
INTELLECTUAL PROPERTY:

DOES IP HARM OR HELP DEVELOPING COUNTRIES?

Alex M. Azar II, Graeme B. Dinwoodie, Jerome H. Reichman, Robert Sherwood;

Moderator: Bruce A. Lehman

HON. MR. LEHMAN: My name is Bruce Lehman. I'm at Akin Gump Strauss Hauer & Feld. I'm also the chairman of the International Intellectual Property Institute, an organization that works with developing countries to help them develop an intellectual property system for their own economic growth and development. I've been involved in this business in one way or another for about 30 years; probably my biggest claim to fame is that during the 1990s I was Assistant Secretary of Commerce and the Commissioner of Patents and Trademarks. During that time, my office really oversaw the intellectual property diplomacy that led to the treaties now in existence requiring, for the most part, all countries of the world, including developing countries, to have patent, trademark, and copyright systems virtually identical to what we have known for many years in the United States and other developing countries. This continues to be a very controversial topic in trade negotiations and in other contexts.

We have a distinguished panel of speakers who know all about this subject. Our first speaker is our Deputy Secretary of Commerce, Alex Azar, who has an extremely distinguished resume. In addition to holding the high post he currently maintains, among other things of course, but at least for my purposes, what stands out is that he was law clerk to Justice Scalia and a distinguished practitioner here in Washington.

I'll introduce the other people briefly, and then we'll start with Secretary Azar. Jerry Reichman, who I've known for a long period of time, is a professor of law at Duke University, before that at Vanderbilt, author of numerous books and articles relevant to the subject, and a very creative thinker in the area.

Bob Sherwood, who I've also known for many years, is really, I suppose, one of the longest standing intellectual property diplomats working in this field. He is a graduate of Harvard Law School, and worked in the global pharmaceutical industry for many years. My dealings with him go back many, many years. He has been trying to get developing countries to recognize the value of intellectual property rights, particularly patent systems, often working in a

very lonely manner without a lot of help from other people. He has spent a lot of time in Brazil, particularly working with that country—which continues to need that kind of help, I must say.

Finally, we have Dean Graeme Dinwoodie, a professor of law, Associate Dean, and Director of the intellectual property program at Chicago-Kent College of Law. He holds a Chair in Intellectual Property Law at Queen Mary College in London. Both of those schools have very strong intellectual property programs, and he has a distinguished academic career.

I'll turn it over to Secretary Azar.

DEPUTY SECRETARY AZAR: Bruce, thank you very much. We live in a world in which advances in medicine are being made that can improve human health, cure or mitigate disease or suffering, and even prevent disease. We have new understandings of the molecular causes of disease, and are really on the verge of a new era in personalized medicine, involving safe, targeted therapies designed for each individual receiving them. But with new technology and innovation comes new costs, and these are becoming harder to bear as populations age. People want the best medical care that money can buy, but they want someone else to pay for it.

I believe the issue that we're discussing today was best described by Ugandan President Yoweri Museveni, quoting an African tribal proverb: "You can't be so hungry as to eat the seeds." Contrast that with the observation of his countryman, one of the kings of Uganda. "In my country, sometimes the farmers are very, very poor, and when they become hungry, the seed that is there for the land, they eat it to stay alive." These two perspectives I think illuminate the role of intellectual property in drug development: how can we both eat today and eat tomorrow? How do we achieve the delicate balance between immediate consumption and the sustainable scientific progress? We have to be careful that our desire to drive down prices today does not sacrifice investment for tomorrow.

For the past several years, I have been meeting with health, trade, and finance ministers and other senior officials from most of the wealthy nations around the world to discuss this challenge. I have sought to build a consensus around the need for all of us to ensure that our reimbursement regimes and pricing systems foster long-term innovation for the health of our people and for all the people of the world. We need to share ideas on how we can accomplish these goals, given our different healthcare systems, because right now many governments have taken a regrettable approach when it comes to intellectual property rights. Many countries have laws that technically support intellectual property, but their monopsonistic means of implementing their health financing regime effectively undercuts any commitment they may claim to respecting intellectual property in many circumstances.

