Review of International Political Economy, 2014
Vol. 21, No. 2, 275–309, http://dx.doi.org/10.1080/09692290.2013.819812

Paradigm shift in the global IP regime: The agency of academics

Jean-Frédéric Morin

Department of Political Science, Université Libre de Bruxelles, Brussels, Belgium

ABSTRACT

The global intellectual property (IP) regime is in the midst of a paradigm shift in favour of greater access to protected work. Current explanations of this paradigm shift emphasize the agency of transnational advocacy networks, but ignore the role of academics. Scholars interested in global IP politics have failed to engage in reflexive thinking. Building on the results from a survey of 1679 IP experts, this article argues that a community of academics successfully broke the policy monopoly of practitioners over IP expertise. They instilled some scepticism concerning the social and economic impacts of IP among their students as well as in the broader community of IP experts. They also provided expert knowledge that was widely amplified by non-governmental organizations (NGOs) and some intergovernmental organizations, acting as echo chambers to reach national decision makers. By making these claims, this article illustrates how epistemic communities actively collaborate with other transnational networks, rather than competing with them, and how they can promote a paradigm change by generating, rather than reducing, uncertainty.

KEYWORDS

Intellectual property; epistemic community; professions; patent; copyright; transnational network; lawyers; paradigm shift; World Intellectual Property Organization (WIPO); survey.

The global intellectual property (IP) regime is currently in the midst of a paradigm shift. Until the early 2000s, the prevailing discourse was promoting the worldwide harmonization of IP rights, modelled on high American and European standards of protection. According to this one-size-fits-all discourse, the same set of rules should be applicable for every field of innovation, irrespective of their social, environmental or cultural value,

and in every nation, irrespective of their level of economic development. Under this paradigm, each new multilateral IP agreement limited further the authorized exceptions and raised the level of protection in developing countries, including the 1991 International Convention of for the Protection of New Varieties of Plants, the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) and the 1996 Copyright Treaty of the World Intellectual Property Organization (WIPO). As late as 2003, the Director General of the WIPO wrote that IP laws are 'an essential component of economic strategy regardless of whether the country is developed or developing' (Idris, 2003: 133).

A decade later, to the dismay of several stakeholders, this continuous extension of IP protection through multilateral negotiations has stopped. The hot topics of the late 1990s, such as the patentability of higher life forms, the extension of copyright term to 75 years, and the development of *sui generis* protection for databases, are no longer on the negotiating table. They were not even included in the list of agenda items of the World Trade Organization (WTO) Doha Round launched in 2001. At WIPO, the last remaining negotiation that was supposed to favour an upward harmonization of IP laws, the Substantive Patent Law Treaty, was put on hold in 2006.

Some developed countries initially reacted to these obstructions at the multilateral level by promoting stronger IP protection in their bilateral free trade agreements with developing countries. However, the IP provisions of these bilateral agreements recently became highly controversial as well. As a result, the bilateral wave is slowly eroding and the most recent bilateral agreements do not go as far as those concluded in the early 2000s (Morin, 2009).

Change is even perceptible domestically, at the centre of gravity of the global IP regime. In 2012, after intense and highly visible campaigning, the Stop Online Piracy Act and the PROTECT IP Act bills were defeated in the United States Congress. In the same year, the European Parliament rejected, in an unprecedented move, the nti-Counterfeiting Trade Agreement negotiated by the European Commission.

Instead of promoting upward harmonization, the emerging discourse of the global IP regime advocates for greater policy flexibility and greater access to knowledge, especially for developing countries. The changing agenda of multilateral negotiations provides strong evidence of this paradigm shift. In 2007, WIPO members adopted the Development Agenda, a set of 45 recommendations to adjust WIPO's activities to the specific needs of developing countries. Since then, multilateral IP negotiations focus on issues such as patients' access to medicines, Internet users' access to information, farmers' access to seeds, programmers' access to source codes, visually impaired people's access to copyrighted works, and students' access to scientific articles.

To be sure, this paradigm shift has still to materialize in significant legal reforms. Some non-governmental organizations (NGOs), like Knowledge Ecology International, advocate for the adoption of a new treaty on access to knowledge, but such a treaty currently remains out of sight. Nevertheless, modest legal initiatives based on the new paradigm have already been adopted: WTO members agreed in 2003 to relax some requirements of the TRIPs agreement in order to provide for greater access to medicines in developing countries; the 2001 Food and Agriculture Organization (FAO) International Treaty on Plant Genetic Resources dissuades plant breeders from filing IP applications if they use certain crops; and WIPO members are actively working on a treaty to facilitate access to published works by persons with print disabilities. The paradigm shift in favour of greater flexibility and access is not yet completed, but is slowly gaining ascendance (May, 2007; Kapczynski, 2008; De Beer, 2009; Muzaka, 2011; Sell, 2013).

This paradigm shift in the making calls for explanation. To be sure, new ideas are not self-generated, but actively promoted by entrepreneurs. In the case of the global IP regime, these entrepreneurs are not simply government representatives. Most governments from high-income countries still advocate for a global strengthening of IP rights and stricter enforcement measures. Conversely, many developing countries have been continuously advocating for special and differential treatment since the 1960s, without much success until recently.

This article argues that the paradigm shift in the global IP regime is rather the result of the emergence of actors who were previously too disinterested or disorganized to play an active role in multilateral debates. IP politics have long been characterized by a collective action problem, in which users of IP protected works do not have sufficient individual interest to counterbalance the agency of IP owners protecting their rent. Only a change in the structure of the actors involved in global IP politics can lead to a paradigm shift.

By making this claim, this article builds on a well-established literature on the agency of non-state actors in global IP politics. In particular, recent studies have convincingly shown that the transnational campaigns of some NGOs, especially those interested in global health and environmental protection, as well as the rise of some social movements, including farmers' groups and Internet activists, are contributing to the paradigm shift ('t Hoen, 2002; Helfer, 2004; Sell and Prakash, 2004; Halbert, 2005; Menescal, 2005; Kapczynski, 2008; Coleman, 2009; Morin, 2010; Matthews, 2011; Dobusch and Quack, 2013; Schneider, 2013; Sell, 2013).

The contribution of academics to this paradigm shift, however, has so far remained under-documented. In an otherwise brilliant article on the contest between NGOs and business networks to influence global IP politics, Susan Sell and Aseem Prakash acknowledge in a footnote that experts

could constitute a 'third type of transnational network', but they assume that it is 'not relevant for [their] analysis' and decide to 'focus only on business and NGO networks' (2004: 147). This article challenges this assumption and argues that a transnational community of IP academics is making a significant contribution to the paradigm shift, in close cooperation with NGOs and the secretariats of some intergovernmental organizations.

More particularly, academics' authoritative claims to knowledge are breaking with the previous monopoly of practitioners over IP expertise. Until recently, the global IP regime could be rightly described as a 'policy monopoly' (Baumgartner and Jones, 1993: 6). This monopoly was held by a closed and restricted circle of attorneys, agents, examiners and civil servants, all specialized in IP law and grouped in associations such as the International Association for the Protection of Intellectual Property, created in 1897 and claiming 'almost 9,000 members representing more than 100 countries' (AIPPI, 2013). These practitioners share a common culture, including a technical language and generally positive feelings about the established laws and institutions that provide the framework for their professions. They find themselves in the privileged position of having both a material interest in the extension of the IP system and, until recently, exclusivity over expertise. Under their policy monopoly, the paradigm governing the global IP regime and promoting its continuous extension remained relatively stable for several decades, until IP academics added their dissenting voice to the concert of criticisms mounting towards the end of the 1990s (Braithwaite and Drahos, 2000; Sell, 2003; May and Sell, 2006).

This article not only provides a more complex mapping of actors involved in the global IP regime and a more complete explanation for its current paradigm shift, but also a friendly contribution to the epistemic community literature. This literature has rightly been criticized for neglecting some fields of knowledge, for overlooking interactions among various transnational networks, for under-theorizing structures holding a community together, and for discounting the power dynamics underlying knowledge production. These limitations, however, are not inherent to the concept of epistemic community, and this article illustrates how it could be unfolded to address them.

