from Africa and Latin America* (Cheltenham: Edward Elgar, 2006); S. Villanueva, *Intellectual Property-Related Technical Assistance: The Philippine Experience* (Geneva: ICTSD, 2005).

¹² Commission on Intellectual Property Rights, *Integrating Intellectual Property Rights and Development Policy* (2002), p.160.

socialisation as well.¹³ Although their capacity to invest and relocate provides them with the ability to use coercion, they can also engage in socialisation by trying to convince foreign lawmakers to follow the US model. There is some evidence that foreign investors are actively engaged in “public education” against counterfeiting and piracy.¹⁴ Arguably, foreign investors also act, behind closed doors, to socialise government officers and legislators. If the domestic business community is disproportionately populated by foreign investors, as opposed to local industry, one can anticipate that socialisation will be even more pronounced.¹⁵ Unfortunately, evidence of the socialisation led by non-state actors other than NGOs remain fractional and anecdotal.

Thirdly, foreign students who populate the LL.M programs of US law schools could convey US norms once they return to their home countries and join the local elite. Indeed, several authors argue that foreign legal education is a powerful driver of legal transplant from one country to another.¹⁶ More than officials participating in *ad hoc* training and lawmakers exposed to foreign investors, foreign students are immersed in US culture while conducting their studies. During their stay, they likely acquire not only the causal beliefs at the heart of IP, but also the worldviews and normative principles underlying IP, such as individualism, rationalism, liberalism and modernism predominant in the United States.¹⁷ On return to their home country, they integrate into the local community of lawyers, with its exclusive expertise, its authoritative language, and its political influence, thereby introducing exogenous norms regarding IP originating in the United States.¹⁸ Surprisingly, the impact of education of its elites on a country’s level of IP protection has never been studied systematically.

In a nutshell, socialisation is one of the causal mechanisms that offer much promise in explaining the adoption of US-style IP laws but is also one of the least understood. Many make assumptions but few bring strong empirical evidence to support their claims. Part of the problem is a tendency for the literature on IP politics to rely exclusively on qualitative analysis. For reasons presented above, socialisation is hard to document through direct observation, archive analyses, in-depth process-tracking, surveys, or interviews. To actually investigate the mechanics of socialisation, quantitative analysis drawing on a minimum of information for each country sounds a more promising strategy at this stage of the research program.

¹³ D. Matthews, *Globalising Intellectual Property Rights: The TRIPS Agreement* (London: Routledge, 2002); S. Oddi, “TRIPs—Natural Rights and a Polite Form of Economic Imperialism” (1996) 29 *Vanderbilt Journal of Transnational Law* 415; S.K. Sell, “The Origins of a Trade-Based Approach to Intellectual Property Protection: The Role of Industry Associations” (1995) 17 *Science Communication* 163; S.K. Sell and A. Prakash, “Using Ideas Strategically: The Contest Between Business and NGO Networks in Intellectual Property Rights” (2004) 48 *International Studies Quarterly* 143; P. Steidlemeier, “The Moral Legitimacy of Intellectual Property Claims: American Business and Developing Country Perspectives” (1993) 12 *Journal of Business Ethics* 157.

¹⁴ J.D. Aronson et al., *Protecting International Intellectual Property: A Report for the Pacific Council on International Policy* (Los Angeles: Pacific Council on International Policy, 1998); M. Yar, “The Rhetorics and Myths of Anti-Piracy Campaigns: Criminalisation, Moral Pedagogy and Capitalist Property Relations in the Classroom” (2008) 10 *New Media and Society* 605.

¹⁵ D.R. Kelemen and E.C. Sibbitt, “The Globalisation of American Law” (2004) 58 *International Organisation* 103.