The case for supporting intellectual property is compelling. Let me give you just a few examples of innovation that has relied on the support of IP protections. Of the last 40 years, early infancy diseases have declined by 80 percent worldwide. New treatments have received reduced ischemic heart disease by 68 percent and hypertensive heart disease by 67 percent. Today, relatively inexpensive ulcer pills have replaced expensive major surgery, and new medicines have led to shorter hospital stays, fewer complications, and better quality of life for the chronically ill. Over the past 40 years, the use of medicines has helped halve the number of hospital admissions for 12 major diseases, including mental illness, infectious disease, and ulcers. Antiretrovirals and cocktail therapies have largely shifted HIV and AIDS from an assumed death sentence into a chronic condition.

Of course, the development of new drugs and new technologies is an expensive, complicated, time-consuming, and very risky process. Fewer than one in 1,000 new molecules created by researchers survive clinical trials and make it to market. Today it costs on average, by some estimates, between 800 million and 1.3 billion American dollars of private investment on average, and in the United States between eight and twelve years to develop a new drug—between eight and twelve years to demonstrate its safety and efficacy, and comply with regulations, just to bring it on the market. The cost of developing new treatments has more than doubled in the last ten years, while success

rates in developing new products remain as low as ever. A great portion of these are the amortized costs of all of the thousands of product failures needed for the one drug that actually makes it to market. In fact, only 20 to 30 percent of drugs in the final stages of testing actually end up receiving market approval.

Without a strong intellectual property system, businesses would not have the confidence to invest billions of dollars in research and development. Without a strong intellectual property system, new and essential medicines would not prosper. These high research and development costs, of course, naturally lead to higher prices for consumers, and the tension between meeting these costs while still investing in innovation is one of the most intractable political questions of our day. Unfortunately, far too often in trying to strike this balance, governments lean too much toward short-term savings and succumb to the temptation to control expenditures through direct price controls, cuts in reimbursement rates, delayed market access, and disregarding intellectual property rights.

The question posed here is: Does IP harm or help developing countries? I believe the answer is emphatically that it does help developing countries. If IP regimes were abolished today, drug development as we know it would cease and all of us, both in developed and undeveloped countries, would be left only with the drugs that we currently have on market. Clearly, nobody would want this, especially as there are still many existing and emerging diseases and conditions for which we would like treatments and cures. Many in the developing world do not have sufficient access to the fruits of innovation. However, this is not a problem caused by intellectual property rights. Without those rights and protections, there would be far fewer medicines to distribute in the first place. The problem is simply a matter of pricing.

Developed countries must respect IP. As I have said, drug research and development is very expensive. Because drug development is funded by consumers in developed countries, it is problematic when developed countries shirk their share of the cost. But what about people in developing countries who cannot afford the high price of supporting innovation? It is reasonable for market prices to vary in different conditions, and the United States has supported initiatives to create differential pricing structures with the DOHA Declaration on the

agreement of Trade-Related aspects of Intellectual Property rights, known as TRIPS. The TRIPS agreement, originally negotiated in 1994, sets down international minimum standards for forms of intellectual property regulation. The DOHA Declaration, negotiated in 2001, is an important political statement that clarifies certain flexibilities that already existed in the TRIPS Agreement. The DOHA Declaration itself recognizes the importance of intellectual property rights for the development of new medicines.

Among the causes primarily responsible for the treatment access problems in the developing world are a shortage of qualified nurses and physicians, underdeveloped healthcare systems, tariffs, and poor distribution and transport. The DOHA Declaration affirms that the TRIPS accord does not, and should not prevent members from taking measures to protect public health. It refers to several aspects of TRIPS, including the right to grant compulsory licenses and the freedom to determine the grounds upon which licenses are granted; the right to determine what constitutes a national emergency and the circumstances of extreme emergency under which compulsory licenses in a developing country can be used; and the freedom to establish the regime of exhaustion of intellectual property rights. Also, it provides a procedure by which WTO members can issue a compulsory license for the purpose of exporting pharmaceuticals to countries that otherwise meet the requirements for compulsory license under TRIPS but have insufficient manufacturing capacities to make effective use of the compulsory licensing provisions under TRIPS.

The fundament point beneath all of this is that countries benefiting from the DOHA Declaration cannot then permit or support the export of these humanitarian drugs to countries that could otherwise afford to pay for them—countries that should be shouldering more of a burden in stimulating innovation. Also, I think it is very important to remember that many pharmaceutical companies do not even register their patents and many countries in the developing world recognize the importance of access to their products there. In addition, the marginal cost of production of many pharmaceuticals is very low, so differential pricing regimes, if they can be enforced, can be highly effective in ensuring an effective return on innovation and access to

these products in the developing world with fewer resources. Another solution of course would be for developed world countries to provide aid and charitable funding, such as we do, through PEPFAR the Global AIDS Fund in order to purchase drugs consistent with the intellectual property regimes.