The remainder of the article is organized into six sections. The first critically reviews the epistemic literature. The second introduces the method used to identify the contribution of IP scholars to the paradigm shift. The third provides evidence that profession is a key dimension in structuring individual beliefs on IP. The fourth presents some causal, normative and epistemological beliefs held by a majority of IP academics, in comparison with other experts involved in the global IP regime. The fifth offers evidence that academics actively contributed to policy debate in partnership with NGOs and some national and international civil servants. The

sixth section assesses their influence, inside and outside the classroom. The conclusion recalls this article's contributions.

THEORETICAL FRAMEWORK

The agency of academics in world politics has often been analysed through the lens of the epistemic community concept. According to Peter Haas' seminal and still helpful definition, an epistemic community 'is a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain' (1992: 3). Its members share four important characteristics: normative beliefs, causal beliefs, epistemological criteria and a common policy enterprise.

Despite some initial enthusiasm in the 1990s, the concept of the epistemic community has drawn less theoretical attention in recent years. As Mai'a Davis Cross rightly notes, 'the utility and explanatory power of the concept has been seriously under-recognized' (2013: 159). In particular, it has been used and interpreted more narrowly than actually required, in at least four different aspects.

First, the policy fields and the types of expertise considered for the case studies have been limited. Although Haas acknowledged from the onset that 'epistemic communities need not be made up of natural scientists' (1992: 3), the literature has largely followed Haas' own empirical interests and remained focused on natural sciences. Countless studies have looked at the influence of scientists on global environmental politics. Anthony Zito even explicitly endorsed this bias by hypothesizing that 'problems involving accepted quantitative data (compared to data that is highly subjective or qualitative) [and] natural systems (such as the environment) as opposed to issues involving social systems [. . .] create favorable conditions for epistemic communities to influence policy actors' (2001: 589). Yet, few case studies have shown that networks of economists can also act like epistemic communities and mobilize their socially recognized expertise to influence policymakers (Drake and Nicolaïdis, 1992; Ikenberry, 1992; Verdun, 1999; Chwieroth, 2007; Kogut and Macpherson, 2011). Unfortunately, studies applying the concept of epistemic communities to other fields of knowledge remain few and far between.

Although it has rarely been conceptualized as such, a network of legal experts could also constitute an epistemic community. Law is perceived by outsiders as a technical, complex and arcane field, providing legal experts with socially recognized expertise. This expertise then serves as a barrier to entry and a legitimate source from which to make authoritative policy claims. These claims, however, are not value-neutral. Law is a mode of reasoning, a language on its own, based on several implicit assumptions

and carrying a substantial amount of normative, causal and epistemological beliefs (Kratochwil, 1989). It defines what is just, how justice can be established, and what claims are worth considering for restoring justice. Moreover, legal experts often mobilize their expertise to be actively engaged in policy enterprises, even transnationally. Previous studies have shown that the active engagement of legal experts has directly contributed to the global harmonization of contract law (Braithwaite and Drahos, 2000), administrative law (Jordana and Levi-Faur, 2005), competition law (Van Waarden and Drahos, 2002), corporate law (Quack, 2007) and litigation procedures (Kelemen and Sibbit, 2004). The role of legal experts in the European integration process (Burley and Mattli, 1993; Newman, 2008) and in the Americanization of some Latin American countries has been especially well documented (Gardner, 1980; Dezalay and Garth, 2002; Mattei, 2003). Like natural science, law masks political conflicts, carries political ideas and could be mobilized by experts for political change. It is thus surprising that the fitting concept of epistemic community has so rarely been used to analyse the influence of legal experts.

A second limitation of the epistemic community literature is its narrow understanding of the intellectual environment in which experts act and interact. In particular, it tends to overestimate the degree of consensus among knowledgeable experts. Most case studies assume that knowledge remains uncontested and that only one epistemic community operates per policy field. While the epistemic community literature has successfully highlighted the role of knowledge in politics, it has largely failed to theorize the politics of knowledge (Litfin, 1995; Toke, 1999; Antoniades, 2003).

In reality, there are constant disagreements among experts about knowledge claims, and these disagreements create and sustain rivalry among various epistemic communities. Rival communities compete for influence over policymakers, mobilizing different resources and using different tactics. Privileged epistemic communities are those that have previously imposed their frame on public debates, succeeded in influencing policymakers, and benefit from established institutions. Policymakers relying on their expertise could even provide them with additional resources to sustain their dominance. This mutual support between knowledge-holders and power-holders makes paradigm shifts rare and unlikely. Nevertheless, knowledge rarely remains uncontested and, at times, 'counter-epistemic communities' could join forces with political challengers and succeed, incrementally or abruptly, in establishing a new paradigm (Youde, 2005).

A third limitation of the epistemic community literature is its under-conceptualization of the structures holding a network of experts together. Clair Gough and Simon Shackley argued that, within an epistemic community, 'scientific knowledge is the glue that helps to keep policy actors committed' (2001: 332). However, one must recognize that an epistemic

community cannot solely and directly emanate from shared causal beliefs. Otherwise, all experts of a given field would likely be members of the same epistemic community, depriving the concept of its specificity and interest. While all members of an epistemic community are experts in the same field, the criterion of expertise is too encompassing to serve as their only pivotal structure.

Likewise, shared normative principles and a policy enterprise are insufficient to identify an epistemic community. By definition, knowledge is 'the professionally mediated body of theory and information that transcends prevailing lines of ideological cleavage' (Haas, 1980: 368). If a network of experts is recognized as driven primarily by ideological motives, it would not be able to make authoritative claims to knowledge and would, therefore, not qualify as an epistemic community. An epistemic community can take active part in an ideological debate and contribute to a discursive coalition, but political ideology alone cannot define an epistemic community.

Arguably, professions powerfully structure experts' beliefs and social relations (Cross, 2013: 148). To be sure, not all members of a given profession are part of the same epistemic community, or even part of an epistemic community at all. This truism, repeated *ad nauseam* in the literature, does not mean that professions could not provide a structural basis on which one or several epistemic communities could grow. Professions are both important sites of socialization and important markers of identity. Recognizing professions as a platform for epistemic communities is also consistent with the idea that various epistemic communities compete against each other. In any given policy field, there are usually several professions with recognized expertise and authoritative claims to policy-relevant knowledge competing to assert their authority and to extend their jurisdiction (Abbott, 1988; Fourcade, 2006; Seabrooke, 2011).

It should be noted that several professions are themselves structured by institutions, including professional associations and regulations. Their status, practices and relations also vary from one national culture to another. Recent comparative studies have shown that professionals from different countries hold different normative, causal and epistemological beliefs, even on issues that might seem highly technical (Mitchell *et al.*, 2007; Fourcade, 2009). By extension, one could assume that epistemic communities often have deep roots in one particular country or group of countries. That said, domestic success is not a precondition for global influence. An epistemic community grounded in one group of countries can have greater influence in another group of countries

The fourth limitation of the epistemic community literature is its flawed conceptualization of influence (Sebenius, 1992). Too often, the influence of an epistemic community is seen as the mere provision of information in the context of uncertainty, providing a common focal point to political actors

struggling to cooperate (Goldstein and Keohane, 1993). Communicating knowledge, however, could achieve much more than the mere transmission of information. Knowledge can constitute new actors and delineate the interests of existing ones. It can also articulate new problems, generate political opportunities and create complexity by linking various policy issues together, shaping 'the very boundaries and points of contention within a field' (Sending, 2011).

Thus, knowledge does not necessarily reduce uncertainty, but can generate it as well. An emerging epistemic community that wants to challenge an established one would likely communicate its knowledge to produce uncertainty. For example, the few climate experts criticizing the global climate change regime often argue that earth science is imprecise and uncertain, rather than claiming that anthropic emissions do not affect the climate (Oreskes and Conway, 2010). Likewise, economists challenging international aid policies often claim that economics is too uncertain to offer recipes for economic growth (Easterly, 2001). If one recognizes that uncertainty is socially constructed, it can no longer be considered as a scope condition for epistemic communities' influence, as was so often assumed. Rather, it could very well be the manifestation of an emerging epistemic community's influence.