¹⁶ C. Atkinson, “Does Soft Power Matter? A Comparative Analysis of Student Exchange Programs 1980–2006” (2010) 6 *Foreign Policy Analysis* 1; R. Brand and W. Rist (eds), *The Export of Legal Education: Its Promise and Impact in Transition Countries* (Farnham: Ashgate, 2009); Y. Dezalay and B. Garth, “The Import and Export of Law and Legal Institutions: International Strategies in National Palace Wars” in D. Nelken and J. Feest (eds), *Adapting Legal Cultures* (Oxford: Hart, 2001); U. Mattei, “A Theory of Imperial Law: A Study on U.S. Hegemony and the Latin Resistance” (2003) 10 *Indiana Journal of Global Legal Studies* 383; D.M. Trubek and M. Galanter, “Scholars in Self-Estrangement: Some Reflections on the Crisis in Law and Development Studies in the United States” (1974) 4 *Wisconsin Law Review* 1062; W. Twining, “Diffusion of Law: A Global Perspective” (2004) 49 *Journal of Legal Pluralism* 1; W. Wiegand, “The Reception of American Law in Europe” 39 *American Journal of Comparative Law* 229.

¹⁷ K. Burch, “Intellectual Property Rights and the Culture of Global Liberalism” (1995) 17 *Science Communication* 214; P. Drahos, *A Philosophy of Intellectual Property* (Dartmouth: Ashgate, 1996); C. May, *A Global Political Economy of Intellectual Property Right: A New Enclosure* (London: Routledge, 2000); C. May and S. Sell, *Intellectual Property Right: A Critical History* (Boulder: Lynne Rienner, 2006).

¹⁸ A.M. Burley and W. Mattli, “Europe Before the Court: A Political Theory of Legal Integration” (1993) 47 *International Organisation* 41; J. Jordana and D. Levi-Faur, “The Diffusion of Regulatory Capitalism in Latin America: Sectoral and National Channels in the Making of a New Order” (2005) 598 *The Annals of the American Academy of Political and Social Science* 102; Kapeczynski, “The Access to Knowledge Mobilisation and the New Politics of Intellectual Property” (2008) 117 *Yale Law Journal* 804; F. Kratochwil, *Rules, Norms, and Decisions: On the Conditions of Practical and Legal Reasoning in International Relations and Domestic Affairs* (Cambridge: Cambridge University Press, 1989); A. Newman, “Building Transnational Civil Liberties: Transgovernmental Entrepreneurs and the European Data Privacy Directive” (2008) 62 *International Organisation* 103; F. van Waarden and M. Drahos, “Courts and (Epistemic) Communities in the Convergence of Competition Policies” (2002) 9 *Journal of European Public Policy* 913.

Moreover, as Jeffery Chwieroth argues, “quantitative methods also offer the advantage of helping ideational researchers overcome objections by sceptics about the importance of social factors for a particular outcome”.¹⁹

Accounting for context

Any robust understanding of how socialisation drives changes in the IP law of developing countries must take into consideration the role that other forces play in concurrently shaping this outcome. This is particularly critical where quantitative research methods are adopted, as failure to account for the full range of causal factors can produce spurious results. This section presents three mechanisms already identified in the literature as alternative explanations for why developing countries integrate US-style IP rules: coercion, contractualisation and domestic economics.

The impact of US coercion on developing countries was the first identified explanation of US-style IP rule adoption and remains the best documented. Coercion occurs when an actor uses its material capability to force another actor to do what that second actor would not otherwise voluntarily do. The United States’s best-known coercive instrument is the so-called “Special 301”, a law requiring the United States Trade Representative (USTR) to publish, on a yearly basis, a Watch List and a Priority Watch List (PWL) of countries that “deny adequate and effective protection of intellectual property rights”.²⁰ The impact of this measure on the strengthening of IP protection in developing countries has been supported empirically through both qualitative²¹ and quantitative studies.²²

A second explanation for the adoption of US-style IP norms in developing countries, contractualisation, is based on the assumption that developing countries adopt higher IP standards in exchange for better access to the US market. The two partners secure this *quid pro quo* bargain through a bilateral treaty.²³ The literature on these agreements is largely comparative. Most studies compare US bilateral treaties with the TRIPs Agreement, conclude that they could be characterised as TRIPs-Plus agreements, and infer from this finding that these treaties could have adverse social and economic effects on developing countries.²⁴ Other studies compare US bilateral agreements with US law to reveal their imbalances,²⁵ earlier

¹⁹ J. Chwieroth, “Neoliberal Economists and Capital Account Liberalisation in Emerging Markets” (2007) 61 *International Organisation* 443.

