

Commission on Intellectual Property Rights

CONFERENCE

***“HOW INTELLECTUAL PROPERTY RIGHTS COULD WORK
BETTER FOR DEVELOPING COUNTRIES AND POOR
PEOPLE”***

TRANSCRIPT

**Session 5: Technology, Development
and Intellectual Property Rights**

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**THE ROYAL SOCIETY
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SESSION 5: Technology, Development and Intellectual Property Rights

Ramesh Mashelkar: Chair, IPR Commissioner

My name is Ramesh Mashelkar. I have the privilege to Chair Session 5 on Technology, Development and IPRs. In this session we will be trying to understand how IPRs have been used in the history of nations as they develop, the impact of IPRs in developing countries and also how the developing countries can best use IPRs to promote innovation, technology development and the reduction of poverty. We have two very eminent speakers, Professor Keith Maskus and Dr Christopher May. Keith Maskus is a Professor of Economics at the University of Colorado and a leading economist in the Development Research Group at The World Bank. He has written extensively about various aspects of international trade, including testing of trade models and the political economy of trade. His current research focuses on the international economic aspects of protecting IPRs and many of you must have seen his splendid book IPR in the Global Economy, which has done outstandingly well.

Keith Maskus: World Bank

I am honoured to be here and to participate in this important endeavour by the Commission on Intellectual Property Rights. I am quite confident that they will come up with recommendations that will help us get through this thicket of difficult issues. I have been asked to speak today about technology, development and IPRs which is a very broad and complex topic. I can only highlight some of the conclusions, most of them fairly tentative, that I have been able to reach in studying this issue for sometime now. Last week I was at a conference at the Columbia University and a licensing manager from an unnamed large American corporation was trying to make the case for IP. You all know the old adage about technology transfer, which is if you give a person a fish he eats for a day, if you teach a person a fish he eats for a lifetime. He pointed out that suppose he invested in a lot of sonar equipment and discovered where the fish are and this is something only he knows. If he lets other people fish there they will take all the fish away. So what he needs to do is put a fence around it and license the rights to fish and then everybody is better off. So this is stage three. If you license information and knowledge, then those who can afford it will be able to eat forever. If I put a fence around my fishing spot and license the rights to fish there this is going to cause other people to go out and find other fishing spots. There is this inducement to doing a lot more innovation. That is right at the core of the IP issue for developing countries. The issues of technological change and economic growth should require entire semesters with a study or entire careers with a study. There is little doubt among economist that technical change is the most significant source of growth and development. Yesterday one of the speakers had a graph where essentially nothing happened to productivity for centuries and centuries until the last century or two. If you put the same kind of slide up for almost any technology you can think of you would see the same thing. That is clearly why the now developed countries are more wealthy. The pace of technical change has been

more substantial there. Economists don't really understand this process terribly well, but we have made a lot of progress. Technical change is a very complex issue. We used to call one type of technical change reducing "x-inefficiency." The means that if you are in an economy that is heavily distorted and far inside your production frontier, then economic reform, opening yourself up to market signals, can have substantial impacts on moving out towards the frontier. My guess is that many poor countries could benefit from reducing their internal and external distortions and moving toward the technology frontier, but that IP would be relatively unimportant in that process. General-purpose inventions, of course, refer to someone inventing a very large discreet new piece of knowledge on which additional industries and inventions are built, examples like the automobile, electricity, the light bulb, now the semiconductor. Those are very powerful things and have a lot of impact on technical change but one can wonder also about how important IP is in that context. Where I think IP becomes important is in these other areas. Most technical change in both the wealthy countries and in the developing countries is much more accumulative and incremental in nature, taking what exists and improving upon it. The nature of IPRs is such that it sets out the boundaries within which that kind of competition takes place. With standards that can be either pro-competitive or anticompetitive. There is this issue as to whether technical change involves imitation of existing technologies or innovation in which there might be changes in technologies and bringing those changes to market through product development. Is the process of technical change responsive to market signals? I think in the main it is. It depends greatly on the nature of competition, on the ability of firms or products to enter and exit markets and whether governments and markets permit appropriability of the innovations being developed. Even at low levels of economic development we know that innovation and adaptation are pretty responsive to changes in demand, the changes in price signals. What about IPRs? What is the role there? The historical role of IPRs, and many of you know quite a bit about this I am sure, if you look back at history what you will find is that IPRs tend to be reformed as a response to the needs of inventors and to political economy pressures within society. There are positive examples and negative examples. US copyright policy in the nineteenth century was explicitly discriminatory in an attempt to try to shift production publishing activity into the US and it was only after very substantial complaints by the Europeans, and Charles Dickens in particular, that this policy was changed. The Japanese patent system after world war two was designed to encourage learning of technology, some would argue stealing of technology. It was designed to encourage very small scale incremental invention, inventing around very narrow claims to patent applications. I think it is demonstrable, even in a statistical context, that this system had a positive impact on technical change and productivity growth in Japan. That positive impact tended to play its way out by the 1980s when Japan was getting closer to the technological frontier, no longer really in a catch-up phase. So it felt that it had to change its system pretty dramatically. I now mention the "East Asian Miracle." It is often claimed, with considerable justification, that countries like Korea, Taiwan, maybe now China, have expanded their technological base, their ability to innovate without having IP protection. Until recently in those countries there was a relatively weak form of IP protection. Many people have taken that very powerful observation and used it to claim that the same process would be true in other development contexts. That may or may not be right. East Asian economies are, in many characteristics, very different from other developing countries. I think it is arguable that many of the characteristics with which industry organised itself in