In sum, I don't think the question is a binary choice between how do we eat today and eat tomorrow. There is a way to thread the needle between the two polar ends of intellectual property and access. And a vigorous and profitable drug industry is not a problem to be solved but a goal to be encouraged for the health of all the world.

JEROME H. REICHMAN: Thank you very much for the opportunity to be here today. The topic is will intellectual property law help or hurt developing countries, in ten minutes, or less. You see the challenge. It's a very big topic. One has to ask which IP laws we are talking about, whose version of them is on the table, which countries are the focus of inquiry, what do we mean by "help or hurt," how do we measure the social benefits or and costs, to whom, and over what time frame? We might also nudge the organizers to ask whether ever-increasing intellectual property rights will help or hurt the developed countries in the long run, because plenty of reputable economists and legal scholars have serious doubts about how far we can push this envelope.

There's abundant evidence that IP as an institution can help every country. But it's also true that intellectual property laws are public goods; and like all public goods, they must be wisely managed [See *generally*, INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME (Keith E. Maskus & Jerome H. Reichman, eds., Cambridge U. Press 2005)]. The same copyright laws that can promote the music industry in Africa, a project with which I have been associated, can also make access to textbooks and scientific knowledge unaffordable for most students in Africa, unless they're managed properly. When the United States was a developing country, we didn't protect foreign authors, and we didn't participate in international copyright conventions. Things are much more difficult now. If we look at industrial property, we can surely say that trade secret laws, unfair competition laws, trademark laws, and the like, benefit every country, because you can't

innovate without them. Keith Maskus has shown that even patent laws can help developing countries just by enabling them to import up-to-date, high-tech products that would not otherwise be available; not to mention licensing and the possibilities of foreign direct investment.

At the same time, intellectual property rights can hurt if the foreign sellers impose terms that undermine the ability of entrepreneurs in developing countries to enter and compete in the global marketplace. These countries also need room to reverse-engineer unpatentable know-how, to add value by adapting foreign goods to local conditions. In doing so, they have to blaze new trails, because historically no poor country—no country that is developed at present—ever had to formulate their development strategies in the presence of the high international intellectual property standards we have today. That doesn't necessarily mean they're bad, but it means they're very challenging.

From a broader perspective, the economist Keith Maskus and I recently published our view that what the TRIPS agreement has actually given birth to is an incipient transnational system of innovation, which could produce very powerful incentives to innovate for the benefit of all mankind [See KEITH E. MASKUS & JEROME H. REICHMAN, "The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods," *in* INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME]. Someone working in a garage in Bangladesh can now reach the world market for knowledge goods. The question is, what norms are best for that system as a whole? There is a serious governance problem at the international level, a tendency to promote international IP standards that lock in rents from existing innovation while making future innovation more difficult. There are pressures on the ability of states to provide essential public goods—public health, education, food security, environmental safety, etc.—because many of the inputs are covered by intellectual property rights. And there are even problems in fostering healthy free enterprise economies, which I'm sure everyone here is in favor of, against the imposition, the regulatory obligations, of these ever-expanding intellectual property standards.

In estimating the social cost and benefits of this

emerging transnational system of innovation, we have to differentiate among many groups of countries at different levels of development. The poorest of the poor, the thirty or more poorest countries, known as the Least-Developed Countries, (LDCs), don't have to shoulder these problems because they're exempt from these obligations until 2013. At the other extreme, middle-income countries such as India, China, and Brazil are struggling to maximize the benefits and minimize the costs of these intellectual property regimes. They have cultural industries and high-tech industries that are profiting. But they also have problems in their public health sector, and other sectors that are trying to catch up. So, they have a mix. Nevertheless, innovators in these countries have all begun to obtain significant numbers of patents abroad, which points in a positive direction.

But then, there are all the other developing countries at much lower levels of income; they have more serious problems. The different national and regional capabilities and endowments of the WTO Members limit their absorptive capacities and reduce the potential benefits of open markets for knowledge goods. There is, in short, a technology divide; and that divide is widened by the high rents that must now be paid to technology exporters and by the absence of any provisions in these international agreements that would confer differential and more favorable treatment on developing countries. This is the first time in history that we have negotiated a trade agreement without such differential or more favorable provisions.