²⁰ 19 USC § 2411.

²¹ J. Braithwaite and P. Drahos, *Global Business Regulation* (Cambridge: Cambridge University Press, 2000), p.17; P. Drahos, “Developing Countries and International Intellectual Property Standard-Setting” (2002) 5 *Journal of World Intellectual Property* 765; S.K. Sell, *Private Power, Public Law: The Globalisation of Intellectual Property Rights* (Cambridge: Cambridge University Press, 2003).

²² K.A. Elliott and J.D. Richardson, “Determinants and Effectiveness of Aggressively Unilateral US Trade Actions” in R.C. Feenstra (ed.), *The Effects of US Trade Protection and Promotion Policies* (Chicago: University of Chicago Press, 1997); C. Özden and E. Reinhardt, “The Perversity of Preferences: GSP and Developing Country Trade Policies, 1976–2000” (2005) 78 *Journal of Development Economics* 1; K.C. Shadlen, A. Schrank and M.J. Kurtz, “The Political Economy of Intellectual Property Protection: The Case of Software” (2005) 49 *International Studies Quarterly* 45; K. Zeng, “Trade Structure and the Effectiveness of America’s Aggressively Unilateral Trade Policy” (2002) 46 *International Studies Quarterly* 93.

²³ K.C. Shadlen, “Exchanging Development for Market Access? Deep Integration and Industrial Policy under Multilateral and Regional-Bilateral Trade Agreements” (2005) 12 *Review of International Political Economy* 750.

²⁴ F. Abbott, *Intellectual Property Provisions of Bilateral and Regional Trade Agreements in Light of US Federal Law* (Geneva: ICTSD-UNCTAD, 2006); C. Fink and P. Reichenmiller, *Tightening TRIPs: The Intellectual Property Provisions of Recent US Free Trade Agreements* (Washington: The World Bank, 2005); R. Mayne, *Regionalism, Bilateralism, and TRIPs Plus Agreements: The Threat to Developing Countries* (New York: PNUD, 2004); J.-F. Morin, “Tripping up TRIPs Debate: IP and Health” (2006) 1 *International Journal of Intellectual Property Management* 37; P. Roffe and C. Spennemann, “The Impact of FTAs on Public Health Policies and TRIPs Flexibilities” (2006) 1 *International Journal of Intellectual Property Management* 75; F. Rossi, “Free Trade Agreements and TRIPs-plus Measures” (2006) 1 *International Journal of Intellectual Property Management* 150; S.K. Sell, “TRIPs-Plus Free Trade Agreements and Access to Medicines” (2007) 28 *Liverpool Law Review* 41; K.C. Shadlen, “Exchanging Development for Market Access? Deep Integration and Industrial Policy under Multilateral and Regional-Bilateral Trade Agreements” (2005) 12 *Review of International Political Economy* 750.

²⁵ Abbott, *Intellectual Property Provisions of Bilateral and Regional Trade Agreements in Light of US Federal Law* (2006).

treaties to track historical trends,²⁶ European agreements to locate differences in trade strategies,²⁷ or current multilateral negotiations to assess their capacity to serve as negotiating leverage.²⁸ Unfortunately, few studies have gone beyond textual analysis to investigate their actual impact on developing countries' laws and policies. The levels of implementation remain largely unknown, although some studies suggest that developing countries might negotiate international IP standards knowing very well that they will not fully implement them domestically.²⁹ Consequently, the causal relation between the rise of bilateralism and the increased level of protection in developed countries is widely assumed rather than firmly established.