Related to this last point, the epistemic community literature has sustained a narrow understanding of the target of influence. Several studies assess the influence of epistemic communities as if they were one more lobbying group directly targeting policy-makers, operating alongside NGOs, ethnic groups, labour unions and businesses (Peterson, 1992; Jacob and Page, 2005). In fact, these different actors interact with each other in a common social environment. Transnational actors from different 'linked professional ecologies', including from advocacy, academia and international bureaucracies, can cooperate and create discursive coalitions to disseminate certain knowledge claims (Stone, 2004; Abbott, 2005; Seabrooke, 2011). Some actors can act as 'knowledge-brokers' for others (Litfin, 1995) and professional mobility among linked ecologies can contribute to the diffusion of certain knowledge claims (Chwieroth, 2008; Seabrooke and Tsingou, 2009). The flows of ideas within discourses and the circulation of professionals within linked ecologies operate in synergy, connecting ideas and professionals to the point that, eventually, they challenge the dominant paradigm.

These four limitations partly explain why the epistemic community literature has yet to reach its full potential. That said, limited use and interpretation does not mean that the concept, with its original definition, should be rejected. Most criticisms actually call for a return to the epistemological foundations of the concept. A 'neo-classical' view of epistemic communities would look at experts in any field of knowledge, acknowledge the potential for competition among rival epistemic communities, consider how

various institutions structure communities, and study the constitutive and performative capacity of knowledge claims. It would, however, remain true to the entire literature by being centred on the agency of experts.

DATA AND METHODS

It is notoriously difficult to map a network of experts and to document its beliefs and policy enterprise. Undeniably, every technique comes with its own drawbacks. One of the most commonly used approaches in the epistemic community literature is process tracing informed by semi-structured interviews with key informants. It often leads to fine-grained qualitative information on causal chains, but it makes difficult the isolation of the specific role of a given community. In contrast, social network analysis and prosopographical analysis allow for quantitative measurement and systematic comparison, but require the researcher to simply assume that individuals working together or having studied together share normative, causal and epistemic beliefs. Text-based discourse analysis is useful to track inter-textuality and identify shared beliefs, but tends to minimize the agency of less prolific authors who are nevertheless actively involved in the common policy enterprise.

This article overcomes some of these drawbacks by relying on an original survey of IP experts, defined as anyone devoting at least 5 per cent of his working time to IP issues. This data collection strategy offers three main benefits. Firstly, it enables the collection of specific data on respondents' beliefs, sources of influence, and policy enterprise. Secondly, a survey can be circulated to a high number of individuals, enabling statistically meaningful comparisons among different communities. Thirdly, the private and confidential nature of a survey discourages public posturing, especially for respondents engaged in a policy enterprise, and encourages candid expressions of personal views, especially from respondents who cannot speak in the name of their organization.

It was possible to conduct a survey for this project because previous studies had already explored the paradigm shift of the global IP regime. Surveys require that a specific frame of close-ended questions be imposed on respondents, precluding the identification of new ideas that were not anticipated by the survey designer. Since other studies had already identified the key ideas constituting the paradigm shift in the global IP regime, it was possible to build a questionnaire with the objective of mapping more precisely the diffusion of these ideas.

More specifically, after a pre-qualification question on the percentage of working time devoted to IP-related issues, the questionnaire includes three sets of questions. The first collected data about demographic information, notably country of birth, education and profession. The second set of questions looked at respondents' sources of information on IP as well

as at their efforts to transmit information. Finally, the third set of questions probed respondents on their IP-related beliefs, including their normative beliefs on the appropriateness of protecting IP, their causal beliefs on the social and economic impacts of IP, and their epistemological criteria to assess new information on IP.

To facilitate the analysis, some answers to this third set of questions were combined to create an index, called the PARADIGM INDEX. This index aims at locating the respondents' general views on a unidimensional continuum, opposing the advocates of the traditional paradigm, favouring upward harmonization or IP protection (higher values on the PARADIGM INDEX), to the supporters of the new paradigm, favouring greater flexibility and access (lower values on the PARADIGM INDEX).[1] The discrete scale of this PARADIGM INDEX is made up of nine equality-weighted indicators, ranging from 0 to 5. To minimize the 'acquiescence bias' effect, the survey includes positive and negative indicators appearing in a randomized order. Agreeing (slightly, moderately or strongly) with assertions in the left-hand column of Table 1 is considered as denoting relatively higher support for the emerging paradigm, while agreeing (slightly, moderately or strongly) with assertions in the right-hand column suggests higher relative support for the traditional paradigm.

The survey was available exclusively on the Internet. Presumably, the vast majority of IP experts are frequent Internet users, although respondents from the least-developed countries with unstable Internet connections might have been under-represented as a result of this technique. Email invitations to fill out the survey were sent to 10,135

Table 1 Indicators of the PARADIGM INDEX

Indicators of the emerging paradigm	Indicators of the traditional paradigm
1. IP treaties should better take into account other policy areas, including health, education, environment and agriculture.	1. The right to have an IPR over one's invention/creation should be considered as an international human right.
2. IP treaties should provide relaxed standards for developing countries.	2. Piracy and counterfeiting should be considered crimes akin to stealing tangible goods.
3. The public domain is a commons that needs to be protected.	3. IPRs are effective incentives for investment in R&D.
4. The free sharing of knowledge fosters innovation and creativity.	4. IP enforcement should be considered a security issue as piracy and counterfeiting can fund organized crime and terrorist groups.
5. Cultural and philosophical assumptions of IPRs are typical of Western cultures.	

potential respondents, whose names and email addresses were collected from various partner organizations, including major conference organizers, professional associations, intergovernmental organizations and specialized news providers. All responses were collected from 1 March to 31 March 2012. To maximize the geographical coverage and response rate, the survey was made available in English, French and Spanish. As an incentive, respondents were promised access to the aggregate results in April 2012 if they filled out the survey in full.[2]

In all, 2299 persons started the survey and 1679 completed it fully.[3] If the sample was representative of the overall population, 1,679 respondents with a response distribution of 50 per cent and a confidence level of 95 per cent would give a margin of error of 2.39 per cent. There is, however, some uncertainty regarding the representativeness of the sample (see the Appendix for descriptive statistics). As described above, the respondents were not selected randomly since the characteristics and the boundaries of the targeted population are unknown. This is the most serious limitation of this method and the results must be interpreted with caution. That said, as the next section shows, sufficient information was obtained on several key demographic variables to control statistically for them.

PROFESSIONAL DISCORDS

According to Susan Sell, the global IP regime is 'reminiscent of the Catholic Church when the Bible was exclusively in Latin', as only a handful of IP experts are the 'privileged purveyors of expertise as was the Latin-trained clergy' (2003: 99). Indisputably, IP law is a complex and arcane field, even for most lawyers. But to build on the analogy of the Catholic Church, results from the survey suggest that a schism occurred among IP experts and that a group of reformists now oppose proponents of the orthodoxy.

Clearly, the IP experts surveyed are not part of the same community. Their normative, causal and epistemological beliefs vary greatly. These variations, however, are not random, but structured along some key variables. The column, PARADIGM INDEX, of Table 2 presents the relations of some demographic variables with the PARADIGM INDEX (see the Appendix for a description of the variables). The constant of 20,036 refers to the expected value of the PARADIGM INDEX if all the demographic variables of Table 2 would have a null value.[4] In a multivariate model, the demographic variables with a statistically significant effect on this constant include COUNTRY OF BIRTH, discipline of education (LAW AND ECONOMICS DEGREE), YEARS OF EDUCATION, COUNTRY OF EDUCATION, primary areas of interest (PATENT, COPYRIGHT, TRADEMARK, or OTHER IPR), professional sector (GOVERNMENT, ACADEMIC, INTERGOV, ATTORNEY, BUSINESS, NGO, or OTHER SECTORS), percentage of working TIME DEVOTED TO IP, and number of YEARS

Table 2 Effects of demographic variables on the PARADIGM INDEX and CERTAINTY (n = 1414)