All of these countries must accordingly compete in markets for knowledge goods on roughly the same normative terms and conditions that govern advanced industrialized countries. All of them have to struggle and cope with the enormous challenges and burdens (including financial burdens) that a universal set of relatively high IP norms thrusts upon them. Even those countries that are not engaged in the knowledge-good-producing tournament still have the costs and the problems of organizing and maintaining the defense of foreign intellectual property owners, with serious implications for their exchequer. In other words, even developing countries that opt out of the innovation system must engage with the social costs of intellectual property norms, both as defensive measures and because they have to continue to provide other essential public goods that

depend in part on access to knowledge. They have to master all of these legal flexibilities with varying degrees of success.

They're having a lot of problems, and we're trying to help them. But I think if they did a better job they would be able to do more of what you want. Of course, it would help if the developed countries would ease off on the pressures on developing countries for still higher levels of intellectual property protection, but that's another problem. When developing countries opt in to the production of knowledge goods for local consumption or export purposes, they encounter really big problems. They have to provide incentives for their own industries without discriminating against foreigners because we have a national treatment requirement. And then they are also under pressure, as you just heard, for political reasons, among others, to address their public health and education problems. Here, in short, even the economically dynamic developing countries must resolve tensions between calibrating TRIPS-compliant domestic norms to stimulate innovation and adjusting the same set of norms to provide access to knowledge and medicines on affordable terms and conditions. This is a really hard task.

More generally, the TRIPS agreement has obliged all developing countries to engage in this delicate balancing act between private and public goods. The international system does not offer any guidance to these countries in this regard. We have no trusted governance mechanism for balancing public and private interest in this emerging transnational system of innovation. Think about that for a moment. Here, in the United States, we are always talking about the balance between public and private interests; thrashing it out in committees, in hearings, in legislation. On the whole, I think we do a pretty good job of it. But they don't have any solid basis for doing this at the international level at all; and they have relatively primitive means of doing this balancing in their own countries. We lack proven theoretical premises and empirical evidence to determine which IP standards would best promote the diverse goals of this transnational system over time. We have generated few ideas and little discussion about how to maintain the supply of other global public goods under the supranational IP regime, and we have hardly begun to acknowledge the distributional problems involved.

Maskus and I expressed the view that we really don't need any more IPR standard-setting exercises for the moment. We've called for a moratorium. We think the developing countries need a breathing space to accommodate the social costs of the TRIPS agreement and posterior TRIPS-plus, and also TRIPS-minus, measures. They must particularly master the nuances of existing international standards of protection, including these built-in and subsequently added flexibilities, with a view to adapting this legal infrastructure to their own assets, capabilities, and needs. We need a timeout.

We also need more reliable information about how IPRs are helping developing countries, especially in certain fields and at certain levels of per capita GDP. We need to encourage them to embrace a pro-competitive ethos. They need to experiment with new intellectual property models, including those based on open-source solutions and the strategic use of liability rules; the latter option is beginning to get quite a bit of play because liability rules can cure market failures without impeding follow-on innovation, without creating barriers to entry, and without necessarily creating blocking effects. Developing countries need to formulate suitable competition laws, rules, and policies. They also need to be testing different approaches to stimulating and disseminating innovation in their own national and regional systems of innovation, which could give us valid experiments that might lead to new bottom-up proposals. For example, one of the things that we ought to be thinking about, in line with Secretary Azar's remarks, is how to coordinate global contributions to the cost of clinical trials; because that is a global public good, and while there shouldn't be any free riding in that area, we ought to think about treating clinical trials as a public good here at home [See Tracy R. Lewis, Jerome H. Reichman, and Anthony So, *The Case for Public Funding and Public Oversight of Clinical Trials*, *ECONOMISTS VOICE*, Jan. 2007, available at www.bepress.com/eu].

We must particularly ensure that developing countries are connected to the worldwide flow of scientific and technical information, in what UNESCO has called "the drive for knowledge societies." We need better research exemptions in all intellectual property regimes. We need to ensure that government-funded and government-generated scientific research results are widely disseminated at

affordable cost. We need to encourage the developing countries to start working on variants of our Bayh-Dole Act—maybe even improvements on our Bayh-Dole Act—to start public-private partnerships between their research universities and the private sector.