Korea, Taiwan and China involved in them implicit protection for technological secrets. They didn't really have a lot of cross firm learning because of a weak IP system. They may have been learning for other reasons but I think we need to be careful about making broad claims in this context. The minimum standards in the TRIPS Agreement for Technology Protection, specifically in patents and trade secrets, are considerably higher than what we might expect most developing countries in a historical context to adopt on their own. Therefore, as a result, we can certainly expect a fairly large number of problems with compliance with the IP standards that TRIPS requires. That will be a challenge for developing countries over the next several years. If you look at the nature of IP form over time, there is a very clear tendency for IP protection to accelerate as economies become even wealthier or to increase their technological sophistication. What we are actually observing now is not so much conversions of IP standards from above but a tendency for those standards to be dragged up as the really advanced economies, like the US and Europe, dramatically increase their protection for IP. I expect that means there will be even more pressures over the next several years to harmonise upward and that, of course, is an important challenge for developing countries and this Commission. A key question here is Are IPRs Important? We have talked at this Conference about balance in finding the right approaches or incentives for defining Private Property Right in information. IPRs to an economist are always second best solutions to complex market failures. The first best solution typically involves, in theory on paper, some Government intervention in the research function and then some widespread dissemination. The problem is that we know from historical experience that there are a number of government failures involved in that process also, so IPRs are the market based second best solution to this complex problem. When you talk about a second best solution to information market failure problems, its impossible to make unambiguous and clear claims about the effects you will get in any context. Much depends on various conditions. Now corollary to the balance question in economics of IP, of course, is if you ask a positive question, "Do IPRs matter for technical change?", the answer is well it all depends, or the evidence is mixed. Those are the two general answers we can give. Are IPRs important for inducing innovation? I think it depends on the objective of the IPR you are talking about and on market conditions. One objective is to maybe stimulate discrete inventions. We have a series of surveys in the industrial countries most of them done in the US which ask the question of research managers in corporations, "Is the promise of a patent actually important in your decision to undertake research and development?" and overwhelmingly the answer to that question is no, except in the pharmaceutical sectors and now in the biotechnology sectors. Many economists take that observation and go on to claim that the entire patent system or the entire IP system is probably inappropriate. I think that is far to broad a claim to make on the basis of that information, which is, after all, an examination of a very narrow slice of the entire IPRs pie. Encouraging incremental innovation is another very important issue because the nature of innovative change in developing countries is largely incremental. I think some forms of IP can be important in promoting encouraging incremental innovation, such as utility models, trademarks etc. What about promoting dissemination and diffusion? The bargain in IP is to convince inventors to put their new information on the market in a way that others can learn in return for their exclusivity. In some contexts I think that works very well, in others it doesn't. It depends very much on the competitive nature of the market and the narrowness of the claims. On to extending and deepening markets. Economists often look at the

technical change aspects of patents and stop there, but IP extends far beyond patents into such devices as trademarks, trade secrets and geographical indications. I think it is fair to claim that one of the real restraints on business development and product introduction in many developing countries is that the absence of trademark protection provides no incentive to extend markets across regions of the country or across different cities. As economies develop, no longer is it sufficient to just sell within your local market. You need to extend markets across cities, across provinces, across borders and, consequently, that requires substituting for implicit domestic or local protection, some mechanism that provides trust that can be extended across these borders and trademarks, in fact, have that effect. I have done most of my work on FDI and technology transfer. Many developing countries are adopting stronger protection for IP precisely because they think this is where the new technology is going to come from for their economies. I would argue, based on the evidence, that there is a lot of truth in that claim. Middle income developing economies have or are building a strong base in their own technological capacities, but there is not much evidence that that's the case in poor and least developed countries. There are other conditions that help optimise the technical change aspects of IP protection, which you are familiar with. Two point here, one is support for technical change and diffusion. It is not going to do much good to just adopt strong IPRs and wait for the technology to flow, that is not going to happen in most developing countries without much stronger support for internal technical change processes and that will require a science and technology policy and some investment in public research laboratories and commercialisation opportunities. The last point I want to make, because I believe it very strongly and it is often missed in this kind of discussion, is market opportunities and access. No one is going to invent in new technologies in developing countries unless they believe that there are going to be markets for them to sell these products. It may or may not be the case that those markets will emerge within the developing countries internally. I think it will happen to some degree, but not nearly to the degree that strong advocates of IP protection claim. I would argue that if you really want developing countries to have a lot of respect for IP and to reform their systems and to enforce their systems, it is incumbent upon the developed countries to provide them significant market access. This requires liberalisation in agriculture, textiles etc. What can countries do to try to improve the processes on their markets? One strategy would be reactor strategies for effective standards. Given that TRIPS requires the implementation of new standards, what kinds of standards can be put in place that will have a pro-competitive dynamic effect on technical competition in the economies? Administrative costs, it is going to be important in developing countries to try to limit the costs of new IP systems as much as they can. I know the Commission has taken this issue very seriously, but there are important issues that arise. If developing countries take advantage of the Patent Cooperation Treaty and use foreign examination systems to decide whether a claim should, in fact, be patentable, that will save some resources, but we do have to be careful that we don't end up with a system where only the examinations are being done in the developed countries and, consequently, the patent claim issues are not being represented in the poor countries. Adopting appropriate IPRs for suitable exemptions and safeguards is an extremely complicated issue. The World Bank put out a publication in November, "The Global Economic Prospects", that has an extensive discussion on this subject. I think it is important for developing countries to avoid implementing new IPRs that seriously limit access to scientific and technical information such as

