MANAGING THE CHALLENGE OF A GLOBALIZED INTELLECTUAL PROPERTY REGIME

I. A RE-REGULATED GLOBAL MARKET DOES NOT FAVOR THE DEVELOPING COUNTRIES

During a recent conference at Duke University, the World Bank's Chief Economist, Nicholas Stern, presented figures showing an impressive rise of per capita GDP across developing countries as a whole in recent years. While countries such as China and India top the list and drive the cart, so to speak, increases occurred in all regions, including even Africa. In providing these figures, Stern did not mean to play down the negative factors that make it hard to eradicate poverty in these countries. His point was that, despite such factors, more open markets, improved governance, and the diffusion of an entrepreneurial spirit were producing a positive impact in the developing countries, and this momentum could be used to further alleviate poverty.

While these sobering and encouraging economic snapshots appropriately recognize the power of market reforms, I fear that they tell only a part of the story. Consider, for example, that if we went back to the period 1950-1975, we could probably assemble a similar upward trending set of per capita GDP statistics for the bad old command economies of the socialist republics of Eastern Europe. These countries had invested heavily in heavy industries, and those investments were paying off. In this period, indeed, the German Democratic Republic became the sixth economic power in the world. As we know, however, these countries then tanked and sank into seep stagnating declines from which they never recovered.

While there are many theories about why these economies ultimately failed, my own conviction is that they simply lacked the agility, skills, infrastructure, and industrial culture to compete in innovation-based markets, which drove economic growth in the last quarter of the twentieth century. I will not dwell on why this was so, I will only stress that their greater ability to compete in innovation driven markets is what most differentiates advanced developed countries from the rest of the pack. It is also what permits them to endure the loss of traditional manufactures to developing countries, such as India and China, with a relative but diminishing degree of stoicism.

My query is whether the upward trajectory of the developing countries will persist over time, or whether it will bounce off the same overhead ceiling that the command economies slammed into. In this case, however, the ceiling is composed only in part by lagging technical skills and infrastructure. It will have become reinforced by a proliferation of legal monopolies and related barriers to entry adopted as international minimum standards of intellectual property protection.

In other words, while tariffs and other barriers to trade in traditional manufactured goods have gone down, and tariffs on agricultural products may also go down, enabling developing countries to expand their exports in these categories, strenuous efforts are being made to re-regulate the integrated world market in ways that will make innovation in general, and follow-on innovation in particular, ever more costly and difficult. There is reason to believe that, if the trend toward more and stronger intellectual property rights continues unabated, as seems likely, that it will deter even the long term growth prospects of the most developed countries. Voices to this effect

are increasingly heard in those countries, even in the most conservative "property rights" driven circles, and there are fears that these economies are actually drifting towards levels of backdoor re-regulation that evoke the corporatist specter of the medieval guilds.

Without belaboring these pitfalls, my point is that if more intellectual property rights are not always better, and if re-regulation turns out to hamstring even the most advanced developed countries, it could constitute a very hard ceiling on the continued evolution of growth prospects in the developing countries. It could indeed so impede technology driven competition in innovation based markets that the developing countries found themselves tanking like the command economies before them. Or, to phrase it differently, just when the developing countries empowered themselves to reach the next level of economic development, they might discover that the re-regulated global economy had in effect removed the ladder from under their feet.

Now, in assessing this eventuality, one could counter-argue that the very existence of new legal monopolies across the global market in the form of intellectual property rights provides developing countries with tools for technology driven development that they would otherwise lack. By wisely managing these tools, adherents of this view argue that developing countries can obtain more foreign direct investments (FDIs), more licensing of better technologies, and more access to better and more advanced knowledge goods. These inputs, in turn, could help developing countries catch up and reach the next level of economic development.

There is undoubtedly a measure of truth in this thesis, and it can be documented by econometric evidence.[1] At the same time, there are strategic difficulties with this thesis over and above the general lack of infrastructure that otherwise constitutes a formidable obstacle to technological growth. Here I refer to the possibilities that the FDIs needed for local innovation may not respond to intellectual property rights protection in any significant way; that licensing of technology will continue to lag because providers fear competition from developing countries; and that the knowledge goods actually provided are either too costly or too obsolete to enhance the competitive prospects of these same countries.[2] More to the point, the re-regulated market may itself ensure that access to the technologies and knowledge goods most needed to make the developing countries competitive in innovation based markets will systematically be thwarted by one means or another.

At the very least, one cannot deny that the progressive re-regulation of the world market in terms of legal monopolies and related barriers to entry is in no way shaped or driven by developing countries. This process is not even driven by a broad consensus of economic actors in the developed countries themselves. Rather, the process of norm formation with respect to intellectual property rights has been driven by coteries of powerful transnational companies whose lobbying efforts dominate relevant legislative initiatives in those countries and in transnational forums. These guild-like institutions have detached intellectual property legislation from its public-interest and public regarding foundations, which viewed all monopolies with suspicion, and have practically eliminated any seats for those representing the public interest at the tables where new and stronger intellectual property rights are plotted, designed, and purchased by campaign contributions. Contrary voices, even when admitted to the chamber, are unlikely to be taken seriously without anteing up comparable sums.

[1] *See*, e.g., Keith Maskus, INTELLECTUAL PROPERTY RIGHTS IN THE GLOBAL ECONOMY (2000).

[2] *See*, e.g., Carlos Correa, INTELLECTUAL PROPERTY RIGHTS, THE WTO, AND DEVELOPING COUNTRIES 30-36 (2000).