Looking beyond innovation, we must also find ways to ensure that progress in stimulating the production of private knowledge goods does not undermine those responsible for supplying other public goods, such as public health, agriculture, the environment, education, and scientific research. In other words, we should be working to reverse the trend that makes the globalization of private knowledge goods increasingly at odds with the provision of global public goods, including knowledge as a public good. Instead, we should be taking steps to ensure that this emerging transnational system of innovation adequately fosters and supports the supply of both private and public goods, in an environment that remains responsive to basic human needs and fundamental human rights.

ROBERT SHERWOOD: I like to start a talk like this by reporting my observation, in probably 25 or so developing countries around the world, that in every country there are inventive, creative minds. And whether this natural resource is utilized to grow those economies or becomes a wasted asset is largely dependent on the local intellectual property system. One of my favorite stories comes from Nicaragua, hardly an advanced developing country. I was there for the World Bank, and after I'd completed an interview with one of the local intellectual property attorneys, he asked me to wait a minute and then reached in his desk drawer. He pulled out this strange-looking plastic thing that he called a melon saver, an oversized golf tee sort of thing, with supplemental legs. He explained that melons in the tropics grow on the ground; as they reach maturity, the microbes emerge from the soil and tend to induce rot and other pathogens in the melons. This melon saver is used to prop the melon off the ground as it reaches that precarious stage. When I got back to my hotel that evening, I told my fellow on the World Bank Mission about it. He had been involved in agriculture around the world for a long career, and said, "My goodness, I wish I had thought of that. That is a major jump forward for agriculture in a lot

of developing countries."

The moral of the story is that the farmer who came up with the invention understood patents just enough to apply for one. The patent law in Nicaragua was pretty primitive but good enough to handle that one. He also got a patent in the United States, and, on the strength of those two patents, was able to go forward into production. I haven't been back to Nicaragua. I don't know the sequel to the story in terms of how it's changed things. But I use the example to illustrate the fact that there are bright minds in every country.

In contrast, in Brazil, Petrobras, the national oil company, in the early '90s, was struggling with the nation's lack of oil reserves. They commissioned some professors at the Federal University of Rio de Janeiro to work on deep-ocean platform drilling technology. They were conscious of patents held by other oil companies, went to work and came up with some very excellent platform technology. As quickly as they could, they published their findings in academic journals, which of course voided the opportunity to seek patents. The result of that failure was that the Brazilian taxpayers who had paid for the research made a gift of this technology to Exxon, British Petroleum, and the other major oil companies of the world, for which I'm sure they were quite grateful.

I've spent a great deal of time in Brazil in the last 35 years. Many inventions have been made there, including important ones in the pharmaceutical area. Many were made by university researchers in federal universities. Knowing that Brazil's intellectual property system has been very weak, some of these inventors have flown to Brussels or London over the years to seek patents, then negotiated licenses there and banked their royalties abroad. Brazil's IP system was bypassed, and Brazil received no benefit from these inventions.

I'll also mention the interesting example of a German fellow who came to Brazil in the '30s. He made lenses for binoculars, telescopes, and the like, and he alone knew the secret of polishing the lenses at the finishing stage. He was afraid to teach this to anybody else because he was afraid that the trade secret would slip out of his company to competitors. That worked fine for a number of years, until the old fellow died. At that point, the company dissolved; since he was the only one who knew the technology.

In Ecuador, I happened to stumble upon a group of young fellows working with the export of cut flowers. They decided that baby's breath had the possibility of genetic improvement, and worked so that the number of petals was increased threefold—something florists very much sought. I happened to meet with these fellows the morning after they learned that the fence around this first crop of genetically improved flowers, way up in the Andes in a hidden valley, had been breached. About half of the new plants had been stolen. They knew, because of the lack of intellectual property protection in Ecuador at the time, that all of their work in improving baby's breath had been lost to competitors.

In Pakistan a few years ago, I asked to talk with the Chamber of Commerce in Islamabad. This was arranged and I met with a rather rough-looking group of men. I began my talk and the president interrupted me. "I know about intellectual property," he said. "My family has been making rugs for a long time, and our particular rugs are distinguished by a vivid blue dye. Only I and my oldest son know where to get the roots up in the mountains and how to process these to produce the vivid blue dye." He went on in a strong voice to say that everyone in this area knows that if they steal this technology he would have them killed. He had a very good understanding of trade secret protection. You use all necessary means under the circumstances to affect a protection.