Demographic variables		PARADIGM INDEX	CERTAINTY
COUNTRY OF BIRTH		2.319 (0.596)***	−0.542 (0.114)***
LAW DEGREE		1.722 (0.513)***	−0.010 (0.101)
ECONOMICS DEGREE		1.828 (0.730)**	0.076 (0.143)
YEARS OF EDUCATION		−0.481 (0.220)**	−0.049 (0.045)
COUNTRY OF EDUCATION		−2.186 (0.664)***	0.1577 (0.1364)
INTEREST FOR POLICY-MAKING		1.192 (0.459)***	0.232 (0.08)***
Primary expertise	PATENT	Reference category for areas of expertise	
	COPYRIGHT	−0.530 (0.652)	−0.214 (0.109)**
	TRADEMARK	0.557 (0.515)	0.03 (0.106)
	OTHER IPR	0.361 (0.777)	0.1789 (0.140)
Professional sector	GOVERNMENT	Reference category for professional sector	
	ACADEMIC	−5.418 (0.758)***	−0.435 (0.143)***
	INTERGOV	−3.117 (1.023)***	−0.081 (0.228)
	ATTORNEY	0.244 (0.633)	−0.188 (0.128)
	BUSINESS	0.685 (0.781)	−0.128 (0.151)
	NGO	−9.577 (1.194)***	−0.188 (0.223)
	OTHER SECTORS	−0.703 (2.176)	−0.316 (0.336)
TIME DEVOTED TO IP		1.388 (0.530)***	0.101 (0.098)
YEARS OF EXPERIENCE		0.625 (0.230)***	0.016 (0.045)
Constant		20.036 (1.464)***	2.307 (0.315)***

Notes: Regression performed with StataSE12 linear regression function and robust standard error. Standard errors in parentheses. *significant at 0.1; **significant at 0.05; ***significant at 0.01.

OF EXPERIENCE. All these variables are partial predictors of a respondent's score on the PARADIGM INDEX.

Among all the demographic variables affecting the PARADIGM INDEX, professional sectors appear to have the greatest magnitude. *Ceteris paribus*, NGO activists and, to a lesser degree, academics and international civil servants, expressed stronger support for the emerging paradigm than other professional groups. Conversely, no significant differences appear between attorneys, national civil servants and employees of the business sector in their relative support for the traditional paradigm.

These trends are apparently being reinforced. A survey question asked respondents if they had changed their views on the appropriate level of IP protection in the last 10 years. Around half of all respondents (44.9 per cent, or 833 of 1668 respondents) answered positively, while the rest claimed either to not have changed their view or to have been professionally active in IP for less than 10 years. Among NGO advocates, academics and international civil servants who reported having changed their views, a clear majority (72.1 per cent, or 202 of 280 respondents) claimed to have

become generally more favourable toward weaker IP protection. On the other hand, a majority of IP experts working for national governments, law firms and businesses (73.5 per cent, or 404 of 549 respondents) said they had become more favourable to stronger IP protection.

Moreover, the more a respondent expressed an extreme view on the indicators building the PARADIGM INDEX, in one direction or the other, the more likely he was to have changed his view in the last decade towards an even more extreme position. The 485 respondents who reported having become more favourable to stronger IP protection ended with a mean score of 26.4 on the PARADIGM INDEX, while the 348 respondents who reported having become more favourable to weaker IP protection ended with a mean score of 15.6. Those who claimed to have not changed their views in the last decade and those who have worked on IP for less than 10 years occupy a middle ground, with mean scores of 22.9 and 19.5, respectively. These results suggest that IP debates are increasingly polarized, presumably amplifying the ideological clash between professional sectors.

Interestingly, profession is a better predictor of scores on the PARADIGM INDEX than country of birth. More specifically, the magnitude of the difference on the PARADIGM INDEX between NGO advocates, academics and international civil servants on one side, and attorneys, national civil servants and employees of the business sector on the other side, is greater than the difference between respondents from developed and developing countries. One of the main differences between developed and developing countries is that the IP debates are more polarized in the former. While developed countries have a greater share of their nationals strongly supporting the traditional paradigm (22.3 per cent of the 1050 respondents born in a developed country have a score of more than 30 on the PARADIGM INDEX, compared with only 12.9 per cent of the 597 respondents born in a developing country), developed countries have also a greater share of their nationals strongly supporting the emerging paradigm (24.5 per cent of respondents born in a developed country have a score of less than 15 on the PARADIGM INDEX, compared with 21.4 per cent for respondents born in a developing country). A majority of respondents from developing countries (58.8 per cent, or 559 respondents) avoid the extremes and could not be considered as strong supporters of any of the two paradigms. Consequently, variations in the level of economic development of the respondents' country of birth are statistically significant, but the magnitude is much less than for the respondents' profession.

These results contrast with the narrative that the current global IP debate is primarily a North–South conflict. Rather, they are consistent with studies showing that transnational networks of IP activists compete with transnational networks of IP-intensive industries to push IP laws in one direction or another (for example, Sell and Prakash, 2004). They are also consistent with studies that show that transgovernmental networks of IP

bureaucrats hold similar views and sustain frequent relations over national boundaries (Cheek, 2001; Drahos, 2010). Views on IP appear to be primarily structured along professional, rather than national, lines.

BELIEFS HELD BY IP ACADEMICS

According to the historical chronicle of Andréa Koury Menescal (2005), the boundaries between IP academics and IP practitioners have traditionally been blurred. Until the 1990s, most IP experts, whether in universities, law firms or governmental offices, broadly supported the development of the regime. Tellingly, the main academic association on IP, the International Association for the Advancement of Teaching and Research in Intellectual Property, was created on the initiative of the WIPO in 1981 and its first elected president, Friedrich-Karl Beier, 'was an explicit advocate on behalf of IP right-holders' (Menescal, 2005: 778). Although counterfactual analysis is hazardous, Menescal concludes that previous attempts to structurally reform the global IP regime failed largely because of IP academics' lack of support.

We can only speculate why a growing number of academics express criticisms against the IP regime. One reason could be that the expansion of IP studies, with more courses being taught and more research being conducted, has created a competitive intellectual environment and led academics to question their traditional assumptions. An alternative explanation would be that the legal extension of IP, domestically and internationally, has crossed the limit of what scholars have always considered to be the appropriate level of protection. A third hypothesis is that new partnerships with NGOs, intergovernmental organizations and foundations incentivize some academics to rethink their previous beliefs or to express more loudly their concerns. But irrespective of the causes, a question out of the scope of this article, it appears that several contemporary IP academics, especially in the younger generation, hold different views from most IP practitioners and no longer support the traditional paradigm. This is nowhere clearer than in the title of the much cited academic book, *How Judges, Bureaucrats, and Lawyers Put Innovators at Risk* (Bessen and Meurer, 2008).

Of course, all IP academics are not unified in a single community actively supporting the paradigm shift. Academia is wide and diverse. As indicated by Table 3, several variables are predictors of the PARADIGM INDEX in the subgroup of academics. Law (LAW DEGREE) and economics (ECONOMICS DEGREE) professors, for example, are more likely to support the traditional paradigm than their colleagues from other disciplines, including literature, philosophy, political science and computer science, when taken as a group. Arguably, law and economics professors have closer ties with IP holders, while professors from other disciplines are more inclined to approach IP

Table 3 Effects of demographic variables and CERTAINTY on the PARADIGM INDEX FOR ACADEMICS (N = 428)

Demographic variables		Academics (n = 428)
COUNTRY OF BIRTH		2.145 (1.203)
LAW DEGREE		3.650 (1.134)***
ECONOMICS DEGREE		4.072 (1.299)***
YEARS OF EDUCATION		−0.239 (0.508)
COUNTRY OF EDUCATION		−3.661 (1.699)**
INTEREST FOR POLICY-MAKING		3.7290 (1.177)***
Primary expertise	PATENT	
	COPYRIGHT	−1.075 (0.881)
	TRADEMARK	0.484 (1.354)
	OTHER IPR	−0.440(1.183)
TIME DEVOTED TO IP		0.599 (0.488)
YEARS OF EXPERIENCE		0.641 (0.377)*
TENURE		0.536 (0.809)
FULL TIME		−0.711 (1.152)
CERTAINTY		1.685 (0.302)***
Constant		10.751 (3.343)***

Notes: Regression performed with StataSE12 linear regression function and robust standard error. Standard errors in parentheses. *significant at 0.1; **significant at 0.05; ***significant at 0.01.

from the users' perspective. Yet, contrary to our expectations, TENURE and FULL TIME status do no significantly affect the PARADIGM INDEX, even in bivariate analysis. Part-time faculty members presumably have professional activities outside of academia, but, apparently, these do not affect their IP-related beliefs.