In this state of affairs, it seems clear that the ratcheting up of intellectual property rights by coalitions of powerful (but not necessarily very innovative) firms in developed countries is not being done to enhance the prospects of the developing countries, and the limited participation of these countries in that process further ensures that it will not be shaped to suit their interests. Moreover, it is widely perceived that the industrialized countries themselves developed their technological prowess under much less regulated and much more competitive conditions than currently prevail. Even the most dramatic technological explosions in these countries associated with digital technologies and biotech engineering were made under conditions in which access to essential scientific and technical inputs was considerably easier and less costly than it is today or is likely to become tomorrow, as the barriers to entry, transaction costs, anti-commons effects, and above all, lost opportunity costs of galloping re-regulation begin to bite would-be innovators everywhere.

Under these conditions, there is no reason to believe that the re-regulated world economy will make it easier for developing countries to compete in innovation based markets, and every reason to expect that this goal could become progressively more difficult to attain. At the very least, tactical errors, poor planning and organization, backward infrastructures, and feebly elaborated national systems of innovation will all produce much higher social costs than would be the case in a less regulated, more open economic environment.

Against this background, the question becomes what can developing countries do to maximize the benefits and reduce the social costs of a re-regulated world market decked out with ever-burgeoning, ever-stronger intellectual property rights? In answering this question, I think it wise to first establish some general principles, and then to address strategic and tactical endeavors in terms of defensive and offensive maneuvers.

II. PREMISES FOR A MORE PRO-COMPETITIVE STRATEGY

The biggest potential cost to developing countries is the aggregate loss of public goods due to the private fencing of expanded intellectual property rights. This "Second Enclosure Movement"[3] weakens the ability of innovators and second comers everywhere to access and use intangible inputs formerly available from the public domain when considering investment in the production of their own knowledge goods. While some degree of privatization stimulates new investment in research and development, the tendency to multiply and strengthen intellectual property rights elevates the cost of innovation generally; impedes follow-on applications in particular; fosters refusals to deal, barriers to entry, and thickets of rights; and discourages firms in developing countries from undertaking adaptations and improvements of local interest. Even when these phenomena generate intellectual property pools built around the cross licensing of exclusive rights in developed countries to overcome the resulting costs, there is reason to believe such pools may generate even higher social costs through collusive and concerted action and the tendency to discriminate against potential competitors, especially those in developing countries.

Developing countries therefore should promote the formation and preservation of public goods even as they seek to stimulate more investment in the private production of knowledge goods. It can be demonstrated that broad access to public goods - or better, an appropriate balance

[3] *See* James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 LAW & CONTEMPORARY PROBS. 33 (Winter/Spring 2003); *see generally*, Duke Conference on the Public Domain, 66 LAW & CONTEMPORARY PROBS. 1-483 (Winter/Spring 2003).

between private and public goods - underlies the past technological successes of the developed countries. It cannot yet be demonstrated that a radical loss of public good inputs into the knowledge economy, coupled with a radical over-privatization of those inputs - as would dramatically occur, for example, in the presence of a strong intellectual property right in collections of data - will sustain technological development at currently high levels in developed countries. Leading economists and legal experts predict the opposite result.

The developing countries must logically strengthen and reinforce those factors that tend to generate public goods and preserve access to them, even as they increase incentives to invest in innovation and research and development, in part by means of intellectual property rights. Maintaining a proper balance of public and private interests in the production of knowledge goods is important for all countries, but it seems indispensable for the technical progress of developing countries.

In this endeavor, policy makers should become aware that the enhancement and preservation of public goods in the knowledge economy does not necessarily mean that such goods must be made freely available to all comers without payment. There are important differences between a "public domain" and a "commons," and a "commons" may be managed and organized in different ways, as we learn from recent initiatives such as Open Source Software and the Creative Commons Movements. If the most precious resource for worldwide innovation today turns out to be a scientific research commons, it does not necessarily follow that all researchers should have a no-cost access to that commons for all purposes What is essential is that all players can access and use that commons for public research purposes on favorable and affordable terms.[4]

Two extremes must therefore be avoided. On the one hand, free riding practices that allow second comers rapidly to appropriate an innovator's research and development results without contributing their fair share to the relevant costs must be universally prohibited, in order to prevent single countries from generating unacceptable risks of market failure that subvert other countries' national innovation policies. It was the unwillingness of developing countries to acknowledge this principle that fomented the backlash that led to the transfer of intellectual property standard setting exercises to the GATT/WTO and which ultimately produced the TRIPS Agreement.

By the same token, all developing countries, despite the economic disparities that divide them, share a common interest in preserving an appropriate balance of public and private interests that favors competition by honest means, that lowers barriers to entry, that reduces transaction costs, and that preserves access to inputs - especially scientific data and technical information - at acceptable costs. Ongoing efforts to shrink the public domain and to privatize what were heretofore public goods cannot in general work to the benefit of developing countries, even if it ultimately benefits developed countries, which remain a very big if.

On the contrary, if the increasingly anticompetitive re-regulation efforts in developed countries turn out to harm and retard innovation in those same countries, then efforts by developing countries to preserve a more pro-competitive balance of public and private rights in the global market place will ultimately enhance growth prospects in developed economies as well. For this and other reasons, such efforts should eventually attract support from small and medium-sized firms and trade associations in the developed countries who are harmed by this same

[4] See J. H. Reichman & Paul Uhlir, *A Contractually Reconstructed Research Commons for Scientific Data in a Highly Protectionist Intellectual Property Environment*, 66 LAW AND CONTEMPORARY PROBLEMS 315-462 (Winter/Spring 2003); NAS PROCEEDINGS (2003).

imbalance and who increasingly unite in coalitions to fight over-protectionist intellectual property legislation in those countries. One of the most pressing tasks for developing countries is to learn how to organize effective coalitions of this kind at the international level and to forge closer ties to those commercial interests in developed countries with whom they should be naturally aligned.