I'm constantly struck by this example: the Oswaldo Cruz Foundation, a very prestigious and distinguished research institute in Brazil for over a hundred years, produced a yellow fever vaccine. They sought and obtained patents in a number of countries where yellow fever is a problem. This vaccine was quite a breakthrough to the world's medical community. They are manufacturing it in Brazil but exporting the finished product elsewhere. Brazil requires that intellectual property be protected within Brazil with the manufacturer locally. What's good for the goose is not good for the gander.

Now, to address the question the Federalist Society has posed for us this afternoon, I want to really stress the fact that an intellectual property system is highly discretionary. A tariff system is easy in the sense that as of some fixed date the tariff is to be reduced from, say 15 to 10 percent. If you say that as of a certain date the intellectual property system is

to work, and those responsible for administering the intellectual property system in that country still do not understand what it is or believe in it, it isn't going to work, precisely because it is so highly discretionary. This means that the Patent and Trademark Office needs to work, and work well. The judicial system needs to understand what's involved. And in most of these countries, they don't.

And so, while our discussion here in this country is very sophisticated and intricate, the conditions in most of the developing countries are still very crude. Beyond this, an understanding of the many ways in which robust intellectual property protection—(and I want to stress that this needs to be well above the level of the TRIPS Agreement)—stands to release a great deal of energy in those countries is not yet sufficiently appreciated.

Carlos Primo Braga, a Brazilian economist at the World Bank was fond of saying that intellectual property is like sex. You can talk about it, but until you've tried it you really don't know what's going on. To that I would add that an intellectual property system, without the support of a well-functioning judicial system, results not in sex, but in a poor kind of fantasy. The judicial system is where the focus needs to be in a lot of developing countries, in order to turn the promise of robust intellectual property into something that has strong positive effects for growing those economies.

GRAEME DINWOODIE: With regard to the question with which the panel was presented, yes, IP can help developing countries. But, as suggested by the remarks by each of the previous speakers, the more appropriate question is "what are the conditions that need to exist in order for it to help developing countries?" That inquiry involves at least two separate but related sets of questions. First, we need to consider what infrastructure must exist in any particular developing country for IP protection to be a net positive. The infrastructure in different developing countries can vary widely. But, second, we need to consider what form the international intellectual property system must take to facilitate a positive answer to the first question, because the international system is one of the main drivers of domestic protection. There is often very little domestic pressure or impulse to create effective forms of protection. We have to think about the role of the international system in shaping domestic conditions.

As an initial matter, I agree with the previous three speakers that stronger intellectual property protection (or effective intellectual property protection at certain levels) is going to facilitate the import of goods into developing countries and indeed encourage foreign investment in those countries. That's especially true if there is effective enforcement, which I think explains in many ways the focus on enforcement one sees in a lot of the discussions in the TRIPS Council. But simply having some level of intellectual property protection will not of itself stimulate vast, new local creativity and innovation. It will most clearly protect that which already exists. As Bob has highlighted in his remarks, there are plenty of developing country inventors or creators with innovative ideas who can benefit from intellectual property protection. But the short-term benefit from a country simply enacting IP protection is going to be greater for current intellectual property owners who obtain a new stable market from which to obtain returns. The full benefits of intellectual property rights for developing countries are really only going to be realized when the local industries also become competitive enough to take advantage of the rights that the system will afford them.

Getting to that situation in fact has substantial benefits for the developed world. It allows for local buy-in to the concept and importance of intellectual property, and an appreciation of the ability to maximize and generate wealth through innovation. This buy-in is particularly important in those industries where, to some extent, extracting the value of intellectual property rights depends on some level of voluntary compliance. We see a variant of that problem in the United States, for example, with respect to downloaded music. If you don't get the buy-in on the cultural level, it becomes very hard through legal rights simply to ensure enforcement.

So, to make that happen, to get the buy-in, what do we need? Well, I think to some extent the TRIPS Agreement already contains some of the tools. For example, the TRIPS Agreement recognizes the importance not only of strong intellectual property rights but also of technology transfer to the developing countries. We can take the contemporary trade philosophy of comparative advantage a little bit too far. It's easy to understand in a non-IP context the idea that each country focus its efforts and talents on areas where it has superior abilities

to produce a particular product. In comparative terms, it doesn't make much sense to try and grow bananas in Scotland, which is cold but has substantial reserves of oil, or to spend money looking for oil in the Caribbean, which has a greater ability to export bananas but less oil. Through free trade, we should enable the export of bananas from the Caribbean and oil from Scotland. But that argument of comparative advantage doesn't play with the same moral force in intellectual property. It's harder to argue, "Why don't you keep providing cheap labor and we'll keep extracting super-rents through the provision of information-rich technology."