A third factor shaping the trajectory of IP protection in developing countries is domestic economics. Quantitative modelling has revealed that economic development generally exerts a curvilinear effect on the level of IP protection. While increases from the lowest levels of development tend to be associated with a lowering of IP protection, this effect weakens with greater development and then reverses direction such that increases in development are associated with increases in IP protection.³⁰ The theoretical explanation for this pattern, offered by Chen and Puttitanun, draws a link between economic growth and the quality of technological advances.³¹ Initial increases from a very low level of development will tend to involve technological advances that, more than anything else, make it easier for local firms to imitate or replicate the practices and products of foreign firms, thus encouraging local governments to relax IP rules that might otherwise protect the foreign firms and raise the costs of local ones. With further increases, however, come increasingly rapid advances in the type of technology that enables local firms to start innovating on their own. As advances in the second type of technology come to outstrip those in the first type, a tipping point is reached, such that increasing IP protection comes to serve the interests of local firms better than would unchanging or declining levels of protection. It bears mentioning that, for many developing countries, the relationship between economic development and IP protection will simply be monotonically positive in a study covering only the last 10 or 15 years; the level of development where the relationship with IP protection turns around is relatively quite low and many developing countries will already have passed this point by 1995, the study's earliest panel. In any event, any study estimating the forces behind the strengthening of IP law in developing countries must be sure to account for the influence of economic development within that country.

Data and methods

With the aim of testing the effects hypothesised in this study, we collected data on 49 developing countries for each year from 1995–2008, resulting in a sample of 686 country-years.³² Seeking to restrict the dataset to developing economies, we included only those countries that the World Bank ranked as low- or middle-income for more than half of the years covered.

²⁶ G.P. Krikorian and P. Szymkowiak, "Intellectual Property Rights in the Making: The Evolution of Intellectual Property Provisions in US Free Trade Agreements and Access to Medicine" (2007) 10 *Journal of World Intellectual Property* 388; R. Okediji, "Back to Bilateralism? Pendulum Swings in International Intellectual Property Protection" (2004) 125 *University of Ottawa Law and Technology Journal* 125; D. Vivas-Engui and M.J. Oliva, *Biodiversity and Intellectual Property in North-South Free Trade Agreements* (Geneva: ICTSD, 2010).

²⁷ M.K. El Said, "The European TRIPs-Plus Model and the Arab World: From Co-operation to Association—A New Era in the Global IPRs Regime?" (2007) 28 *Liverpool Law Review* 143; M.P. Pugatch, *A Transatlantic Divide? The US and EU's Approach to the International Regulation of Intellectual Property Trade-Related Agreements* (Brussels: ECIPE working paper, 2007).

²⁸ J.-F. Morin, "Multilateralising TRIPs-Plus Agreements: Is the US Strategy a Failure?" (2009) 12 *Journal of World Intellectual Property* 175.

²⁹ A. Mertha and R. Pahre, "Patently Misleading: Partial Implementation and Bargaining Leverage in Sino-American Negotiation on Intellectual Property Rights" (2005) 59 *International Organisation* 695.

³⁰ Y. Chen and T. Puttitanun, "Intellectual Property Rights and Innovation in Developing Countries" (2005) 78 *Journal of Development Economics* 474.

³¹ Y. Chen and T. Puttitanun, "Intellectual Property Rights and Innovation in Developing Countries" (2005) 78 *Journal of Development Economics* 474.

³² The 49 developing countries were selected because of the availability in French, English or Spanish of updated information on their IP laws from a reliable governmental or intergovernmental organisation.

In order to measure the relative adoption of US-style IP rules in any given country, we developed a new statistical index. Existing indexes are either limited to a specific IP right (e.g. patent or copyright) or include indicators, such as 20-year patent terms, largely irrelevant in the post-TRIPs period. The widely used Ginarte and Park index, for example, captures little meaningful variation after 1994 as it is based on indicators that thereafter became mandatory for WTO members.³³ Our index accounts for this shift in the IP landscape, assessing the level of adoption of certain IP rules that are not required by the TRIPs Agreement.³⁴

Our study operationalised the causal mechanism of IP socialisation using three indicators, each associated with an above-mentioned causal pathway. These are as follows:

- (1) the cumulative number of US-funded IP training events in which each country participated;
- (2) the stock of foreign direct investment as a percentage of GDP; and
- (3) the percentage of the population studying in the United States.

The effects of coercion, contractualisation and domestic economics were respectively controlled for by the variables of PWL designation, entry into US bilateral agreements and GDP per capita.

Where some delay in the effect of a variable was expected, that predictor was lagged accordingly in our estimations. This eliminated the observations from 1995, truncating the span of our study to the 1996–2008 period and reducing our sample to 637 country-years. Some variables were also transformed to adjust for non-linearity in their association with IP protection. These decisions are explained in the appendixes, which also contain for all variables descriptive statistics, data sources, the calculations for variable construction and transformations and missing values figures. The list of countries sampled is also provided.