the kind of database protection in the European Union that we are seeing. Positive strategies for IPRs and development. This is really where the action would happen. I think it is important to encourage small scale innovation with the types of IPRs that are assigned for that purpose, such as utility models, certain forms of trade secrets, industrial designs etc, promoting product development with trademarks and geographical indications and in a number of developing countries I have visited it does appear that weak trademark enforcement tends to diminish domestic business opportunities more than it penalises foreign firms. Recognise the market-deepening aspects of trademarks and copyrights. I don't know much about TK so this is an issue for you to think about, Finally, can IPRs work well? Yes, but the road is difficult, it does require greater reforms than just IPRs and they need to be embedded in a broader system of innovation and regulation. It is a complex issue, but I am pleased the Commission will be coming up with concrete recommendations. Thank you.

Ramesh Mashelkar

It is a pleasure to introduce the next speaker, Dr Christopher May. He is a senior lecturer in International Political Economy at the faculty of Economics and Social Sciences at the University of the West of England. His interests are in IPR, Global Information Society, Information Economy, Knowledge Workers and the issues that surround state and international law. He has published very extensively many books and articles on the global political economy of IPRs and information society.

Christopher May: University of the West of England

I'd like to thank the Commission for inviting me to speak to you and exercise my prejudices. When I was younger, I had a view that all IP was theft. Now I have grown up and become more mature in my views, I have become more reformist, perhaps. Nevertheless, that still lurks in the back of my mind.

Referring back to Keith's presentation, I have great respect for that reformist position, I do not wish to criticise it. I just wish to take a different cut through the problem. What I want to suggest is that we have a political choice here, a political problem that needs to be addressed and that political problem is the question of the dominant understanding of IPRs which is encapsulated in the TRIPS Agreement. It is this I want to talk about and I want to place in a longer scale historical perspective. IPRs have been challenged before and not doubt they will be challenged in the future. The issue we need to think about is not so much the technical issues about how IP works, but rather what are its real world effects. The real world effects we should be interested in are those that are outside the developed world of owners and the real world effects of those who we might call the users. I think we should also bear in mind how important is the question or problem of IP and I take an example here from Bill Gates. When asked in the forum about the importance of information communication technologies for the development of the under developed and developing world, Bill Gates said it was all very well to have computer Internet access, but if you are living on a dollar a day then perhaps the more important problem was health and clean water. I think although it is very import to think about