III. SPECIFIC RECOMMENDATIONS

A. Defensive Strategies

When Congress enacts intellectual property legislation in the United States, it is usually the outcome of pressures generated from three directions: a coalition of forces demanding protection; a coalition of forces opposing protection or advocating a lesser degree of protection; and government positions on the issues adopted after interagency review by all "ministries" (i.e., departments). In this process, the role of the intellectual property bureaus varies considerably with the issues. In general, their power derives from their expertise, which greatly exceeds that of the Congressional staffers; and this power is enhanced by the ability of private coalitions - quasi-cartels - to capture the intellectual property agencies in various ways, including the placing of their own agents in leadership positions. At the same time, the power of the intellectual property bureaus is offset by the ability of anti-protectionist coalitions of interest groups to influence congressional staffers and their elected representatives, and also by their ability to influence specific departments or agencies of government who can champion their views in interagency reviews.

Interagency review is even more crucial in the formulation of United States policy with respect to international intellectual property standard-setting exercises. Here, for example, is where Science, Health, and Competition Law agencies can, and sometimes do, play a major role in tempering U.S. positions abroad. In particular, these agencies were partly responsible for the public good features added to the WIPO Copyright Treaty of 1996, and they were largely responsible for blocking adoption of a database protection treaty in the same period.

My point is not that these coalitions and interagency review processes have saved the United States or the rest of the world from a proliferation of high-protectionist and excessively rent-seeking legislation. If they had, we would not need to map out a strategy for developing countries to cope with a profusion of international intellectual property rights. The point is that, without these coalitions and review processes, the outcomes could have been even worse; and that without establishing some functional equivalents of this infrastructure, developing countries cannot hope to regain and maintain control of their intellectual property policy-making functions, to preserve them from encroachment by coalitions of high-protectionist interests in developed countries, and to forge national and regional innovation policies in their common interest.

The minimum international standards of intellectual property protection already mandated by the TRIPS Agreement, in particular, are not uniform law, but instead provide member states considerable flexibility in the ways those standards can be incorporated into their domestic legal systems. The challenge for each member state is to enact laws and implement policies that, while consistent with these standards, also effectively promote national development priorities.

Policy makers will accordingly need to evaluate the legal options available under each relevant international legal standard and their economic impact on the national system of innovation. In

general, higher levels of intellectual property protection may produce specific incentive effects on local innovative capacity - including foreign direct investment, licensing, and the purchasing of knowledge goods - at the expense of free competition, while lower levels of intellectual property protection favor free competition at the expense of legal incentives to innovate or create. Striking the appropriate balance ought to be a primary goal of every national system of innovation, but each system should take into account its own assets and comparative advantages as well as any new opportunities that may derive from regional cooperation.

Mastering the legal and economic challenges of the standards mandated under the various WTO Agreements further requires that countries should, in general, avoid adopting "off the rack" model laws that may codify or embody objectives different from those likely to accommodate their own needs. Rather, developing countries should review their own capabilities and needs, and in the light of their findings, they should strive to tailor-make intellectual property rights and other legal or regulatory regimes to produce pro-competitive results consistent with both their own technical capacities and international legal obligations. In so doing, they should also take into account the possibilities of regional actions or strategies that could effectively reduce the overall social and economic costs of compliance with those obligations for the region as a whole.

1. Building an Institutional Infrastructure for Evaluating and Reconciling International Intellectual Property Standards With National and Regional Systems of Innovation[5]

a. Primary Proposals

My primary recommendation is that every country consider the feasibility of establishing a high level, permanent Advisory Council on Trade-Related Innovation Policies (ACTRIPS), which could become the focal point for interagency policy making with respect to the integration into domestic law of existing and evolving international legal standards affecting innovation. These local ACTRIPS would not duplicate the activities of national and regional intellectual property offices. The Advisory Councils would ideally play a supervisory and policy making role that requires inputs from intellectual property offices but that locates policy making decisions of importance to the state as a whole in a suitable oversight agency concerned with national development strategy.

A second major recommendation is that each regional or sub-regional group of developing countries should also consider the feasibility of establishing a regional (or interstate) Advisory Council for the purposes of coordinating regional positions on matters of common concern, developing regional standards concerning intellectual property rights, and enabling consensus building for future IPR negotiations. The regional ACTRIPS, once established, could benefit from the pooling of resources and expertise among its members to avoid duplicating the same inputs in all countries. In the short and medium term, the regional ACTRIPS could become institutionalized focal points for future bilateral, plurilateral and multilateral negotiations bearing on national innovation policies, in order to ensure that governments and regional bodies, wherever possible, coordinated their positions on the relevant issues.

[5] These proposals are drawn from Draft UNDP Flagship Program on Innovation, Culture, Traditional Know-How and Bioresources, prepared for the Special Unit for Technical Cooperation Among Developing Countries (TCDC), April/May 2000, by J. H. Reichman, Ruth Okediji & Jayashree Watal [hereinafter Reichman, Okediji, & Watal].

Establishing and training these Advisory Councils at both the national and regional level could, if appropriately implemented, empower them to maximize the benefits and reduce the social costs of existing international legal obligations, while also positioning them to contribute to the future development of suitable international legal norms affecting national innovation systems. Above all, they would serve to institutionalize a broad-based lobbying coalition that could focus on both existing and new issues, monitor developments in different forums (WIPO, WTO, WHO), and become a vehicle for rapidly responding to pressures from developed countries in an ongoing and systematic fashion.