Given the availability of panel data and our interest in explaining changes in IP law within countries, we chose to model the relationships hypothesised in this article using fixed effects regression. In addition to controlling for the influence of all predictors included in the model, this technique manages certain forms of unobserved heterogeneity quite well, eliminating bias arising from omitted variables, provided that they remain effectively fixed within countries. All models were estimated using robust standard errors to adjust for heteroskedasticity in the distribution of the error term.

Results and discussion

Our results strongly support the effect of socialisation on developing country adoption of US-style IP rules. Table 1 respectively sets out in its first three columns the bivariate effects of events sponsored by the United States, FDI per GDP and studying in the United States. Each of these three models shows the relationship between changes in a given socialisation factor and changes in IP law when no other variables are taken into account. In each instance, we see positive, highly significant relationships.

In order to rule out spuriousness, however, and isolate the independent effects of each factor, we must adjust for the influence of other causes as well. Column 4 sets out such a model, such that each socialisation factor is estimated together, while also holding constant the effects of GDP, PWL designation and bilateral agreements. Although the magnitude of each socialisation factor is substantially diminished from the bivariate estimates, each relationship remains positive and strongly significant. This is strong evidence of the positive effects of socialisation on the adoption of IP rules, supporting the still nascent theory relating to socialisation.

³³ J. Ginarte and W. Park, “Determinants of Patent Rights: A Cross-National Study” (1997) 26 *Research Policy* 283.

³⁴ The actual implementation of these rules and their interpretation by executive and judicial authorities, which can either obstruct or favour a transplantation process, were not taken into consideration.

Table 1: Impact of socialisation on developing countries' IP laws³⁵

Variables	1	2	3	4
Capacity building events	0.023*** (0.002)			0.008*** (0.002)
FDI stock		0.035*** (0.003)		0.015*** (0.003)
US Study			0.785*** (0.134)	0.241* (0.108)

These results raise some major policy implications. Evidence that socialisation is a significant carrier of US-style IP rules points to the need for developing countries to remain critical of assistance financed by other governments and to provide public fora in which IP issues are discussed by domestic stakeholders. Attention need also be paid to the other modes of norm transmission: study in the United States and foreign investors. While the advantages of studying in the United States and other countries are certainly significant, encouraging domestic scholarship and support of national academic institutions may act to at least question and assess the appropriateness of imported norms. Similarly, greater involvement by local investors and entrepreneurs can act to balance and critically assess the adoption of US norms promulgated by foreign investors.

In essence, this article constitutes an empirical basis for developing country delegates to ask, in Geneva-based international organisations, for the establishment of policies to make sure that technical assistance activities are demand-driven, transparent, neutral, and accountable. Technical assistance would have to be designed to better capture the reality of developing country creative and innovation systems and focus on long term capacity, policy independence and informed decision-makers. As Finnemore and Sikkink observe, “making successful law and policy requires an understanding of the pervasive influence of social norms of behaviour”.³⁶

Appendix 1: Sample of developing countries

Albania, Algeria, Argentina, Armenia, Bolivia, Botswana, Brazil, Bulgaria, Cambodia, Chile, China, Colombia, Costa Rica, Croatia, Dominican Republic, Egypt, El Salvador, Guatemala, Honduras, Hungary, India, Indonesia, Jamaica, Jordan, Kazakhstan, Kyrgyzstan, Laos, Lebanon, Malaysia, Mexico, Morocco, Nicaragua, Paraguay, Peru, Philippines, Poland, Romania, Russia, Senegal, Slovak Republic, South Africa, Thailand, Tunisia, Turkey, Turkmenistan, Ukraine, Venezuela, Vietnam, and Zambia.