So technology transfer is very important if developing countries are to be helped by IP protection. But so is the capacity and infrastructure within the countries to which the technology is transferred to absorb that technology. Countries vary very widely in their capacity to absorb technology, for reasons that include the state of the education system, basic national infrastructure, the existence of particular skill sets, the availability of health care, etc. These are issues on which intellectual property requires the help of policymaking initiatives in other areas. So, to make intellectual property rights work in a developing country we need to get the local industries to buy in. We need, therefore, to make them competitive enough to want to take advantage of intellectual property rights. And that involves more than just core intellectual property policy.

Moreover, it may be the case that in the initial stages of this shift there is a need to offer developing countries some latitude regarding how they grow the industrial base from which they can obtain and benefit from IP rights. The publishing industry in the United States took advantage of such latitude with respect to its exploitation of pirated works from Britain when the US publishing industry was in its infancy. The likely eventual success of India in the pharmaceutical field, under its new patent regime, will to some extent be dependent upon the fact that India already has a generic drug industry that has come about by close to nonexistent, patent rights.

This last observation points us to two further issues that I want to identify as particularly important. The first is the speed of implementation; the second is the need to recognize that not all developing countries should be treated alike in thinking through the role of intellectual property

law. Again, the question of the speed with which developing countries must come into compliance with international standards is something that the TRIPS Agreement itself recognized through the inclusion of transitional provisions and grace periods. The conclusion of the TRIPS Agreement is still relatively recent. It has only been 13 years. There are some least developed countries that don't require to implement all provisions of the TRIPS Agreement until 2013. As Jerry said, we need to give countries time to ensure that they're able to comply with international standards.

There's also a real danger of elevating a norm to the status of an international standard too quickly. For example, look at Article 31 of TRIPS and the compulsory licensing mechanisms that the Agreement contemplated in 1994. The assumption in the conditions set out in Article 31 (though probably not all that explicit in the discussion from the early 1990s) was that compulsory licensing would be an adequate safety valve against overbroad patent rights because there was some degree of manufacturing capacity in countries that needed to impose a compulsory license. I think the experience of the 1990s showed us that was not the case, causing problems in the provision of drugs in Africa such that we had to have the DOHA declaration that Alex referenced. But securing the Doha Declaration took time. International obligations, when entrenched, are very, very difficult to change.

The old way the international intellectual property system took care of that danger was by ensuring that there were plenty of spots for flexibility in the implementation of international norms. It also allowed some degree of latitude in enforcement. So, for example, the United States could join the Berne Convention and adopt a relatively generous interpretation of its moral rights obligations under Article Six. Now to be sure, TRIPS was intended in some ways to shore up enforcement gaps and in fact consciously take away some of the latitude available. But TRIPS took a different position on the flexibility question. For example, Article One. One clearly recognizes a sort of international federalism, or member state autonomy. Member States of the WTO are given the ability to implement the general principles of the various agreements in accordance with the legal culture that persists in their particular country. I don't think we should lose sight of that

flexibility. There is recognition, even within the current system, of the fact that respect for national sovereignty is an efficient way of implementing more general international norms.

This provision also speaks to the need to recognize that not all developing countries should be treated alike. But let me conclude by adding one last point on the importance of treating different things differently. A lot of the debate about the role of intellectual property law in developing countries, particularly in the controversial areas, is really about patents. But it's important to recognize that there are other forms of intellectual property. In particular, the arguments for trademark protection and protection against counterfeiting are very strong as a short-term approach that developing countries should have to take because the social welfare and public health concerns implicated by counterfeits are such that there is little reason not to comply very quickly with the general trademark obligations. We need to understand and treat some of the intellectual property rights differently from others.

The short answer is, yes, intellectual property rights can help developing countries, but the ability of intellectual property rights to do that is heavily dependent upon the speed with which we require implementation and the latitude and flexibility that we give developing countries to implement the obligations in ways that are tailored to their particular circumstances.