The proposed interagency advisory councils should oversee the sustained training of cadres and updating of knowledge needed by governments to formulate policy options over time. They should also undertake the following endeavors:

- Coordinate activities to enable consensus building among constituents of ACTRIPS at the national level;
- Support the training and sensitization of law enforcement officials to ensure a cadre of skilled personnel in each developing country and to formulate regional enforcement standards based on national positions;
- Coordinate inter-ACTRIPS activities with a view to identifying best practices and models for adaptation by other countries and to facilitating consensus building at the regional level;
- Support the activities of national, regional and international non-governmental organizations (NGOs), which identify with the mission of the Advisory Councils.

b. Ancillary Considerations

In putting forward these proposals, I make no assumptions that developing countries will think alike on the relevant issues or that members of any regional group will readily embrace a common position. The opposite is true. What experience demonstrates is that any coalition of developing country interests will be more effective than the absence of such a coalition. Moreover, further experience demonstrates that the compromise positions staked out by regional groups can effectively block the most egregious proposals emanating from developed countries, and can sometimes even lead to universally valid intellectual property legislation of value to the developing countries.

The organization of national and regional interagency Advisory Councils would reduce the dependence of developing countries on ad hoc support by foundations, NGOs, and pro bono legal counsel. It would make it possible for governments to continue to receive these and other inputs while processing them in a more systematic fashion that ensured continuity of policy making and decision making at the center.

The existence of such organizations would ensure early detection of new protectionist initiatives, facilitate early reactions to them, and enable the formation of coalitions to resist them if undesirable or to modify and support them if desirable. It would also make it possible to appoint subcommittees that could follow ongoing standard setting exercises at WIPO and elsewhere on a daily basis and report directly to the regional advisory councils.

The existence of such a permanent infrastructure would also alleviate the problems caused by rotation of the members of permanent delegations in Geneva. On the whole, these delegations cannot in themselves muster the skills, time and effort to follow the standard setting exercises and other initiatives on an ongoing basis. Crisis management usually occurs too late, that is, as a

reaction to agendas set by transnational corporate lobbies and their government representatives in developed countries. When delegations do acquire the needed skills, they are vulnerable to rotation and recall.

In contrast, national and regional Advisory Councils should be able to support the work of permanent delegations and regional political caucuses at WIPO and WTO on a continuing basis. They would be able to liaison directly with NGOs and ad hoc foreign experts. They could also draw on an Academic Resource Group that could be nurtured along the lines proposed by Blakeney and Drahos.[6]

Above all, the existence of national and regional Advisory Councils would make it possible for developing countries to formulate broad-based policies and practices to resist unacceptable pressures at the bilateral and multilateral levels for undesirable levels of protection. As discussed below, coordinated action to resist such pressures seems more likely to succeed than leaving each state to fend for itself. But unless there is some coordinating infrastructure either along the lines I propose or some functional equivalent, there is simply no institutional foundation for promoting a systematic and coordinated response to what has become a systematic and coordinated effort to re-regulate the global economy.

c. Training and Financial Considerations

Training of cadres capable of dealing with complex trade and intellectual property issues is a high priority, whether or not advisory councils are established, and they are indispensable to the success of such councils. Training should be provided both at the local level and through qualified foreign institutions.

At the local level, distance-learning options should be vigorously pursued, along with other efforts to locate training facilities within regional areas. Global expertise on international property rights and trade law, though scarce, is growing, and more courses on these topics become available every year. Affiliations should be sought with leading foreign institutions, with a view to developing systematic inputs and distance-learning materials. Ideally, ways could be found to enable local trainees to participate via distance learning in courses emanating from suitable foreign institutions.

Hands on training at foreign institutions of the most qualified personnel under degree granting programs, such as JD and LLM programs, is of course the best and most effective form of training. However, it is subject to the risk of brain drain either by defection to foreign countries or by recruitment to serve foreign interests at home. These risks can and must be alleviated by suitable contractual agreements that mandate fixed periods of public service for the beneficiaries of fellowship programs. With these precautions in place, foundations and governments should aggressively seek to expand the training of qualified personnel at foreign institutions.

As regards the financing of the Advisory Councils themselves, the developing countries should seek to avoid dependence on foreign governments for these initiatives, to the fullest extent possible. This would require earmarking sustained support out of their own scarce resources.

By the same token, once the Advisory Councils or analogous institutions are established, they would be in a position to seek technical assistance from IGOs (such as WIPO) and other entities, such as World Bank, without the strings that vitiate the effectiveness of technical

[6] *See* Peter Drahos and Michael Blakeney, Rockefeller Report for Bellagio Conference (2002).

support under current initiatives. If, for example, the Advisory Councils are directly funded, they can identify their own experts and need not be obliged to absorb the high-protectionist propaganda paid for by the very coalition of interests that developing countries are seeking to resist.

2. A Moratorium on New International Intellectual Property Standards and a Reciprocal Commitment Against Unbridled Free Riding

If developing countries have anything to gain from new intellectual property standard setting exercises, I fail to perceive what it might be. As matters stand, these laws are not being written either to promote their interest or the public interest. On the contrary, the developing countries play virtually no role in norm formation (partly due to their disorganized institutional apparatus), and the public interest is not currently represented at the negotiating tables in the developed countries themselves. Rather, new intellectual property laws tend to express the lobbying power of large corporations whose interests in stronger intellectual property protection are not necessarily pro-competitive or pro-innovative. All too often these initiatives reflect strategies to build rent-seeking opportunities into measures that freeze the law to protect existing comparative advantages in ways that could produce serious unintended harm to future innovation.