IP and very important to think about issues around the ownership of ideas, we should also recognise that this is not by any means the whole problem. Therefore, we should expect that IPRs may play some role, may play some obstructing role but we should also look at a much wider context. The first issue is technology transfer. Technology transfer and IPRs have been linked for many years and issues around access to technology are very important. One of the things about technology is, of course, is that it also relies on large amounts of quite often unrecognised tacit knowledge. Transferring tacit knowledge is much more problematic. Indeed, transferring technology can be problematic because “inappropriate technologies” may sometimes be perversely induced to be transferred. Lower level technologies, or what are usually called “appropriate technologies”, a sort of work the Intermediate Technology Development Group does, seem often to be much better solutions, but the IPRs regime, the IPR settlement, doesn’t really have much to say about those properties or those technologies because they are, of course, outside that regime by virtue of their age or their traditional uses. We have a problem if we are asking developing countries to try and leapfrog technology or if they wish, in fact, to leapfrog technology, there may be a problem in the question how appropriate the technologies that they are asking for, or equally are being thrust upon them, maybe. If we are going to think about transfers, perhaps we should also be thinking about the transfer of cash. “The evidence suggests the inflows of foreign direct investment may rise when IPRs are strengthened. In the meantime, however, governments of poor countries are being asked to cooperate in the redistribution of global income that will cost them hundreds of millions of dollars.” That radical statement about the global injustice was recently published in that august organ of radical leftism, The Economist. If these ideas are percolated to the economics’ focus column in the Economist, it seems to be that we really need to start thinking about them rather than suggest they are some transitory problem. I would regard it difficult to justify IP in a general sense if we end up with the situation with the poor paying the rich and this is especially the case if we pretend in the developed world that we are interested in some way in alleviating poverty and inequality. Of course, the answer is we may not actually be interested in doing that but if we are proclaiming to be interested in it, we need to be addressing these problems rather than thinking about more technical issues. In that sense, one of the questions we need to ask ourselves is what does history tell us about IP. First of all, the history of IP is much longer than many people presume. I am working on this at the moment and what I think is interesting is that currently the general understanding of IP in the general discourse around IPRs and their justification suggests they go back to Britain’s monopoly laws of 1624. I traced them at least 150 years further back to Venice, and some people would go even further back than that. What is interesting about the Venetian IP laws, which came out in the late part of the fifteenth century, is that they are completely strategic. The Venetian authorities enabled the law of monopoly to protect what they, at that time, would regard as strategic technologies, early printing and, perhaps most importantly, glass making. Incidentally, exporting glass-making technologies out of Venice and being caught was punishable by death, so technology can be quite an import issue for some people. What is interesting about this is that the spreading of legal innovation from Venice into other parts of Europe over the next 150 years was entirely based around the need for states to generate what we might call comparative market advantage, in that sense to attract artisans. That didn’t stop the decline of Venice, but that was certainly what they were trying to do. It is also important to remember that Britain’s attempt at monopolies was a similar strategic

aim. It was strategic in the sense that it was intended to a) aid the appropriation and importation of technologies that were previously foreign owned or, at least, foreign manifest. In that sense, as Keith has pointed out already, the American history of IP, again in the nineteenth century, reflects similar strategic aims. There is a very interesting period between 1850 and 1875 when there was enormous controversy about patents and their international use and recognition. This debate raged between abolitionists, those who favoured complete abolition of IPRs on the bases that they constricted free trade and those who argued that they should be internationally because they benefited authors. Parts of these debates came up with some very interesting and familiar points of view. The first issue that many abolitionists focused on is the actual right to own IP which, at the time, was regarded as some form of natural right. The abolitionists focused on the notion that actually there is nothing natural about IP. IP is entirely a legal construction. Whereas with material property, a chair or a table, at least we can say that the chair or table had some sort of physical existence prior to its recognition as property. It is hard to argue that knowledge and information are similar. Unlike material property, there is nothing naturally scarce about IP. One of the things that IP, we know, has to do is to construct a scarcity. IPRs are entirely intended to construct a scarcity. Scarcity is not some bizarre by-product of IP, it's their function. The second aspect, which the abolitionists focused on, was a notion of just rewards. Should rewards be given to those who invent? This, as we know more recently, is quite often based on a sort of John Knox notion of just desserts for the improvement of nature. The abolitionists argued, as far as IP was concerned, that one problem was that the rewards for invention were not distributed fairly, i.e. the most recent innovative step was the one that garnered all the rewards. So when you managed to make that last step you gathered all those rewards to you and your predecessors garnered none. Thirdly, and again has certain resonance to the current debate, the abolitionists looked at the notion of the incentive to invent and argued that IPRs are really a disincentive to rival inventors. Once someone has made that first invention, others who might have wanted also to invent that item for different uses, others who might have even wanted to invent that item for the same use are, if anything, disincentivised. In that sense, they do not prosper under patent, only the first person prospers, the winner, if you wish. The winner's reward. We might also look at human history itself. Can we really argue that before the period of IP man did not invent enough. As Keith mentioned and was also demonstrated yesterday we can see this upwards shift of inventive activity and technological effect. That might not have nothing whatsoever to do with IPRs, it might indeed has something to do with network effects of innovation. Dianne Daley concluded her presentation by talking about the political will. We need a political will to change, and I would fundamentally concur with that, I think we do need a political will. We need to remember is that the TRIPS Settlement that currently governs the IP regime is in no sense the final settlement. There is no reason that that settlement should be final. We can if we wish, and I hope the Commission will be thinking about this, reengage in those discussions in the next trade round. There is nothing to say that now the TRIPS Agreement has been written, nothing else should be written on this subject, all we should do is try to work out how we work through it. What I find surprising about IP writers and also inventors and companies involved in this area is that, given that we are asked to talk about innovative activities, creativity and newness, they are actually incredibly conservative when it comes to the laws governing those activities. In that sense, it is not self-evident that we have the most efficient or just settlement, but rather we

