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## 100 YEARS OF INTERNATIONAL IP - REFLECTIONS ON PAST, PRESENT AND FUTURE ♦♦

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We have been asked to reflect on the past 100 years of international intellectual property law and to try to project forward about what changes might be necessary or desirable in the future. Only a science fiction writer would purport to have some idea about what things might look like a hundred years in the future, including from the standpoint of international intellectual property, so my remarks on that will be somewhat more proximate to the present.

I started working on IP matters in 1973—one half-century ago—as the Andean Pact countries had recently adopted Decisions 84 and 85 that sought to change the North-South balance of power in respect to technology and technology transfer.<sup>1</sup> My first academic publication in 1975 addressed that. In some small measure the history of international IP through the second half of the 20th century and first part of the 21st can be viewed through the lens of what happened to this “interesting” balance of power experiment in the Andean region. Success was modest, at best.

The TRIPS Agreement negotiations started in the mid-1980s. As Rochelle Dreyfuss has described, the transformation of rulemaking and enforcement in IP from a system of treaties that were limited in their scope to IP, to multilateral and plurilateral arrangements that were negotiated within the framework of broader economic arrangements—relying on trade-based measures for enforcement—is probably at the top

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♦ This Article is part of a collection of writings stemming from the *100 Years of International Intellectual Property Law* Panel held during the 100th Annual Meeting of the American Branch of the International Law Association on Saturday, October 22, 2022, in New York City.

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<sup>1</sup> See Frederick M. Abbott, *Bargaining Power and Strategy in the Foreign Investment Process: A Current Andean Code Analysis*, 3 SYRACUSE J. INT’L L. & COMM. 319, 347–48 (1975).

of the list of major developments in international IP during the past century. This move was precipitated by demands from investors in technology and expression, mainly from the United States, Europe and Japan. They regarded uncompensated use of their technology and expression, mainly by persons in the developing world, as an impingement on their economic interests.<sup>2</sup> This came on the heels of a developing country-based movement advocating a New International Economic Order that in part focused on the World Intellectual Property Organization (WIPO). In some measure the TRIPS Agreement represented a backlash against more development-friendly policies promoted for WIPO.<sup>3</sup> That does not discuss the “rights or wrongs” of the matter, but it would be remiss to reflect on the past century without identifying this major set of political and economic maneuvers.

I think it is important to recall that intellectual property rights, such as patents, copyrights, and trademarks, are not “sentient beings,” though we will return to that. IP as such does not think about whether it is favoring or disfavoring access to health technologies, making books available, protecting brands, or encouraging use of tobacco products. Intellectual property is defined by sets of legal rules that are created by human beings (still) with policy objectives in mind. Though in principle one can “praise” patents as supporting the development of new medical technologies, or “decry” patents as antithetical to access to medicines, patent rights themselves are quite malleable. They can be shaped and reshaped as we try to encourage or discourage certain types of activity. The patent does not have a viewpoint.

Even the most “progressive” institutions rely on patents and other IP rights to define and allocate interests involving their work.<sup>4</sup> Whatever you may think of the role that patents played in addressing the recent pandemic, your praise or faulting does not have much to do with the existence of patents as a legal instrument; it has to do with what people did or did not do with patents.

If we wished patents away tomorrow, protection of interests in technology would not suddenly disappear. It would take another form. Maybe better, maybe worse, but protection of technology and expression is a consequence of economic, social, and industrial interests being managed. The form of management may be transformed, but IP rights do

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<sup>2</sup> See Frederick M. Abbott, *Protecting First World Assets in the Third World: Intellectual Property Negotiations in the GATT Multilateral Framework*, 22 VAND. J. OF TRANSNAT'L L. 689 (1989).

<sup>3</sup> See UNCTAD/ICTSD, RESOURCE BOOK ON TRIPS AND DEVELOPMENT (2005).

<sup>4</sup> Frederick M. Abbott, *Public-Private Partnerships as Models for New Drug Development: The Future as Now*, in THE CAMBRIDGE HANDBOOK OF PUBLIC-PRIVATE PARTNERSHIPS, INTELLECTUAL PROPERTY GOVERNANCE, AND SUSTAINABLE DEVELOPMENT 29, 29 (M. Chon, P. Roffe & A. Abdel-Latif eds., 2018).

not arise in a vacuum. They are a byproduct of global economic and social interaction and needs.