While the COUNTRY OF BIRTH of academics is not significantly related to their score on the PARADIGM INDEX, significant differences remain among IP academics educated in developed countries and those educated in developing countries. IP academics educated in developed countries have on average a much lower score on the PARADIGM INDEX (mean of 16.3 for 369 respondents) than academics educated in developing countries (mean of 21.9 for 59 respondents). Academics educated in high-income countries, most of whom are presumably teaching in the same group of countries, are on average more critical of the traditional paradigm than their colleagues educated and teaching in developing countries.

The observation that the core of the academic community criticizing the traditional paradigm is located in high-income countries does not come as a surprise to anyone familiar with IP scholarship. Several prominent scholars from Western universities have expressed harsh criticisms of the current regime. For example, professors James Boyle (2008), Graham Dutfield (2009), Peter Drahos (2010), Rochelle Dreyfuss (2009), Pamela

Samuelson (2006) and Jerome Reichman (2009), to name just a few well-respected academics in the field, are known for supporting greater flexibility in the regime and opposing the one-size-fits-all approach. Mainstream discourse in Western universities is quite critical of the mainstream policymaking of Western governments.

Arguably, it is not unusual for academics to hold more progressive views than industry lobbyists and policymakers. What is noteworthy, however, is the extent to which their views diverge from practitioners, even when lobbyists and policymakers are removed from the equation. Table 4 shows the results of mean comparisons between academics from high-income countries with experts from the same countries working on the more technical aspects of IP, such as application, examination, licensing and litigation, in public or private organizations.[5] Consistent with the epistemic community definition, indicators of normative, causal and epistemic beliefs were compared. On nearly all of these indicators, differences between these two groups of IP experts are statistically significant. One of the only assertions of the survey that IP scholars and IP practitioners both strongly agree on is, tellingly, that 'public policy debates on IP are highly ideological rather than technical'.

Importantly, academics do not simply occupy a middle ground position between NGO advocates and government officials. They hold distinctive beliefs, different from all other groups of IP experts. In particular, academics stand out in their epistemological criteria for weighing and validating knowledge claims. They are less likely to find a claim more convincing simply because it comes from someone with first-hand experience or from a prestigious institution. They are conversely more likely to be convinced if the claim on IP is informed by theory, refrains from making moral judgements and comes from someone without major interests at stake.

Differences on causal beliefs between academics and other experts are also perceptible. More than any other professional group surveyed, academics tend to disagree with the assertion: 'Social and economic impacts of IPRs are known with a good level of certainty' (CERTAINTY). Going back to Table 2, academics are the only professional group to diverge from the constant on this assertion in a statistically significant manner. Among the 431 academics surveyed, 69.0 per cent disagree (slightly, moderately or strongly) with this assertion, and this number rises to 74.1 per cent for the 292 academics born in a high-income country. While several NGO advocates seem to be convinced that IP has harmful social and economic impacts and a majority of industry lobbyists, policymakers and private attorneys seem to be convinced of the opposite, academics are more doubtful.

Moreover, as shown by Table 3, the level of certainty among academics is related in a statistically significant manner to their score on the PARADIGM INDEX. The more academics are sceptical of available knowledge on the

Table 4 Differences between means of academics and practitioners from high-income countries

	Beliefs	Academics developed countries n = 343	Practitioners developed countries n = 367	Significance of difference
Causal beliefs (Q = 16, scale 1 to 6)	'Social and economic impacts of IPRs are known with a good level of certainty.'	2.60	3.47	***
	'Individual creators and inventors have different interests than most corporations holding IPRs.'	4.68	4.31	***
	'IPRs are effective incentives for investment in R&D.'	4.10	5.19	***
	'The free sharing of knowledge fosters innovation and creativity.'	5.00	4.33	***
	'Piracy and counterfeiting fund organized crime and terrorist groups.'	2.61	3.98	***
Normative beliefs (Q = 16, scale 1 to 6)	'The right to have an IP over one's creation should be considered as a human right.'	2.97	4.02	***
	'IP treaties should better take into account other policy areas.'	4.79	4.29	***
	'The public domain is a commons that needs to be protected.'	5.25	4.64	***
	'IP treaties should provide relaxed standards for developing countries.'	4.48	3.79	***
	'Law should ensure a balance between public and private interests.'	5.01	4.83	*
	'Piracy and counterfeiting should be considered crimes akin to stealing tangible goods.'	3.07	4.59	***
	'Cultural and philosophical assumptions of IPRs are typical of Western cultures.'	4.28	3.89	***

(Continued on next page)

Table 4 Differences between means of academics and practitioners from high-income countries *(Continued)*

	Beliefs	Academics developed countries n = 343	Practitioners developed countries n = 367	Significance of difference
Epistemological criteria (Q20, scale 1 to 4)	'Claims are more convincing if supported by statistical evidence.'	3.24	3.21	
	'Claims are more convincing if informed by theory.'	3.04	2.69	***
	'Claims are more convincing if they refrain from making moral judgements.'	2.76	2.92	**
	'Claims are more convincing if they come from someone with firsthand experience.'	2.73	3.14	***
	'Claims are more convincing if they come from someone without major interests at stake.'	2.77	2.72	
	'Claims are more convincing if they come from a prestigious institution.'	2.32	2.62	***
'Most public policy debates on IP are highly ideological rather than technical.' (Q = 16)		4.49	4.57	

Notes: Means comparison performed by a two-tailed test using StataSE12 with the unequal variance option applied. Standard errors in parentheses. *significant at 0.1; **significant at 0.05; ***significant at 0.01.

social and economic impact of IP, the more likely they are to support the emerging paradigm. The mean score on the PARADIGM INDEX of academics who disagree (slightly, moderately or strongly) with the assertion, 'Social and economic impacts of IPRs are known with a good level of certainty', is only 15.8, which is significantly below the 17.1 mean for academics. Importantly, the relation between CERTAINTY and the PARADIGM INDEX goes both ways. Among the 195 academics to have a score of less than 15 on the PARADIGM INDEX, 81.5 per cent disagree (slightly, moderately or strongly) with the assertion, 'Social and economic impacts of IPRs are known with a good level of certainty'.

These results suggest that if a majority of academics in high-income countries oppose the previous paradigm of upward harmonization, it is not necessarily because they believe that increased IP protection is economically and socially harmful. Their opposition rather appears as the expression of a precautionary approach: in the face of uncertainty regarding social and economic costs, the burden of proof should fall on those clamouring for increased protection. As the following sections explain, this distinctive scepticism might be one of the keys to understanding how academics have contributed to shaking the previous orthodoxy.

THE POLICY ENTERPRISE OF ACADEMICS

The vast majority of academics do not limit their work to teaching and scientific research. Many also take an active part in policy debates. They publish op-eds in newspapers, write commissioned policy papers, post regular blogs, testify at public hearings and advise policymakers in informal settings. More than 86 per cent of the academics surveyed are said to have directly contributed to IP policymaking, in one form or another, over the last five years.

In Canada, for example, Professor Michael Geist from the University of Ottawa is particularly active in public debates on copyright reform. He is a weekly columnist in major Canadian newspapers, including the *Toronto Star* and the *Ottawa Citizen*, and has more than 25,000 followers on Twitter. This engagement has contributed to making copyright law a high-profile, rather than a specialized, issue in Canadian public debates. In 2007, in the midst of the Canadian government's attempt to reform the copyright system, his Facebook group, 'Fair Copyright for Canada', grew to 90,000 members, a number much greater than most experts previously assumed was the number of Canadians even remotely interested in copyright laws. According to a study of Geist's activism, he successfully 'destabilized institutional equilibrium within Canadian copyright policymaking' (Mochnacki, 2009: 1)

Other academics undertake direct initiatives to change practices and behaviour. Professor Lawrence Lessig, for example, co-founded Creative

Commons in 2001. This non-profit organization offers authors standardized licences to grant copyright permission to share and use their work, instead of the default 'all rights reserved'. Creative Commons now has a network of affiliate organizations in over 70 countries, often based in universities and led by scholars (Dobusch and Quack, 2013). Another direct initiative took place at Yale University in the early 2000s, when a group of students and faculty members successfully convinced the university administration, holder of a patent on an antiretroviral drug licensed to Bristol-Myers Squibb, to authorize the import of generic drugs in South Africa. Drawing on this success, Amy Kapczynski, one of the Yale students at the time and now a law professor, co-founded Universities Allied for Essential Medicines, with more than 100 chapters in 15 countries (Sell and Prakash, 2004).