should look to innovate legally. It is wrong to emphasise the rights of owners rather than users, and I think term limits have been one way of mediating that effect in the past and we certainly think about looking at that. I also want to mention something John Linsday said yesterday and I think is very key to this. We should also remember, politically, that IP is an award of monopoly and in the past, in Venice and in Britain, monopolies were awarded and then patent laws were a way of constricting the advantage that monopoly gave. They were not a right they were an obligation, an obligation to act in a just or, at least, a plausibly just manner. What we have to ask is what do we actually want IP to do. If we are going to appeal to the moral rights of authors and creators, let's look at what those rights actually cost. These have important real world effects, both to the health and life of others and also to the opportunities available to those outside the developed or rich world. There is one very important, quite easy answer to this problem. We could, if we wished, try and engender some way to return to differential treatment internationally of IPRs. This is the de facto position prior to TRIPS. It was messy, it was quite chaotic in some senses, but it did have the advantage through the quasi acceptance of piracy and illegal "copying" to allow knowledge of innovations to be disseminated more widely. I think there are good arguments for robust IPRs in the developed world, but this one size fits all system which has been mentioned before is, I would regard, unjust. America and other developed states were quite happy to ignore the rights of foreign innovators and creators when they were developing their own economies. It seems unfair that we, in the developed world, should plot the ladder behind us. Why should we have the right to adopt policies that we never would have adopted when we were in the position of the developing world? So, my argument is this. If we are going to do one thing about IP that is quick to do, and quick is important for those people who are dying, we should look to differential treatment, we should think about trying to establish or working through an inner and outer area of TRIPS. Let's have those two areas governed by a different set of bargains regarding social and the private rights in that we can have, if we so wish in the developed world, a situation where owners' rights are used and leave a residual for social rights, but in the developing world, in the poorer parts of our global system, we should allow the social world not to be a residual but to be a positively constructed realm of freely available knowledge. This is a political project, it is not an economic project, and I hope the Commission will recognise that and recognise their role as intervening in a political process. Thank you.

Edward Chisanga: Zambian Mission, Geneva

Although I speak on behalf of myself, I am also speaking on behalf of over 48 least developed countries not here today. It is very rare for poor countries' views to be heard in forums like this. I have five suggested proposals for the Commission. I propose that the Commission looks into a grassroots best active IP programme for the poor. The second proposal concerns local working requirements of IP, which we would like to see used as an instrument for development so it would take into account issues such as technology transfer as well as supply capacity building. The third proposal concerns technical assistance. We would like technical oppression to focus on an individual basis, development and interests of poor countries rather than focusing on implementation, as is usually the case. Fourth, OECD's implementation costs as well as return on investment. If the OECD, as poor as they are, will spend

all their limited resources on implementing IPRs what will they get in return, almost nothing. So we would propose that the Commission looks into a mechanism that will reconcile the two. Expenditure and return on investment. The fifth concerns the field of medicines. It is necessary to provide innovations to facilitate access to medicines, so we would propose that the Commission looks into establishing a mechanism of reconciliation or balancing to provide innovation as well as access to technology and technology diffusion. There was a reference to Japan in Keith Maskus' presentation. I have a paper, which I have read. It says that Japan's patent system focused on diffusion. Now that it is a globally dying technology, the patent system must shift from diffusion to protection. Why has Japan shifted from diffusion to more protection? Finally, the historical perspective. The historical countries have adopted strong IPRs.....**tape change**. It would be interesting to have a look at the history of IPRs as protection in countries like Switzerland, Japan etc. which were once at the same or much more advanced stage that at which most of developing countries. Why is OECD being asked to adopt very high IP standard as in Switzerland and Japan.

Ramesh Mashelkar

If you wish to elaborate on these points and wish to write to us that would be helpful. We will take the suggestions most seriously indeed.

John Enderby: The Royal Society

We are delighted to host this open meeting of the Commission. I would like to talk about the developments in South East Asia. I would like to focus particularly on one sector in that story, namely semiconductors. In the last 70s, the semiconductor industry was dominated by the US and Europe, and what the SE Asian countries did, first of all, was to start at the very low value end, namely the packaging. Then they moved back into the production chain through the development of masks right the way through to circuit design. By the late 90s they had outstripped Europe in the production of circuits and they were now running a close second to the United States. They started at the packaging end but, as they were going back through the chain, they developed their infrastructure, their education, their technical support, mostly primed by the government, but still a good relationship between academia, international countries and so on. It is no coincidence that the semiconductor industry has been the most liberal with regard to licensing and the relatively free interchange of IP, which contrasts rather sharply with the pharmaceuticals. It does seem to me, and both our speakers said this, that a most rigorous application of copyrights and IP has to be a major disadvantage to developing countries, particularly those poorer ones. We must all have been moved by the words of Professor Nicholson yesterday about the copyright situation in South Africa. So whilst we can have these theoretical discussions, on the ground the rigorous intervention on copyright really has a serious deleterious effect on a country like South Africa, which is by no means the poorest country in that continent. You do have to have some clear transparent way of applying differential rights both with regards to IP and copyright. I'm not sure how this fits in with TRIPS but it seems to me a model in which the rigour with which these rules are applied was inversely

related to the economic growth as measured by gross national product or some other measure could be a way forward. It seems to me totally unfair that the West having benefited in the early days from a rather liberal law should now pull the other up.