From this perspective, even if the developing countries possessed more bargaining power than they do, there would be good reason to suspend further harmonization exercises. This follows because there should be no further re-regulation of the global marketplace by government enacted legal monopolies without proven mechanisms to elaborate and assess their social costs and benefits and without clear strategies for preserving and enhancing the public good side of the equation. As matters stand, international standard setting exercises dominated by big corporate interests tend systematically to ignore a complementary discourse about public goods and the public interest, and until that gap in international lawmaking has been suitably filled, such initiatives will continue to suffer from a basic design defect.

Any gains in efficiencies of operation and lower transaction costs that greater harmonization might entail are thus likely to be offset by losses of sovereign power to control the single states' own innovation policies; by a shrinking public domain; by still higher costs of technological inputs and reverse engineering; and by growing thickets of rights that will make the transfer of technology harder for those operating outside patent and intellectual property pools (pools that could soon include major research universities as well as giant corporate holding companies). With every rise in international intellectual property standards, moreover, there will be a corresponding loss of flexibility under the TRIPS Agreement and still greater risks deriving from the prospects of nonviolatory acts of nullification that these standards may engender in the future.

There are additional risks of participating in new harmonization exercises that are even more sobering. First, certain new initiatives - such as the European database protection right- could radically subvert the classical intellectual property tradition built around patents and copyrights, with unintended consequences that could elevate the costs of research and development across the entire knowledge economy.[7] While pressures to adopt similar legislation in the United States mount, legal and economic analysis of database protection as a

[7] *See most recently*, J. H. Reichman, *Database Protection in a Global Economy,* 2002 REVUE INTERNATIONALE DE DROIT ECONOMIQUE 456-504.

generator of anti-competitive effects and of obstacles to innovation also grow more refined and alarming.[8] In other words, certain new initiatives could become hazardous to sound economic development everywhere, and premature action in their regard should not be taken at the international level.

Even when it comes to the oldest, most established intellectual property regimes - namely, the patent and copyright systems – the fact remains that their operations have never been more controversial in the United States than at the present time. The patent system in particular is widely perceived to have broken down, and it has been subject to scathing criticism in both high-level academic articles, legal journals, the scientific literature, and even magazines of general circulation. New proposals to reform the patent system appear frequently, and commissions to study or propose reform are operating on numerous fronts. How, under such circumstances, could it be timely to harmonize and elevate international standards of patent protection - even if that were demonstrably beneficial - when there is so little agreement in the U.S. itself on how to rectify a dysfunctional apparatus that often seems out of control?

Even in the courts themselves, which operate at some degree of removal from lobbying and other political pressures, there are elements of change, uncertainty, and disarray that do not bode well for an international standard setting exercise. For example, the U.S. Court of Appeals for the Federal Circuit has recently narrowed the doctrine of equivalents in patent infringement actions; practically eliminated the research exemption under which universities operated for 50 years or more; expanded patent protection of computer programs in ways that are strongly opposed by the European Union; and opened patent law to the protection of business methods in ways that have disrupted settled commercial activities. It boggles the mind to think of "harmonizing" the international patent system at such a time, when the risks of harmful effects to worldwide competition could not be higher, and when the only basis for consensus might be those elements of so-called harmonization that most clearly limited the innovation capacities available to firms operating in developing countries.

It would be possible to paint a similar picture in respect of copyright and related rights laws. Efforts to expand and strengthen the protection of works transmitted by digital telecommunications networks have generated popular resistance to settled copyright norms as well as strenuous academic concerns with free competition, free speech, and with the need to ensure access to inputs for future creative works. Further harmonization efforts in this climate amounts to a gamble from which bad decisions and bad laws are far more likely to emerge than good laws that appropriately balance public and private interests.

A further consideration is that the TRIPS Agreement itself, coupled with the WIPO treaties of 1996, represents an upheaval of revolutionary proportions, especially for developing countries, whose economies need time to digest and adjust to these reforms. These countries are not in a position to absorb the social costs of new intellectual property burdens when the real social costs of the last round of reforms are just making themselves felt.

a. The General Proposition

The time has come therefore for the developing countries to take a united stand against further substantive international intellectual property initiatives for at least one or two decades. A *united*

[8] See, e.g., Jane C. Ginsberg (2001); Reichman and Uhlir (2003); PROCEEDINGS OF THE NATIONAL ACADEMIES (2003).

stand could lead to national, regional, and multilateral declarations against further efforts to re-regulate the global marketplace by instituting government-sponsored legal monopolies that hinder healthy competition. These declarations should then be supported by concerted action that would make it easier for single countries to resist bilateral pressures for stronger intellectual property protection. Concerted action could also identify areas of interest or vulnerability on the other side, against which countervailing pressures and threats of non-cooperation could be brought to bear.

It is time, in short, to take intellectual property off the international agenda for a foreseeable period of time and to replace it with measures aimed at integrating the developing countries into the worldwide innovation economy by means that enable them to better cope with and adapt to the challenges that prior rounds of intellectual property harmonization have already bred.[9] This message should be disseminated at all the relevant forums, particularly the Council for TRIPS, with a view to creating a climate in which further pressures to harmonize intellectual property rights prematurely are seen as hostile acts contrary to the interests of the developing world.