Since the earliest days, the role of IP in international society has been controversial, and the TRIPS negotiations and post-TRIPS era are no exception. It was well-recognized during the TRIPS negotiations that the agreement would substantially transform IP systems, particularly in developing countries, which classification is today overbroad, and we ascribe countries to tiered layers of development. So, for example, it was well understood that adding substantive coverage requirements for patents, including pharmaceuticals, would eventually result in a country like India having less flexibility to produce generic versions of non-patent drugs.<sup>5</sup> That decision ultimately resulted in a series of collisions, first resulting in the Doha Declaration on the TRIPS Agreement and Public Health in 2001<sup>6</sup> and continuing through the Covid-19 pandemic. However, public health is not the only collision-venue. Technology is playing and will continue to play a significant role in addressing climate change, and technology and IP are intricately linked.<sup>7</sup> Consequently, multilateral rules (and plurilateral rules, e.g., in FTA's) have already been the subject expressed concern regarding access to technologies to address climate change, and the role that IP is playing in the development and onward distribution of advances in technology. Yet we have seen substantially different assessments of the likely impact of IP rights in addressing climate change as compared with addressing health, based on the different characteristics of the industries involved and the end products.

No doubt, intensive debates will continue regarding the role of IP in addressing the range of social and economic issues across the world, but it is important that these debates adequately reflect the nuances of the problem sets being addressed. This is something that is very difficult to accomplish when many such debates take place through the exchange of slogans rather than through rigorous analytic work. It was one of the critical insights of a dear friend of ours, Pedro Roffe, for many years at UNCTAD and then ICTSD: before launching global political IP campaigns, it is important to figure out what is really needed and whether a particular change will increase the chances of that happening. Otherwise, we run the risk of preoccupying ourselves with achieving objectives that in the end will not have a practical impact. This is where

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<sup>5</sup> *Id.* at 713–14.

<sup>6</sup> Frederick M. Abbott, *The Doha Declaration on the TRIPS Agreement and Public Health: Lighting a Dark Corner at the WTO*, 5 J. INT'L ECON. L. 469, 469 (2002).

<sup>7</sup> Frederick M. Abbott, *Innovation and Technology Transfer to Address Climate Change: Lessons from the Global Debate on Intellectual Property and Public Health*, ICTSD PROGRAMME ON IPRS AND SUSTAINABLE DEV., Issue No. 24 (2009).

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academic researchers can and do play an important role, collecting and analyzing inputs, and assisting policymakers in formulating options and pursuing objectives. Sometimes this may entail taking public positions, but this work is often carried out behind the work of more visible negotiators who are charged by the public with governing.

Otherwise in terms of trends, I will mention that we can detect a movement of international IP interest away from the WTO and global trading rules and back toward the more purely IP interested institutions like WIPO. This trend is not so difficult to account for. The WTO is affected by a consensus-based decision-making structure, and an international community—which, no doubt, has been mentioned several hundred times in the course of the past two days—that is increasingly fractured. I sometimes start my course in international trade by asking students to think about whether we would collectively be able to identify a “single pizza” that would be amenable to everyone in the room. I suspect today it might be a gluten-free pizza shell with no toppings of any kind. Perhaps doable in principle, but with a suboptimal result. This is the problem of the WTO. Imagine what is involved with over 160 countries agreeing on anything truly meaningful.

WIPO is more congenial for discussions of complex IP issues, if for no other reason than at the end of the day an agreement can be reached without a consensus and brought into force among the countries that decide to accept it. That may not be a global solution, but IP agendas can be advanced.<sup>8</sup> Perhaps more importantly, while WIPO may be inherently tilted toward valuing and protecting IP rights, it really is not so single-minded as to foreclose open debate and exchange of views, even if differences may not be resolved. There is very good research-product coming out of WIPO. For example, if you are interested in “exceptions” to patent rights, there is no better compendium than that prepared by the Patent Law Division of WIPO under the guidance of Marco Aleman—who is now in another important role.

We thus have a not wholly unforeseeable swing back from trade-based international IP governance to more traditional governance of IP in its own right. That should be overstated. It is perhaps a subtle trend.

The foregoing has been a bit “in the clouds” and abstract, but addressing 100 years of IP in ten minutes requires either a helicopter perspective that is unsatisfyingly overbroad or an “in the weeds” examination that may be less than edifying for generalists.

That said, I will turn to two specific matters. Very different, but both current and forward-looking.

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<sup>8</sup> Frederick M. Abbott, *Distributed Governance at the WTO-WIPO: An Evolving Model for Open-Architecture Integrated Governance*, J. INT'L ECON. L., 63, 81 (2000).