While several academics in favour of the emerging paradigm take publicly visible actions, their colleagues sympathetic to the traditional paradigm do not remain inactive. Results from the survey suggest that the degree of academics' engagement in policy debates does not vary significantly according to their score on the PARADIGM INDEX. Academics supporting the paradigm shift, however, do not contribute to policy debates in the same manner and with the same partners as their colleagues supporting the traditional paradigm.

Table 5 suggests that academics who have worked as consultants or in any other paid capacity for an NGO, a think-tank or an intergovernmental organization tend to have lower scores on the PARADIGM INDEX. Academics who have indicated partnering frequently with an NGO or a think-tank in their efforts to contribute to the policymaking process also tend to have lower scores on the PARADIGM INDEX. Conversely, those who have worked as consultants for or have collaborated with a business organization tend to have higher scores on the PARADIGM INDEX. The mean PARADIGM INDEX score of the 88 academics who have worked as consultants for an NGO is 14.8, while it jumps to 19.7 for the 86 academics who have worked for a business organization. It remains unclear whether consultancy work and collaboration induce ideological influence and, if so, whether the influence flows from or towards academics. It seems, nevertheless, that IP experts sharing similar views on the global IP regime collaborate and interact more regularly together than with their opponents.

These results are consistent with the observation that several academics and NGO advocates co-signed several petitions and declarations calling for a paradigm shift in the global IP regime. In 2004, hundreds of them signed the Geneva Declaration on the Future of WIPO, in support of Argentina and Brazil's Proposal for the Establishment of a Development Agenda for WIPO. Among the first 20 signatories, 10 were university professors and the others were mainly NGO leaders, including from Consumers International, Médecins Sans Frontières (MSF), Third World Network and Oxfam.

Table 5 Effects of policy enterprise variables on the PARADIGM INDEX for academics only (n = 332)

Policy enterprise variables		Coefficient
POLICY ACTION FREQUENCY		−0.098 (0.093)
Consultancy work		
	CONSULT POINTS	0.220 (0.551)
	CONSULT FOR DEVELOPED	−0.155 (1.375)
	CONSULT FOR DEVELOPING	2.42 (1.593)
	CONSULT FOR IGO	−2.782 (1.566)*
	CONSULT FOR NGO	−2.476 (1.473)**
	CONSULT FOR BUSINESS	2.993 (1.502)**
	CONSULT FOR LAW	1.648 (1.096)
Partnerships		
	PARTNER WITH DEVELOPED	−0.568 (0.415)
	PARTNER WITH DEVELOPING	−0.221 (0.472)
	PARTNER IGO	0.691 (0.370)*
	PARTNER NGO	−1.287 (0.347)***
	PARTNER BUSINESS	1.155 (0.457)***
	PARTNER LAW	0.430 (0.374)
	Constant	17.309 (0.837)***

Notes: Regression performed with StataSE12 linear regression function and robust standard error. Standard errors in parentheses. *significant at 0.1; **significant at 0.05; ***significant at 0.01.

A similar representation of NGOs and academics is evident from the signatures of the Manifesto for Transparency, Participation, Balance and Access, addressed to the WIPO Director General in 2005. This manifesto was signed by hundreds of NGO representatives from all over the world and by academics from more than 60 different universities. More recently, in 2011, the American University Washington College of Law hosted the first annual Global Congress on Public Interest Intellectual Property, convening over 180 scholars and NGO advocates from 35 countries. At the end of this congress, participants co-signed the Washington Declaration, calling for better integration of public interest issues in intellectual property law and policy (Flynn, 2011).

More than being simply co-signatories, some NGOs and academics work in close cooperation to promote the paradigm shift. This type of partnership, for example, is a key strategy of the Geneva-based network of NGOs and think-tanks active in IP policymaking. This network includes the International Centre for Trade and Sustainable Development (ICTSD)[6], the Quaker United Nations Office (QUNO), the South Centre and the Center for International Environmental Law (CIEL). They share regular information, meet in various venues and often partner to organize policy events. Some IP experts have navigated through this network in

a revolving-door manner, working for one organization after the other, in different capacities. Unsurprisingly, given this level of cohesion, they have developed a common *modus operandi* to promote the paradigm shift. It consists of inviting academics to publish policy-oriented papers that the network then circulates to policymakers, mostly WTO and WIPO negotiators. Over the years, several professors, such as Carlos Correa from the University of Buenos Aires and Frederick Abbott from Florida State University, were frequently invited by the Geneva-based network. They remained peripheral to it, as they do not participate in the revolving-door process and are typically considered as external guests rather than co-organizers of key policy events. Academics are nevertheless key partners of the Geneva network, providing scientific legitimacy and benefiting from this platform to make their publications better known (Karaganis, 2012). This partnership, the next section argues, seems to have been fruitful.

THE INFLUENCE OF ACADEMICS

A community of academics contributes to the paradigm shift of the IP regime by breaking the previous monopoly of practitioners over IP expertise. While most practitioners continue to support the traditional paradigm, this group of academics expresses a strong and authoritative dissenting voice. Their recognized capacity to interpret existing IP rules and to craft alternative ones enables them to provide technical expertise and, perhaps more importantly, legitimacy to NGO activists and developing countries' representatives claiming for greater flexibility and greater access in the global IP regime.

The influence of academics starts in their classroom. As indicated by the first model of Table 6, results generated from the survey show that the number of years spent at university is related in a statistically significant manner with views on paradigm shift. More educated respondents are more likely to express support for the emerging paradigm than less educated respondents. The 489 respondents with four–five years of university education have a mean score of 23.35 on the PARADIGM INDEX, while the 543 respondents who spent eight years or more at university have a mean score of 20.15. This trend remains valid even when academics, a group both highly educated and, on average, favourable to the paradigm shift, are removed from the sample. In almost every group of professionals, the number of years spent as a university student, irrespective of the specific discipline, is related with stronger support for the emerging paradigm.

Moreover, it appears that the influence of academics is stronger among recent graduates. The survey did not include a specific question on the graduation date, but it can be reasonably assumed that respondents with

Table 6 Effect of demographic variables and SOURCE ACADEMIC on CERTAINTY, PARADIGM INDEX and USE OF ACA LIT

		All respondents excluding academics (n = 1185)			Government officials only (n = 217)
		PARADIGM INDEX	CERTAINTY	USE OF ACA LIT	PARADIGM INDEX
COUNTRY OF BIRTH		2.651 (0.637)***	−0.509 (0.133)***	−0.239 (0.070)***	5.480 (1.597)***
LAW DEGREE		1.091 (0.537)**	0.080 (0.109)	0.235 (0.056)***	0.173 (1.400)
ECONOMICS DEGREE		1.950 (0.748)***	0.137 (0.157)	−0.015 (0.077)	−0.777 (1.258)
YEARS OF EDUCATION		−0.456 (0.236)**	−0.052 (0.049)	−0.002 (0.025)	0.706 (0.592)
COUNTRY OF EDUCATION		−1.967 (0.659)***	0.279 (0.144)**	−0.113 (0.073)	−4.759 (1.590)***
INTEREST FOR POLICY-MAKING		1.168 (0.459)***	0.382 (0.096)***	−0.247 (0.050)	2.388 (1.070)**
Primary expertise	PATENT	Reference category for areas of expertise			
	COPYRIGHT	−0.319 (0.877)	−0.220 (0.152)	0.100 (0.070)***	3.035 (1.665)*
	TRADEMARK	1.106 (0.526)**	0.137 (0.114)	0.144 (0.061)***	0.423 (1.234)
	OTHER IPR	0.643 (0.885)	0.205 (0.168)	−0.052 (0.084)	−0.185 (1.435)
Professional sector	GOVERNMENT	Reference category for professional sector			
	INTERGOV	−3.540 (1.023)***	−0.137 (0.223)	0.223 (0.103)**	
	ATTORNEY	0.138 (0.577)	−0.069 (0.123)	−0.047 (0.061)	
	BUSINESS	0.646 (0.719)	0.084 (0.143)	−0.136 (0.073)*	
	NGO	−9.701 (1.038)***	−0.423 (0.199)**	0.147 (0.087)**	
	OTHER SECTORS	−2.762 (2.249)	−0.299 (0.365)	−0.286 (0.076)	
TIME DEVOTED TO IP		0.751 (0.357)**	0.033 (0.065)*		1.066 (0.697)
YEARS OF EXPERIENCE		0.894 (0.233)**	0.084 (0.045)*		0.183 (0.499)
SOURCE ACADEMIC		0.142 (0.492	−0.170 (0.097)*		
Constant		18.264 (2.019)***	2.895 (0.372)***	2.209 (0.197)***	2.307 (0.315)***