If those pressures persist, they should be met with a growing barrage of wellcalculated and well-coordinated retaliatory measures. Sometimes, especially if §301 pressures are unilaterally threatened, a WTO dispute settlement action can be brought. At other times, concerted refusals to deal on measures of interest to developed countries could constitute an appropriate response. The point is that a moratorium is needed now and for the foreseeable future lest the market openings nominally available to developing country entrepreneurs from globalization should become further foreclosed by premature, ill advised, or unbalanced efforts to re-regulate that same marketplace at their expense.

At the same time, efforts to institute such a moratorium will run up against legitimate concerns in developed countries to prohibit free riding on investments in new technologies that enter the global marketplace. Developing countries that support a moratorium on higher intellectual property standards must therefore remain willing to commit themselves to policies that avoid free riding practices that undermine the incentive to invest in new technologies everywhere. They must be willing to accommodate internal measures that avoid market-distorting conduct without succumbing to claims for powerful new exclusive rights that would distort the market even more.

It was a failure to recognize a need to protect research and development investments in innovative technologies against unbridled free riding that led developed countries to demand adoption of the TRIPS Agreement within the WTO framework in the first place. This mistake should not be repeated. A willingness to accommodate legitimate concerns about free riding could defuse potentially heated conflicts and remove controversial topics, like database protection, from a more ambitious standardsetting agenda. It could also support the credibility of a demand for a moratorium on further intellectual property initiatives by accompanying it with a "clean hands" doctrine that would reassure investors in all countries.

b. Ancillary Considerations

How developing countries would participate in existing standard-setting exercises, such as the WIPO Patent Treaty, would have to be carefully evaluated in the light of the foregoing proposal. On the one hand, nothing can stop the E.U. and U.S. from harmonizing their intellectual

[9] This would also avoid the risk of bad deals, e.g., the risk of exchanging strong database protection for efforts to protect traditional knowledge and folklore, whose economic potential are not easily predicted.

property regimes if they so desire. On the other hand, there is less chance of accommodating developing country interests in such an exercise if these countries do not actively participate.

Yet, realistically, I see no prospects that their real interests will be taken into account under the present circumstances, and I fear any decisions taken at the international level despite the degree of disarray and uncertainty that surrounds cutting edge patent protection in the U.S. today. Rather, the most tangible welfare gains seem likely to accrue from shutting down the possibilities for further substantive international legislation in this area for the short and medium term, except where emerging minimalist anti-free riding measures are demonstrably needed.

B. Offensive Strategies

There is good reason to believe that improved intellectual property protection can accelerate growth and technological progress in developing countries over time, and there are growing examples of successful adaptations of these rights to local needs and objectives. While most developing countries probably undertook higher standards than they were ready for in the TRIPS exercise, from both a quantitative and a qualitative perspective, most of the standards imposed upon them in the Uruguay Round of Multilateral Trade Negotiations were time tested general norms that were not radically novel nor inherently over-protectionist.[10] Even when viewed as a large mouthful to swallow in the aggregate, the social costs of these standards were to some extent offset by countervailing trade concessions concerning access to markets for traditional manufactured goods and textiles, and they may be further offset by pending concessions for exports of agricultural goods.

1. Maximizing the Benefits of Intellectual Property Schemes

As developing countries become more accustomed to working within the international intellectual property system, moreover, it seems logical to expect growing social benefits to accrue from better uses of the system itself to stimulate transfers of technology, local innovation, and greater investments in research and development of local, regional, or even transnational importance.[11] The more open the global marketplace becomes, the more that the incentives to create that intellectual property rights legitimately foster may operate to benefit entrepreneurs in developing as well as developed countries.

There is accordingly much that developing countries can do to help themselves by mastering the intricacies of intellectual property laws and policies and by adapting them to their own needs and capabilities. From this perspective, it is not helpful to fantasize about rolling back the TRIPS standards, and it is quite wrong to view intellectual property protection as a phenomenon that is innately hostile to the interests of developing countries. Rather, a more promising path starts with the understanding that, within the worldwide intellectual property system, developing country interests tend to coincide with the interests of second comers, improvers, and value adders everywhere more than they do with interests rooted in basic research. Even this point of departure can shift as greater acquisition of technical know-how moves more developing

[10] There are exceptions to this proposition. *See, e.g.*, Art. 39(3) of the TRIPS Agreement as interpreted by some developed countries.

[11] See, e.g., KEITH MASKUS, *supra* note 1.

countries toward more refined technical capabilities and more investment in intermediate, less small-scale innovations.

In the most technically advanced countries, it remains the case that all innovators borrow inputs from each other and from the public domain in order to generate creative outputs that attract intellectual property rights. We are all borrowers and improvers of pre-existing technology, and every time we strain the system by overemphasizing the protection of outputs, we ruefully rediscover that - as one normally protectionist judge recently exclaimed - "if things keep going as they are, nobody will be able to innovate."

The lesson for developing countries is to exploit the flexibility inherent in the TRIPS Agreement to promote their own systems of innovation, to tilt existing intellectual property standards to promote their own investment needs, and to experiment with new forms of intellectual property protection that may stimulate local innovation at lower social costs than models familiar from current European or American practice.