In the late 1990s, at the instigation of the United States, and under the general direction of Francis Gurry, later Director General of WIPO, a system of dispute settlement was developed, ultimately entitled the Uniform Domain Name Dispute Resolution Policy or UDRP, for which WIPO became the principal (though not exclusive) provider of dispute resolution services. Though it does not receive a great deal of public attention, or academic attention, the UDRP may be the most successful innovation in international IP dispute settlement to have evolved in the past 100 years.<sup>9</sup> I do not have time to go through the details of how this all works. However, in terms of what may account for its success, first, the subject matter is reasonably constrained. It involves only disputes between trademark owners (or putative trademark owners) and registrants of domain names. This is in fact quite a large arena, but only a part of the trademark and digital arena. Second, remedies are limited to transfer or cancellation of a domain name registration. No monetary awards, injunctions, or other types of remedy. Third, I would venture that WIPO has done a pretty good job of assembling a group of panelists who approach their duties with a strong background in IP law, on one side, and a neutral perspective, on the other. Yes, from time to time the system has been argued to favor trademark owners over other interests, but I have been at this for more than 20 years on behalf of WIPO, and my own perception is that the dispute settlement panelists are evenhanded. If there is a legitimate claim of fair use, for U.S.-based parties, it is as likely to be acknowledged at WIPO as in a U.S. federal court.

But out of the universe I could mention, there is one recent trend which is concerning. It is a concern arising out of a tremendous increase in the incidence of abusive practices in the digital environment, which might generally come under the rubric of cybercrime. Very briefly, of relevance, for the first 20 years of the UDRP system, the vast majority of claims involving the abuse of trademarks by registrants and users of domain names concerned matters such as using a well-known trademark to divert internet traffic to some type of third-party commercial website, which might for example be selling counterfeit goods, or (more prevalently in the early days) to pornographic content. Today, however, we increasingly see domain names being abused as part of deceptive email addresses, that is the domain address following the @ symbol.

Often, the sender of an email will use the name of an actual employee of a company (without their knowledge or consent) as a username, with an email domain that incorporates the trademark of an enterprise from which a legitimate email might be expected. It can be

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<sup>9</sup> *But see* Frederick M. Abbott, *On the Duality of Internet Domain Names: Propertization and Its Discontents*, 3 N.Y.U. J. INTEL. PROP. & ENT. L. 1 (2013),.

very difficult for a recipient to distinguish the deceptive email address from a legitimate business email address, even if the recipient of the email is familiar with the legitimate business and, for example, routinely receives invoices from it. The objective is to deceive the recipient of the email into taking an action such as paying a falsified invoice that can appear “quite real,” with the only material differentiation being the bank account to which funds are to be transferred. It may include a link to a website that is a clone of the website of the owner of the trademark. There are so many variations of deceptive practices based on email domains, and related website addresses, that it strains the imagination to keep up. Yet a major problem is that cybercriminals have become increasingly sophisticated such that even internal security teams within businesses have trouble distinguishing real from fake. To clarify, we are talking about many billions of dollars in fraudulent activity, annually. This is not some idle pastime.

I imagine you are thinking, but what does this have to do with trends in international IP and the future? The short answer is that it requires us to approach dispute resolution, and the field of IP more generally, with a somewhat more “precautionary” approach. Why? Because once a fraud has been perpetrated using a term confusingly similar to a trademark as its initial vector, the harm for all intents and purposes cannot be undone. If I have just tricked you into electronically transferring \$100,000 to me, in all likelihood I have thought through the second part of my scheme and moved my ill-gotten gains into cryptocurrency or some untraceable asset. You are not going to get that back from me except in the rarest of cases. So, from the standpoint of dispute settlement, it has become much riskier to wait for people to engage in abuse and then try to impose a remedy after it has happened. Transferring a domain name that cost someone \$15 to register, and from which they profited by \$100,000, is not going to bother the registrant too much.

So, if you have registered a domain name confusingly similar to a registered trademark, as a dispute settlement authority/panelist I have become less likely to let you keep it on the theory you will reveal your bad faith intention only when you use it. The harm that occurs the first time you use it may be quite substantial and effectively beyond remedy. It can involve the misappropriation of personal data, including financial data. It can involve access to proprietary technology. These things are difficult to put back into the bottle once they have escaped. In the past, I might have gone out of my way to hypothesize what a domain name registrant might do that would be in good faith, and to give the registrant the benefit of the doubt, even if they had not argued their case. Today, I am more inclined to take the position that if the registrant could not bother to explain its motive to me, I am not going to speculate about what they

might do in good faith. If the registrant is unable or unwilling to explain its motivation for adopting someone else's trademark, it may no longer receive the benefit of the doubt. And, just to be clear, if you look over my over 20 year history of UDRP decisions, I would be fairly characterized as "a progressive" among the administrative panelists, receptive to claims of fair use and the like. The enormous wave of cybercrime we are today living through has affected my perceptions of risk and fairness.