Ron Layton: Light Years IP

I want to talk about IP exports because we are all working on poverty and poverty is connected to development and we have been focusing on the connection between IP exports and development. If you go to export lead models of growth that were based on manufacturing, some people believe that export lead growth can lead to growth in the economy. We are in a different world now. I have a Prime Minister who is saying to me, "I want to go straight to an export design economy, I want an export processing zone in design products. Its too late to go into manufacturing margins are gone. I can't go into another crop zone, a crop experience, and have my people disappointed by another disaster in crop prices. I can't go into manufacturing, it is out of the questions. We will never make or grow anything to export" is what he said to me. So can the international market for IP produce and engine for growth in his economy, an export processing zone type image. I also believe that if we do something on TK and we do have a way in which we can channel the funds coming back to a developing country from IP exports we can affect poverty at the absolute lowest level. I was an IP exporter for twelve years and we created our own IP, we marketed in 150 countries and I had said I don't give a damn about Bangladesh. It was America, Germany, Spain, England and France and after about 15 countries that's where all the money is. So if we are going to understand how people create IP and earn revenue from it we need to understand how this sort of industry, based in content industries, based in design of actual products but owning the design, not owning the manufacturing aspect of it, how do they get to market. What is it? It's a commercial approach. And if this very fine Prime Minister is going to create his export zone then he needs market access and a whole bunch of things that I needed when I was exporting IP. One thing I needed was a critical mass. If you have a small amount of IP the market wont only not function you will get nothing. In my humble opinion I will throw out a figure of \$50million. If you have \$50million of IP, you can afford to go into US Federal Court and protect your copyright for US infringement. It is the US infringement that's affecting my revenues. So if you have a critical mass of some IP in reasonable volume and that's a problem for a new exporter you can protect your rights and get your revenues. Secondly, you can get fairer prices. You go and negotiate for the buyers who are buying your IP, if you have got \$100million of IP property you will get some fair prices. You wan to sell you IP, get an agent. Access the agents in the contents industries, access a brand manager, take a totally and completely commercial approach to it, then some revenues come back. Create the critical mass in whatever way you have to do it and I think collectively is one of the ways you have to do that. I welcome anyone who wants to, to come and contribute to what this very fine Prime Minister is trying to achieve.

Ruth Mayne: Oxfam

I am very heartened to hear some of the comments today which call for a differential set of rules. One of the good things about this Commission is that it provides the opportunity to think creatively about this issue outside the confines of political constraints. To think about what would be desirable as well as what is actually feasible. I think one of its roles is to help build the consensus on moving towards what would be desirable. I actually think there is quite a lot more consensus about the need for differential rules for poorer countries than necessarily we often hear, precisely because people do tend to bow to the obvious political constraints that we face here. Martin Wolff in the FT, The Economist and others has raised this issue and are exploring possible solutions. The recent declaration on TRIPS and Public Health at Doha also went some way towards recognising the need for differential rules by extending the transition period for pharmaceutical patenting for least developed countries. This was an important step forward, but doesn't go far enough. I would like to say that there is a clear need to think beyond the existing safeguards. That obviously is an incredibly important issue for many poor countries, that they can use these safeguards without fear of trade sanctions or illegal pressures. It is quite clear that the short-term costs from implementers for many of the least developed countries and many poor countries in implementing TRIPS. The short-term welfare costs and, of course, the trade losses that they will incur are very high and the long-term benefits are much more hypothetical and not so guaranteed. We have heard about the conceptual practical administrative difficulties for countries in implementing TRIPS so I would like to support these calls for the Commission to really look carefully at the possibility for differential rules and in one of the Commission's workshop reports it says, "a possible solution would be to examine the concept of threshold levels of economic development as triggers to the compliance of international IP standards." I would like to support the need for that kind of work to continue.

Connie Carter: University of London

I am currently at Xiamen University in South China. Christopher May acknowledged that what we are here to do is actually political rather than economic and that there will be an awful lot of politics in what the solution is going to be eventually. My question is really to enquire why China is not represented at all in this forum. I asked a Commissioner yesterday and he said China is part of it, in fact there was a visit to China and there was a working group that has had China on board. I know that the British Government has also been helping to build legal capacity in China, for instance, the Lord Chancellor's Fellowship for Young Lawyers and training seminars for judges etc. I feel that given we are acknowledging that this is going to be largely political, that the Commission, I hope, will get China on board in terms of getting changes in the TRIPS negotiations. I think that is going to be the most important contribution and now that China is in the WTO, obviously the laws etc. are all in compliance now. The latest revisions were made in October and November of last year, so that they are in compliance on paper. As discussed already, the major problem will be enforcing them. We have heard also about the Asian Miracle etc. we need, I think, to make a great effort to make sure that China is going to be on board in this area too.