2. Summary of Self-Help Incentives

In what follows, I will simply list a number of self-help initiatives that states should consider from this perspective. For reasons of time and space, I cannot elaborate on them in ways that would be needed to do them justice. Some, of course, are selfexplanatory, but others are the fruit of a growing literature, which cannot even be hinted at, let alone summarized here. Nevertheless, and for what it is worth, I attach the following list of initiatives in the hope that they will stimulate interest and further discussion at the Bellagio meeting.

a. Strengthening Trade Secret, Trade Mark and Related Laws

Strengthening trade secret and trademark and unfair competition laws can only improve the prospects for local entrepreneurs to invest in technically more sophisticated products and processes.[12]

b. Using Laws Protecting Geographical Indications of Origin

Laws protecting geographical indications of origin may also benefit some developing countries, but over-reliance on these laws or over expansion of their scope could be disappointing and counterproductive.

c. Hybrid Exclusive Rights to Protect Small-Scale Innovation

Some intellectual property laws are deliberately designed to stimulate small-scale innovation, for example, utility model laws, design protection laws, plant variety protection laws, and the like, and some minimum standards of protection must be given to-foreign innovators in some of these fields under the TRIPS Agreement. On the whole, these laws may stimulate investment in small-scale innovation in developing countries better than a state of unbridled freedom to copy

[12] *See* J. H. Reichman, *Implications of the Draft TRIPS Agreement for Developing Countries* (UNCTAD Discussion Paper 1993).

by lavish imitation, but they carry high social costs and numerous technical disadvantages.[13] Using them successfully requires considerable skill and caution, and few foreign models are good enough to be transplanted wholesale to developing country environments without considerable adaptation.

d. Compensatory Liability Regimes to Protect Small-Scale Innovation

A growing body of legal and economic research shows that developing countries' efforts to stimulate investment in small-scale innovation could benefit more from new types of intellectual property protection sounding in "liability rules" than from antiquated exclusive rights regimes, such as utility model laws and the like. Under hybrid exclusive property rights, there is an "absolute permission" requirement, which usually means that second comers cannot engage in follow-on applications and improvements without an express license from the originator. Under liability rules, instead, there is a "take and pay" regime, which enables second comers to borrow novel technology for purposes of improvements and follow-on applications, but obliges them to compensate originators for their investment in research and development by means of a relatively set table of royalties.

A "compensatory liability regime" along these lines would entitle innovators to three distinct forms of relief 1) protection against wholesale duplication; 2) reasonable compensation for follow-on applications; and 3) a right to borrow back the improver's own improvements for purposes of further innovation, in return for similar compensatory payments. There is good reason to believe that such schemes can generate private collection agencies to bargain around the liability rules and keep transaction costs low. Such regimes should stimulate investments in small-scale innovation without obstructing follow-on applications without creating barriers to entry, and without impoverishing the research commons or the public domain, as occurs under hybrid exclusive property rights in developed countries.

However, these proposals are unfamiliar to most intellectual property experts in developed countries, who tend to dismiss them out of hand either from ignorance or other reasons. Developing countries cannot therefore pursue this line of self-help strategy without concentrating proper intellectual and other resources on learning and experimentation. At the same time, the risks remain low because liability rules inherently generate lower social costs than exclusive rights; hence they tend to do little or no harm, except possibly to under stimulate investment (a prospect which we believe can be empirically demonstrated to be false).

Moreover, governments that experiment with liability rules can continue to meet international obligations by offering foreigners the minimum exclusive rights, where required (e.g., in design protection laws), while maintaining a parallel liability rule for the same subject matter in the local economy. By the same token, local innovators operating under liability rules cannot be denied access to exclusive property rights abroad under prevailing treaty rules.[14]

Nevertheless, developing countries should not expect routine foreign intellectual property experts to endorse such proposals, and on the contrary, they should expect most experts to deprecate them. Any experimentation in that regard must therefore emerge from circles in

[13] *See* J. H. Reichman, Of *Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation*, 53 VANDERBILT L.REV. 1743 (2001).

[14] These rules also require countries adopting liability rules to make them available to foreigners who seek their protection in the name of national treatment.

developing countries themselves that want to explore concrete modes of exploiting the advantages of liability rules that have become theoretically more predictable over time.[15]

e. Compensatory Liability Rules to Protect Traditional Know-How

Some of the most interesting and important applications of liability rules could result from their use in new schemes to protect traditional knowledge, as I have suggested in other forums. Only liability rules can achieve the twin objectives of benefit sharing without reduction of the research commons, and interest in this approach is growing.[16] Nevertheless, the tendency of traditional intellectual property scholars and practitioners will be to scoff at such proposals and to dismiss them as impracticable.

f. Other Investment-Protecting Alternatives to Supplement the Patent System

Very theoretical research is currently underway to expand the scope of liability rules from the realm of small-scale innovation to a possible alternative form of protection for investment in major forms of innovation, including biotech, which could parallel the patent system and interact with it. While these studies are still in their early stages and are not therefore ripe for action, they may turn out to be particularly well suited to technologically upward mobile economies.

g. Enacting Tools to Protect the Public Interest

Comparative intellectual property law identifies a number of instrumentalities for protecting the public interest, which all developing countries should have at their disposal through appropriate legislation. Examples include laws prohibiting abuse of patent rights (and other intellectual property rights); laws allowing the imposition of compulsory licenses to lower prices or to promote greater competition in the public interest; laws permitting and regulating government use of patented inventions; as well as exceptions permitting the use of patented inventions for research purposes.[17]

While all developing countries should enact the enabling legislation needed to implement these and other public interest exceptions, which are consistent with international law, care must be taken when exercising these rights, especially compulsory licenses, lest they become an excuse for, and a hindrance to, a sound national innovation policy. Within the framework of such a policy, the existence of these tools can help states to regain a measure of control over intellectual policy making that can be used to their advantage in appropriate circumstances.

h. Strengthening Competition Laws and Policy

Developing countries can use competition law and policy to limit some of the adverse effects of high intellectual property standards, but this is a course of action that requires considerable skill and expertise. While developing countries can learn much from older practices of developed

[15] For details, see Tracy Lewis & J. H. Reichman, *Using Liability Rules to Stimulate Local Innovation*, Duke Conference on International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime (forthcoming 2004); Reichman, *Saving the Patent Law from Itself* (forthcoming 2004); J. H. Reichman, *Green Tulips, supra* note 13.