Appendix 2: Variable definitions and data sources

Variable	Definition	Source
Index	The index comprises 8 indicators, each ranging theoretically from a minimum value of 0 to a maximum value of 1. In each case, higher scores indicate closer alignment with US-style rules. Scores across indicators are added, such that each indicator receives equal weight and the index ranges theoretically from a minimum value of 0 to a maximum value of 8.	WIPO and national government websites.
	(1) Patentability of plants: If no, 0; if yes, 1.	
	(2) Copyright term of 70 years or more after death: If no, 0; if yes, 1.	
	(3) Prohibition of the dissemination of technology used to circumvent measures that control access to copyrighted works: If no, 0; if yes, 1.	

³⁵ * significant at <0.05, ** significant at <0.01, *** significant at <0.001.

³⁶ M. Finnemore and K. Sikkink, “International Norm Dynamics and Political Change” (1998) 52 *International Organisation* 893.

Variable	Definition	Source
	(4) Ratification of UPOV91: If no, 0; if yes, 1. (5) Ratification of WIPO Internet Copyright Treaty: If no, 0; if yes, 1. (6) Ratification of the Brussels Convention on Satellite Signal: If no, 0; if yes, 1. (7) Ratification of the Patent Law treaty: If no, 0; if yes, 1. (8) Ratification of the PCT: If no, 0; if yes, 1.	
PWL Designation	Countries designated in the Special 301 Report from the year before as being (a) on the Priority Watch List; (b) a Priority Foreign Country (including potential PFCs); or (c) subject to section 306 monitoring receive a 1. All others receive a 0.	USTR
Bilateral us	“Bilateral agreements” refer to international agreements that (1) are considered as treaties under international law; (2) include significant TRIPs-Plus provisions; (3) have a bilateral or regional scope; (4) concluded after 1994; (5) signed by the United States. Where, in a given country-year, a bilateral agreement has been signed that is not in force, they receive a 1 on the signature flag. The signature indicator identifies years in which a country has signed (whether in that year or an earlier one) a bilateral agreement with the United States, but the agreement is not yet in force. We lagged this measure by one year in our regressions. The “in force” indicator identifies years in which a bilateral agreement signed with the United States is in force in the country.	USTR
GDP	Log (ln) of gross domestic product per capita	World Bank
Capacity building events	The total number of IP training events, whether sponsored by the US government or private actors, that the country has participated in since January 1995. The motivation for rendering the variable as a stock was to reflect the long-term nature of this investment.	Intellectual Property Rights Training Program Database
FDI stock	Total stock of foreign direct investment in a given country in a given year, as a percentage of the country’s GDP that year.	UNCTAD
US Study	The percentage of the country’s population studying in the United States. This variable was lagged by one year and transformed into its natural logarithm.	Institute for International Education

Appendix 3: Descriptive statistics

In the following table, the first column provides the overall rate of valid values for each variable. Only the 637 cases from 1996–2008 period were used to calculate these values, as the observations from 1995 were all excluded due to the one-year lags adopted. The following 14 columns display the average value for each given variable in each year for which data was collected. The arithmetic mean is reported for continuous variables, while a percentage is reported for dichotomous variables. Entry into a US bilateral agreement is represented by a single dichotomous variable flagging countries in which either the signature or the in force indicator would read 1. The averages are raw, reflecting neither the lagging nor the mathematical transformations adopted in modelling.

Variable	% cases valid	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Index	100	0.61	0.67	0.73	0.86	1.02	1.18	1.35	1.69	1.92	2.04	2.22	2.55	2.65	2.82
GDP/Pop.	100	2134	2235	2330	2289	2223	2292	2301	2298	2596	3054	3510	3931	4693	5498
PWL	100	6%	10%	16%	20%	24%	22%	29%	27%	22%	24%	27%	24%	24%	16%
US BA	100	0%	0%	0%	0%	0%	0%	2%	2%	4%	6%	18%	20%	20%	20%
US Study	100	0.013	0.013	0.013	0.013	0.014	0.015	0.016	0.017	0.017	0.016	0.015	0.014	0.014	0.013
FDI	99.4	14.9	16.8	19.4	24.2	27.0	28.8	29.7	32.0	33.2	33.5	33.5	36.0	39.5	35.4

Variable	% cases valid	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Events	100	0.0	1.5	12.5	15.9	18.9	23.7	29.8	34.5	40.1	43.6	46.8	50.8	58.0	64.2