Eric Noehrenberg: International Federation of Pharmaceutical Manufacturers

I have two points. One regards a comment by Christopher May about the alleged lack of scarcity of good ideas. It is a big surprise to me, and other business leaders here, that good ideas are scarce. They are extremely scarce and particularly in our industry. Of the thousands of molecules we look at only one makes it through the entire development process and registration process on the market. Of those on the market only one in three don't even make back their own development costs. Indeed, Professor May, these are very scarce things, they need to be protected and if you weaken the protection of them the number of good ideas will reduce quite dramatically. I appreciated very much Keith Maskus' presentation and I regret that he had to rush at the end because I think there were many good points that had to be glossed over. The point I would like to make to Professor Maskus is the idea of also looking at the importance of IPRs in stimulating research and development in developing countries themselves. There are thousands of very excellent Indian, Egyptian and Chinese scientists in our industry doing wonderful and innovative research, but are doing it in the US, the UK, Canada. Why is that? Because in their own markets due to the weak patent laws, particularly in India and Egypt they have to fight very hard to make sure no one else steals their invention. So, therefore, they are going to do that work where they will be protected. In fact, the imminent improvement of India's patent laws to bring them into compliance with TRIPS is a long and difficult process. The prospect of that is actually motivating some very leading companies to start doing some more research in development for themselves but they are licensing it out to companies outside their country because they know that if they do so they will receive royalties and revenue for their ideas. We are talking at this conference about how IPRs could work better for developing countries and poor people. We should emphasise the importance IPRs can have to developing excellent research development in developing countries and particularly for conditions and diseases which affect those countries.

Kamal Puri: University of Queensland

I believe that there is a perception among developing countries and poor people that IP laws give too much benefit to those who are protected under the laws. I don't think that developing countries are advocating that all IP laws should be repealed but what they are agitating against is that too much protection is being granted. That takes us to the whole issue of what the IP laws are aiming to achieve. I have asked myself many times, "Would inventors still invent if there were no patent laws, would authors still write and artists create if there were no copyright laws." Probably, yes, they would. Inventions would still be there, people would still be writing. No empirical study, so far as I know, has been produced which has proved to the contrary, that there will be no inventions, literary work or artistic work if there are no IP laws. We are looking at the protection of those who are investing a great deal of money in promoting and developing inventions into marketable products. We are dealing with those people who are spending a lot of money on research and development. We are dealing with those industries that are investing in the reproduction and dissemination of the world. I urge the Commission to look at this

issue first. Are the IP laws providing too much protection? If so, then the Commission would have to look at whether there is a need to do something like reduction of the term of protection or creating differential rights etc.

Bill Haddad: Biogenerics Inc

I am somewhat offended by disinformation spread to conferences of this nature. With all due respect, the Pharma comment, my heart bleeds for Pharma. It is like a blindfolded man touching an elephant. There has never, never, never been an industry that's been more consistently profitable at a multiple of the profits of other industries than Pharma. They tell you about the ten thousand molecules. This one in three, I will reserve my comment about that privately. Second, we are not talking about politics. Politics is an honourable profession. Politicians corrupt it. What we are talking about is Enron politics, access to power, which goes on behind closed doors. What this Commission is doing is making a lot of that transparent. I am also offended by the use of language, Intellectual Property Rights. One example, for many years I fought the multinationals. There was a time when Madison Avenue picked the generic name and the brand name. They picked a very complicated chemical name for the generic and a very simple name for the brand, for a purpose. My remarks are reserved for the medicine session.

Julian Morris: Institute of Economic Affairs

I remember some remarks made by a colleague in India, who works for the Ranjit Ghandi foundation. He points out that knowledge itself is often kept by an individual and not disseminated. So monopoly on knowledge is not created by IP but by the individual. The purpose of IP is to encourage those individuals who have that knowledge to disseminate it to the wider public. That point has been a bit missed here today. Another point relates to this desirable notion of segregating countries into those who are perhaps better able to implement and enforce IPRs and those that are less able. We have to be very careful when doing that to ensure that we don't discourage countries that could be better able to implement and enforce IPRs. They are discouraged. Take the example of India, which Dr Mashelkar will know from intimate knowledge, has over the past thirty years had a relatively weak product patent law but has a very strong copyright law. The consequence of that is you have seen over the past ten years the rapidly developing IP industry in the copyright sector, namely the software sector which is now worth about \$6billion, about \$4billion of which is due to exports. Contrast that with, for example, the pharmaceutical sector, which has not been developing in the same way, it certainly hasn't been evolving in molecules etc. So I think one has to be careful about distinguishing countries according to purely their level of poverty. If you look at India as a whole it is an extremely poor country but in those particular sectors there may be room for improvement in terms of IP protection.

Ramesh Mashelkar

By the way, India is described as a rich country where poor people live.