[16] *See,* for example, J. H. Reichman, papers presented at the Cardozo and Berne Conferences on Traditional Knowledge.

[17] See J. H. Reichman with Catherine Hasenzahl, NONVOLUNTARY LICENSING OF PATENTED INVENTIONS (UNCTAD/ICTSD 2003-2004).

countries in this regard, they should be aware that, in general, competition law constitutes a blunt and clumsy antidote that must be used with caution.

At the international level, these countries must take care not to enter agreements than can prematurely restrain their control over their own competition laws and policies. At the local level, they should exercise considerable restraint lest efforts to police abuses unduly disrupt needed transfers of technology through licensing and sales.

i. Regional Supply Centers for Essential Medicines and Related Measures

Now that progress has been made in clarifying the legal infrastructure supporting access to essential medicines, greater attention should be paid to proposals for regional distribution centers that could cut acquisition costs, streamline distribution channels, and increase bargaining power with foreign patent holders. In particular, carrot-and-stick incentives can be fashioned to encourage original producers to become low bidders for regional supply, and special efforts should be made to encourage them to establish regional production facilities.[18]

j. Preserving the Worldwide Research Commons for Scientific Data and Technical Information

The traditional research commons for scientific data and technical information is under a privatizing assault in the United States and the European Union. Countervailing efforts are nonetheless underway to preserve, enhance and, where necessary, contractually reconstruct this commons in the face of a highly protectionist intellectual property regime.[19] Developing countries have a very great stake in the outcome of these initiatives, and they should be involved in these efforts.

Closely related are efforts to use intellectual property rights in novel ways that support collaborative research and development and other similar initiatives. The Open Source Software Movement and the Creative Commons are but two such initiatives that developing countries should become involved with. In general, these initiatives make it possible to strengthen the research commons, with a view to producing collaborative outputs that themselves become capable of private exploitation without impoverishing the public domain. Developing countries should prod WIPO into examining these public regarding uses of intellectual property rights, which are highly regarded by most sectors of industry but opposed by powerful special interests.

k. Transfer of Technology from the Public to the Private Sector

Besides investing heavily in basic research conducted at universities and research institutes, the United States has pioneered the use of legislative tools to promote the transfer of publicly financed research results to the private sector, typically by means of the patent system While the success of these initiatives has bred further complications and unexpected consequences that require careful study, developing countries should begin to institute appropriate mechanisms of their own to encourage universities to become focal points of know-how acquisition and to facilitate the transfer of research results to the private sector under terms that are appropriate to these countries' own interests.

[18] *See* further, J. H. Reichman, Wisconsin Paper (2002) (unpublished).

[19] *See* further Reichman & Uhlir, *supra* note 4.

l. Global Funding of Scientific Research and Applications in Developing Countries

I continue to believe that a global version of the U.S. National Science Foundation (NSF) that would fund developing country scientists under competitive, merit-based, peer reviewed procedures could yield exceptional results, so long as candidates from developing countries competed only with themselves and not with scientists from developed countries. A complementary Global Venture Capital Fund to exploit research results from these projects also merits attention.

m. Bargaining Around International Intellectual Property Standards

More thought should be given to the possibilities of encouraging cooperative ventures that promote trade and foreign direct investment in developing countries by tailor-making local intellectual property protection and other benefits to specific projects. These proposals for "bargaining around" the TRIPS Agreement[20] have been deliberately misinterpreted by special interests as proposals to subject technology transfer to more bureaucratic controls. The opposite is true. Where there is a common interest to arrange major FDI projects between groups in developed and developing countries, governments can and should consider ways to *remove* administrative and enforcement obstacles that exceed international obligations in return for solid investment guarantees. So long as these deals remain in the public/private sphere, and do not entail state-to-state accords, national treatment and MFN obligations need not apply.

n. Programs to Promote Graduate and Post-Graduate Studies in Intellectual Property and Trade Law

I have previously discussed the importance of these programs and will not repeat those ideas here. In addition, proposals to establish an "Academic Resource Group" to support initiatives in developing countries on a continuing basis deserve further study.[21] While there are many obstacles and complications to be overcome, the basic idea is sound, and this could become a major resource for developing countries - and the advisory councils described earlier - if carefully nurtured.

o. Differentiating Intellectual Property Policies by GDP Per Capita Capacities

One particularly helpful task that such an Academic Resource Group could undertake is research into differentiated intellectual property policies that states at different levels of development could profitably enact.[22] This would greatly facilitate medium and long term planning, make it possible to reduce the costs of path dependence, and make it easier to promote sound practices without repeating past errors.

p. Market Intelligence Strategies

Difficulties surrounding the transfer of technology under conditions likely to enhance the competitive prospects of developing countries suggest the need for better market intelligence

[20] *See* J. H. Reichman & David Lange, *Bargaining Around the TRIPS Agreement,* DUKE J. COMPAR. & INT'L L. 11 (1998).

[21] *See* Drahos and Blakeney (2003), *supra* note 6

[22] *See* esp. Maskus, *supra* note 1.

strategies in these countries. Methods to improve both licensing and purchases of up to date technologies need to be standardized and shared.

q. Strengthening the Role of Chambers of Commerce

Experience in Northern Italy suggests that local chambers of commerce can facilitate regional development strategies and become centers for the exchange of know-how and spill over technological skills. These practices merit systematic study and emulation.