Notes: Regression performed with StataSE12 linear regression function and robust standard error. Standard errors in parentheses. *significant at 0.1; **significant at 0.05; ***significant at 0.01.

less experience have left the university more recently than seasoned respondents. Table 6 shows that experts with less experience are significantly more likely to support the paradigm shift. They are also more likely to share academics' scepticism about available knowledge on the social and economic impact of IP. These findings can be interpreted either as an indication that the influence of university education vanishes over time or that professors have changed their teaching in recent years.

Yet, what seems to matter even more than the number of years spent at university and the graduation date is the country where the respondents obtained their highest degree. Table 6 shows that the country where the respondents received their highest academic degree is a strong predictor of the PARADIGM INDEX. Experts educated in a developed country are significantly more likely to support the emerging paradigm. The last model of Table 6 further suggests that the effect of the country of education on the PARADIGM INDEX is particularly pronounced in the subgroup of government officials. A government official born in a developing country, but educated in a high-income country, is significantly more likely to support the paradigm shift than a colleague working for the same administration, but holding a degree granted by a local university.

These results are consistent with the earlier finding that academics in high-income countries seem more favourable to the emerging paradigm than their colleagues from developing countries. Students trained at the Duke's Center for the Study of the Public Domain, Yale's Information Society Project, Stanford's Center for Internet and Society, Queen Mary's Intellectual Property Research Institute, the Max Planck Institute for Intellectual Property, Competition and Tax Law or Harvard's Berkman Center for Internet and Society, to name a few of the leading academic centres on IP, are likely to be exposed to favourable views for the emerging paradigm. These students partly internalize these views and carry them over their career, in the private sector or in governmental organizations, in developed or in developing countries.

Academics are also influential outside their classroom. A survey question asked respondents to list their primary sources of information on current thinking related to IP. When academics are excluded from the sample, about 64.5 per cent of the remaining respondents listed academic journals, books and conferences as one of their primary sources of information, with the lowest score (57.5 per cent) for respondents working for business organizations and the highest (73.1 per cent) for respondents working for intergovernmental organizations. As shown in Table 6 , having academic references as one of the primary sources of information (SOURCE ACADEMIC) is significantly related to the level of certainty regarding the social and economic impacts of IP (CERTAINTY). The more IP experts other than academics read and listen to academics, the more they share their scepticism on the reliability of the knowledge currently available on the social and economic

impacts of IP. This result could be interpreted as evidence that academics have some influence over other IP experts.

The influence of academics is, however, limited. Respondents who listed academic references as one of their primary sources of information on IP are not more likely to support the emerging paradigm. SOURCE ACADEMIC is not related in a statistically significant manner to the PARADIGM INDEX. While academics seem to infuse some scepticism among their readership, and scepticism is generally associated with stronger support for the emerging paradigm, it appears that academic publications are not sufficient in themselves to have a significant impact on the level of support for the emerging paradigm.

That said, results from the survey suggest that academic publications could be an integral part of the strategy deployed by other influential stakeholders to promote the paradigm shift. A question of the survey asked respondents to rate the level of usefulness of academic publications for their own work on a four-point scale from 'not at all useful' to 'very useful'. Considering academic publications useful is not the same as relying on academic publications as a source of information, and the two questions generated different results. One could find academic publications rhetorically useful to convince others, while not necessarily regarding them as a learning opportunity for oneself. Thus, while NGO advocates are not more likely to consider academic publications as one of their primary sources of information than respondents working for businesses, they are significantly more likely to consider academic publications useful. As many as 90.7 per cent of NGO advocates and 91.5 per cent of international civil servants consider academic literature somewhat or very useful, as compared with 69.7 per cent for respondents from business organizations. The third model of Table 6 corroborates this opposition to the perceived usefulness of academic literature on the part of NGO advocates and international civil servants on the one hand, and representatives from business organizations on the other.

A final question of the survey invited respondents to list up to three authors they find especially inspiring on IP issues. The results obtained from this open question are difficult to interpret, as several respondents left the question blank and only 29 names were mentioned 10 times or more. Nevertheless, the most frequently mentioned name by respondents other than academics was Professor Carlos Correa, significantly ahead of others with 68 occurrences. While this article refrains from assessing the influence of one individual academic, Correa's work exemplifies several trends found in the survey. First, he was one of the earliest advocates of the paradigm shift in the global regime. At the end of the 1990s and early 2000s, he pioneered the literature on 'TRIPs flexibilities' by identifying and promoting measures that could be implemented by national authorities to optimize access to knowledge while complying with the minimal

requirements of the TRIPs agreement (Correa, 2000). Second, Correa has worked as a consultant for several intergovernmental organizations, including the World Health Organization (WHO), the FAO, the United Nations Conference on Trade and Development (UNCTAD), the UN Development Project (UNDP) and the World Bank, and his publications have also been actively disseminated by NGOs and think-tanks, such as ICTSD, QUNO and the South Center. Third, among the respondents who identified Correa as one of the most inspiring and useful authors on IP, a clear majority are sceptical about current knowledge on the social and economic impact of IP (61.5 per cent as compared with 46.4 per cent for the overall sample) and are supporters of the paradigm shift (mean score on the PARADIGM INDEX OF 13.3 as compared with the overall average of 21.9). This career path, like several of the results from the survey, suggests that academics working in partnership with NGOs and intergovernmental organizations can play a key role in the promotion of the paradigm shift.

CONCLUSION

Earlier studies on the paradigm shift of the global IP regime have focused on transnational advocacy networks and social movements. The role of academics in this process has been neglected, arguably because of a shortage of appropriate theoretical frameworks. If epistemic communities are understood as networks of natural scientists holding a monopoly over knowledge, one does not see the relevance of the concept for the understanding of global IP politics. However, if one considers that epistemic communities are made of experts and that several communities could be rivals in the establishment of the dominant paradigm, the usefulness of the concept appears more clearly. Networks of experts can mobilize their authoritative claims to knowledge with the view of influencing policy-making in any policy fields, especially those perceived to be as technical as IP.

Importantly, under this reconceptualization, epistemic communities do not merely provide focal points for international coordination. Rather, they side with other actors and feed them with information, ideas, credibility and legitimacy. If they want to challenge the prevailing paradigm, their claims are likely to generate, rather than reduce, uncertainty. In doing so, they can alter the established structure and favour actors who were previously suffering from a collective action problem, such as IP users.

Building on the results from a survey of IP experts, this article argues that a community of academics successfully broke the policy monopoly of practitioners over IP expertise. They instilled some scepticism concerning the social and economic impacts of IP among their students as well as in the broader community of IP experts. They also provided expert knowledge that was widely amplified by NGOs and some intergovernmental

organizations, acting as echo chambers to reach national decision makers. The contribution of academics to the paradigm shift is both specific and significant.

This article, however, does not claim that academics provided the initial assault on the traditional paradigm or that they were the most influential actors in the process. It would be inaccurate to picture influence as unidirectional flows from academics, upstream, to policy makers, downstream. It should be noted, for example, that the Geneva-based NGOs and think-tanks that actively promote academic studies favourable to the paradigm shift receive substantial funding for their IP programmes from governmental agencies, including the UK Department for International Development, the Swedish International Development Cooperation Agency and the Canadian International Development Research Centre. Although professions powerfully structure views and social relations, governments are no more monolithic than academia or the NGO community. Transnational governmental networks operate alongside epistemic communities and advocacy networks.