Christopher May

I just want to make a couple of comments. Let me start with Eric Noehrenberg's points. With the greatest respect, I think you are confusing the two uses of the word scarcity. Scarcity is rivalrousness and scarcity is something where good ideas are scarce. I am not arguing that there are load and loads of wonderful compounds that are not available to be used. When I say IP constructs the scarcity, it takes an idea that you and I can use at the same time, everybody in this room can hold that idea in their minds and use and suggest that if everybody wants to use it they have to pay and that constructs the scarcity which is very different to what you implied. Though I am sure somebody will raise this in the next session, I think the pharmaceutical companies, when they argue about support for research and development, are quite right on one level, but equally one should look at the predevelopment money that is paid by the public sector which pharmaceutical companies then take advantage of. There is a question about balance there as well. Secondly, IP export is a very interesting issue. In another life where I write about the information society, I think what is very interesting is what you do see in the Caribbean and just to mention the Delhi software industry and you also see a lot of backroom activities moving across borders now, sometimes called e-commerce. The notion that you can actually have business services delivered at a distance over the Internet and electronic networks is a very interesting area for developing countries and certainly a number of developing countries have made quite a big play for that. I am not suggesting that Ireland is a developing country, but you can look at the Irish Development Corporation, how they have operated in that area, a very valid point. Coming back to the point that Julian Morris made about IPRs encouraging the dissemination of knowledge. Formally absolutely correct, that's what IPRs are meant to do. Historically what has been the case is that term limits on IP have tried to balance that dissemination benefit with the rights of society to access that information. The problem is when let us take software for an example, what we might regard as a generic tool, becomes copyrighted. You get the copyright lasting for the period of the author's life plus 50 years or sometimes plus 70 years. We might regard that term limit as a bit too long for a generic tool. Though you are formally correct, I think what you identified as a very serious problem which is the term limits have remained either static or have in some cases grown slightly whereas the speed of technology has broadly accelerated and, therefore, the effective protection length of time in so much as the ability to profit from it and what can be gained by the private owner has actually expanded. By staying the same, there has been an expansion of benefits to owners that has, I think, violated the original legal bargain which term limits encapsulate.

Keith Maskus

Ron Layton has identified an important problem we have not paid a lot of attention to in discussing the technical aspects of IP, which is actually that there are many market failures that even IPRs on paper don't necessarily overcome. What we want then, is finding mechanisms for international marketing in IP. I think Ron Layton was focusing on the scale issue. This is a very important question and I think that very strong standards of protecting IP tends to encourage concentration industrially and even within service sectors and content sectors. Consequently, it is important to

think carefully about developing mechanisms for both internal and external marketing, of the creativity that is clearly there. There is a lot of innovation in developing countries and Kamla Puri suggested that maybe the standards that are being brought across aren't appropriate in terms of innovation. I would argue that a lot of work that is trying to be accomplished here is not so much to encourage more invention, or music-writing or more book writing as opposed to finding ways to get those products to market and to have some income generated for those who actually do this creation. It is true that you find thousands of quite creative musicians in almost any poor country you go to and it is also true that very few of them get to make any money from recording. Perhaps this is sounding overly materialistic and much like an economist, but I do think that there are substantial market failures involved that prevent this kind of activity from happening. To some important degree, IPRs are designed to get through that. It is not an easy process, but if you think about copyrights and the complex system of rights that copyrights are supposed to allocate across all of the entrants into that activity, it isn't only the musicians; it's the performers, the recorders and the publishers. There is some argument that can be made that there are some net advantages that can emerge from this. A final comment on the issue of differential rules which Julian Morris mentioned. You are arguing that, taking the Indian case, there is a strong copyright law and, therefore, a fairly strong software sector, but the patent law has been weak, at least in pharmaceuticals, and consequently there is not a very competitive pharmaceutical sector. I am not entirely certain that that's the history we want to put together there. Let me make the inference from what you are saying that you really think IPRs nationally should be the result of a political economic equilibrium, sectors that are strong they will want protection, the sectors that are not so strong they won't want protection or they will want the chance to copy for a very low cost. That is fair enough. We are in a different world, though, where there is this tendency towards harmonisation. To me the question we are all trying to grope towards here is whether the TRIPS Agreement itself, or any revisions to the TRIPS Agreement really meet some sort of standards of what is an international political economic equilibrium. My own view is that probably the TRIPS Agreement overshot itself in the context of achieving some international equilibrium and that without additional benefits and market access and technology transfer and financial assistance and all these things we have mentioned at the margins that it won't be a sustainable agreement. Extensions and strengthening of the TRIPS plus kinds of agreements clearly would before or during not be sustainable either. What is required, and this is where the Commission can make a real contribution in terms of transparency and pointing the way forward, is thinking about what a constrained optimal equilibrium would look like and that, no doubt, will involve some kind of differential treatment, although exactly what that means I'm not entirely sure. I do think we need to get off the view that either very strong IPRs are the right way to go, or very weak IPRs are the right way to go and to think about the fact that there are very complex incentives involved in a system that needs to be supported by additional policies. Thank you.

Ramesh Mashelkar

Thanks the speakers for their outstanding presentations and for the participants' input.