In the end, though, we are getting to the point where we need to seriously address what is going on in the domain name system and on the internet more generally from the standpoint of addressing fraud, which affects everybody. And it is related to intellectual property. Cybercrime involves various types of abuse of IP, some of it more serious than others, but some of it deadly serious. How do we balance the right of the public to use IP in fairly while maintaining adequate standards of protection? I do not have the answer to this. It is a much bigger problem than domain name dispute settlement, but many different parts of the IP system are grappling with similar questions.

Third and finally, I want to say a few words about Artificial Intelligence (AI), largely as a stand-in for my son, Professor Ryan Abbott.<sup>10</sup> AI is generating inventions and expressive works. Whether or not we think AI has or will become "sentient" in the sense of self-aware is a different question than whether AI can engage in inventive activity.

If we take the fields of biotechnology and biochemistry, it is evident that a sophisticated AI machine can engage in the same type of inventive activity that research scientists have traditionally performed:<sup>11</sup> Studying databases of biological and chemical interactions, identifying potentially favorable and/or unfavorable compounds or biological materials, predicting whether testing is warranted, and so forth. And, while an AI machine, such as a neural network, initially must be programmed by a human being or group of them, what that AI ultimately accomplishes may be very distant from the program itself. In other words, it may be very difficult to attribute a specific combination of chemicals or biological materials to the software engineers who designed the program because they literally had no idea what the AI would ultimately create.

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<sup>10</sup> See RYAN ABBOTT, *THE REASONABLE ROBOT* (2002); Ryan Abbott, *I Think, Therefore I Invent: Creative Computers and the Future of Patent Law*, 1079 B. C. L. REV. 1079, 1083–91 (2016).

<sup>11</sup> See, e.g., AlphaFold, DEEPMIND, <https://www.deepmind.com/research/highlighted-research/alphafold> [<https://perma.cc/XVS9-MCWU>]:

We started working on this challenge in 2016 and have since created an AI system known as AlphaFold. It was taught by showing it the sequences and structures of around 100,000 known proteins. Experimental techniques for determining structures have been painstakingly laborious and time consuming (sometimes taking years and millions of dollars). Our latest system can now predict the shape of a protein, at scale and in minutes, down to atomic accuracy. This is a significant breakthrough and highlights the impact AI can have on science.

Again, because of time limitations we will not go into details. But we confront a similar and, in some ways, an even more striking set of developments in the area of expressive works. I imagine many or most of you have had experience now at least playing with one or more of the AI-based graphic design programs that allow entry of a subject matter or set of subject matters from which the AI creates a work of art. Some of these AIs create truly extraordinary works of art in a matter of seconds. One quickly begins to speculate about whether human artists will be needed before long, putting aside that human artists like to express themselves.

Should an AI be named as an inventor on a patent application? As the sole inventor in some cases? Should an AI qualify as the author of an expressive work? If a human being claims inventorship for something actually done by an AI, does that constitute a fraud on the patent office?

And this is just one, though perhaps the most important, set of questions. But assuming that we think an AI can be an inventor or author, who owns the patent or copyright?

My son Ryan poses another hypothetical. What happens when AIs become so good at inventing that scientific or technical problems previously considered very difficult to solve, if not insoluble, are commonly solved by AIs? Will we need to change our standards of what constitutes inventive activity? Will humans be able to compete with AIs in terms of the level of inventive activity or will AIs make everything obvious, at least in relation to human inventiveness?<sup>12</sup>

There are the beginnings of answers to some of these questions, but only the beginnings. The South African Patent Office has issued the first patent for an AI-generated invention to an AI's owner, with the AI listed as the patent inventor.<sup>13</sup> There is a series of test cases ongoing regarding whether AIs can be named as inventors and who would own their output. Though early rulings are largely against, mainly based on interpretation of statutory language, there may yet be decisions in favor as, for example, the UK Supreme Court will soon consider the question. More important, the objective of these cases is to push the issues in front of regulators and legislatures who will need to confront them. If AIs for all intents and purposes are inventing and creating expressive works, can and should we attribute their efforts to human beings who are not the true creators? And, if we do treat AIs as inventors and authors, what are the potential social and economic consequences?

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<sup>12</sup> See Ryan Abbott, *Everything Is Obvious*, 66 UCLA L. REV. 2 (2019).

<sup>13</sup> Eli Mazour, *Clause 8: Professor Ryan Abbott on Why Patent Law Should Recognize AI Inventors*, IPWATCHDOG (Mar. 2, 2022, 6:15 AM), <https://ipwatchdog.com/2022/03/02/clause-8-professor-ryan-abbott-patent-law-recognize-ai-inventors/id=147033/> [https://perma.cc/G8UN-HD9A].



In this brief space, I do not plan to answer these questions. That is, as we say, for the next 100 years of international IP!