Several research avenues can be explored to extend further our understanding of these transnational professional networks and their complex interactions. One of them is to use the methodological tools of social network analysis. While a survey can compare respondents according to their profession, a network analysis would enable the more precise locating of areas of overlaps between transnational networks. Another option is to rely on prosopography. Surveys and network analysis offer static snapshots of transnational networks, but a prosopographical analysis of career paths would facilitate the study of dynamics between professional sectors. In fact, definitive support for the hypotheses explored here probably requires the triangulation of several methods.

NOTES

1 A unidimensional scale is by definition a rough simplification. The reality of political debates is obviously more complex than simplistic dichotomies. One can advocate for stronger and more standardized protection in some contexts, but for greater flexibility and access in others. Moreover, the analysis of the scale is based on relative, rather than fixed, positions. A group of respondents is considered as more or less in favour of the new paradigm as compared with other respondents, and not based on a stable reference point. For analytical purposes, however, relative positioning on a unidimensional scale is a useful heuristic device to apprehend empirical realities.

2 To minimize the risk that one respondent strategically influenced the results, only one respondent was allowed per Internet protocol address.

3 However, several questions were not mandatory. This reduces the quantity of responses for these questions, but arguably increases their quality.

4 For the multi-categorical variables of area of expertise and professional sector, 'patent' and 'national government' were the values selected for the constant.
5 Practitioners are understood as any IP experts in sectors other than academia and with a reported primary area of interest other than policymaking.
6 For reasons of disclosure, the ICTSD contributed to this study by providing the names and email addresses of some of the respondents. The author was invited a number of times by the ICTSD to present his research in Geneva and to publish papers on their website.

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APPENDIX
VARIABLES DESCRIPTION

Name	Description	Coding	Statistics
ACADEMIC	Main professional sector is academia	0-No 1-Yes	No = 1589 Yes = 536
ATTORNEY	Main professional sector is the private practice of law	0-No 1-Yes	No = 1325 Yes = 800
BUSINESS	Main professional sector is business or business association	0-No 1-Yes	No = 1832 Yes = 293
CERTAINTY	Agreement with the assertion that 'social and economic impact of IPR are known with a good level of certainty'	0 to 5	Mean = 3.33 Median = 3
CONSULT FOR BUSINESS	An academic who has worked as a consultant or in any other paid capacity for a corporation or a business organization in the past five years	0-No 1-Yes	No = 450 Yes = 86
CONSULT FOR DEVELOPED	An academic who has worked as a consultant or in any other paid capacity for a developed country government in the past five years	0-No 1-Yes	No = 451 Yes = 85
CONSULT FOR DEVELOPING	An academic who has worked as a consultant or in any other paid capacity for a developing country government in the past five years	0-No 1-Yes	No = 475 Yes = 61
CONSULT FOR IGO	An academic who has worked as a consultant or in any other paid capacity for an intergovernmental organization in the past five years	0-No 1-Yes	No = 472 Yes = 64
CONSULT FOR LAW	An academic who has worked as a consultant or in any other paid capacity for a law firm in the past five years	0-No 1-Yes	No = 382 Yes = 155
CONSULT FOR NGO	An academic who has worked as a consultant or in any other paid capacity for a public interest NGO or think-tank in the past five years	0-No 1-Yes	No = 448 Yes = 88
CONSULT POINTS	Number of different organizations for which an academic has worked as a consultant or in any other paid capacity in the past five years	From 0 to 11	Mean = 1.20 Median = 1
COPYRIGHT	Primary area of expertise in IP is in copyrights	0-No 1-Yes	No = 1349 Yes = 298
COUNTRY OF BIRTH	Born in a developed country	0-No 1-Yes	No = 597 Yes = 1050

COUNTRY OF EDUCATION	Highest academic degree obtained in a developed country	0-No 1-Yes	No = 386 Yes = 1260
ECONOMICS DEGREE	Holds a degree in economics, management or business	0-No 1-Yes	No = 2073 Yes = 222
GOVERNMENT	Main professional sector is national public service	0-No 1-Yes	No = 1837 Yes = 288
INTEREST FOR POLICY-MAKING	Policy-making or law-making is the primary area of interest in IP, as opposed to application, examination, contracting or litigation	0-No 1-Yes	No = 552 Yes = 1095
INTERGOV	Main professional sector is intergovernmental public service	0-No 1-Yes	No = 2047 Yes = 78
FULL TIME	Works full time as an academic	0-No 1-Yes	No = 64 Yes = 408
LAW	Hold a law degree	0-No 1-Yes	No = 1448 Yes = 847
NGO	Main professional sector is public interest NGO or think-tanks	0-No 1-Yes	No = 2007 Yes = 118
OTHER IPR	Primary area of expertise in IP is in IPRs other than patent, copyright or trademark	0-No 1-Yes	No = 1496 Yes = 151
OTHER SECTORS	Main professional sector is other than the above	0-No 1-Yes	No = 2113 Yes = 12
PARADIGM INDEX	Index made of 9 indicators assessing the relative support for the traditional paradigm See section data and methods	From 0 to 45	Mean = 21.96 Median = 23
PARTNER BUSINESS	How frequently an academic partners with a developed country government to contribute to policy making	0-Never 1- 5 years + 2- 2–4 years 3- Yearly 4- 6 months	Mean = 1.22 Median = 1
PARTNER IGO	How frequently an academic partners with an intergovernmental organization to contribute to policy making	0- Never 1- 5 years + 2- 2–4 years 3- Yearly 4- 6 months	Mean = 1.27 Median = 2

(Continued on next page)

Name	Description	Coding	Statistics
PARTNER LAW	How frequently an academic partners with a law firm to contribute to policy making	0- Never 1- 5 years + 2- 2–4 years 3- Yearly 4- 6 months	Mean = 1.24 Median = 2
PARTNER NGO	How frequently an academic partners with a public interest NGO or think-tank to contribute to policy making	0- Never 1- 5 years + 2- 2–4 years 3- Yearly 4- 6 months	Mean = 1.57 Median = 3
PARTNER WITH DEVELOPED	How frequently an academic partners with a developed country government to contribute to policy making (in a different country)	0- Never 1- 5 years + 2- 2–4 years 3- Yearly 4- 6 months -	Mean = 1.36 Median = 2
PARTNER WITH DEVELOPING	How frequently an academic partners with a developing country government to contribute to policy making (in a different country)	0- Never 1- 5 years + 2- 2–4 years 3- Yearly 4- 6 months	Mean = 0.67 Median = 0
PATENT	Primary area of expertise in IP is in patents	0- No 1-Yes	No = 777 Yes = 870
POLICY ACTION FREQUENCY	Frequency of an academic contribution to policy-making process over the last 5 years by either serving on advisory boards, writing policy papers, organizing policy-oriented training, publishing op-eds, posting blogs, testifying at hearings or discussing with officials	From 0 to 29	Mean = 9.76 Median = 9

SOURCE ACA	Considers academic books, journals and conferences as a primary source of information on current thinking related to IP (others options are policy papers by governmental organizations, policy papers by stakeholders, blogs and newsletters, governmental or intergovernmental meetings, discussions with stakeholders, and others).	0- No 1-Yes	No = 563 Yes = 1025
TENURE	Academics with tenure position	0- No 1-Yes	No = 217 Yes = 255
TIME DEVOTED TO IP	Percentage of professional time devoted to IP issues	0- 5%- 10% 1- 10%-20% 2- 20%-50% 3- 50% +	Mean = 2.4 Median = 3
TRADEMARK	Primary area of expertise in IP is in trademarks	0- No 1-Yes	No = 1319 Yes = 328
USE OF ACA LIT	How useful are academic publications for one's work	0- Not at all 1- Not very 2- Somewhat 3- Very	Mean = 2.04 Median = 2
YEARS OF EDUCATION	Number of years as full time university student	0- zero 1- $\leq$ 3 years 2- 2–5 years 3- 6–7 years 4- $\geq$ 8 years	Mean = 3.91 Median = 4
YEARS OF EXPERIENCE	Number of years professionally active in IP issues	0- < 2 years 1- 2–4 years 2- 5–9 years 3- 10–20 years 4- >20 years	Mean = 3.86 Median = 4