

Four Reforms for Wider Benefit-sharing

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It is in the interest of advanced countries (which is effectively the United States) that there should be a unitary system of intellectual property rights to cover the whole world. In contrast, all other countries need diversity, because their individual situations are so different. Moreover, the unitary system has developed in ways that simply reinforce the market powers of capability and persuasion, which firms in advanced countries possess in strength. The intellectual property rights which other countries need are therefore rights which will help to compensate for their weakness with regard these other kinds of market power.¹

Four reforms of intellectual property rights which could contribute to the protection of genetic resources and traditional knowledge as well as to benefit-sharing, are: returning to States the power to limit the absolute monopoly which trade marks deliver; direct protection of innovation; compulsory expert arbitration of disputes; and introducing a financial dimension into the measurement of all grants.

Trademark Reform

In discussions about the effects of intellectual property rights, the enormous economic importance of registered trademarks is almost invariably overlooked. These are much the most valuable of all such rights because they are the basis of *brands* and are not limited in time.

As well as other types of intellectual property rights, TRIPS imposed on poorer countries the requirement to set up a modern trademark regime. A most harmful aspect of this is that it gives the international tobacco firms the laws they need for a marketing onslaught in these countries, to make up for losses in advanced-country markets. As a quite inescapable consequence, smoking-related diseases will increase rapidly in these countries. The resulting harmful effect on vital statistics could even wipe out any victories there may be over, e.g., HIV/AIDS and malaria.

TRIPs prevents anything being done to prevent this because its Article 15.4 (which is a word-for-word copy of Article 7 of the Paris Convention) provides that "The nature of the goods or services to which a trademark is to be applied shall in no case form an obstacle to the registration of the mark."

Although Article 7 of the Paris Convention prescribes for international registration of marks, there is nothing in it about conditions for their renewal. In the pre-TRIPs era, this meant that whilst an individual Convention member country could not refuse to register a trademark for any category of goods, it was under no obligation to *renew* it. Denmark took advantage of this to put a limit on the term of trademark protection for pharmaceuticals. At the 1958 meeting of the Conventions' members, the International Chamber of Commerce and the Convention

¹ Kingston, W. , 2004. *Harmonization is a Trojan Horse*, European Intellectual Property Review, 26 (10), pp. 447-460.

Secretariat moved that the scope of Article 7 should be extended to cover renewals, so as to prevent this, but the Danes stood their ground and the proposal was dropped and not revived subsequently. Marketing interests finally got their way in Article 18 of TRIPs, which specifies that trademarks must be renewable indefinitely.

This total denial to WTO member States of any control over the most valuable of all the intellectual property rights they grant, is quite perverse in the light of what TRIPs allows in respect of *patents*. Article 27. 2 prescribes that "Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect ... human, animal or plant life or health."

Nothing more than this is needed for trademarks, and TRIPs will simply have to be changed to provide it. In doing this, provision should be included for States to fully control their own trademark laws, so that they can prevent monopolies *in perpetuity* being obtained on products which have originated from their genetic or other natural resources. Moreover, provisions which have the same effect should be incorporated into any new international convention which would include the advanced countries also. Nothing else can lead to proper compensation for the use of these resources.

Direct Protection of Innovation

Originally, intellectual property rights were devised to protect the results of individual creativity. Largely because of the rigidity imposed on the system by the existence of a specific Clause for them in the U.S. Constitution, they have never been adjusted properly to the historical change to *investment* as the source of what needs to be protected.

Consequently, the grant is made to the supposed inventor or author, and the protection the investment receives depends upon how close the link is between them. Copyright works because there is identity (perfection in the link) between an author's text and what is published. There is a close link, amounting to identity, between a chemical invention and its innovation. What is discovered in the laboratory, what is patented, and what is eventually bought and used, are all exactly the same. Protection of the invention consequently protects its innovation very well. In other technologies, however, where the link between invention and innovation is much weaker than it is in the chemical field, a patent for invention gives poor protection for its related innovation.

The solution is to protect innovations directly, not through their link to a supposed creative act of an individual.² This is done in the EU Database Directive, which provides for grants to protect the results of investment, with no requirement for originality. It is also used in the outstandingly successful alternative protection to patents for "orphan" drugs provided by the Department of Health in the United States. This is given to the developed and tested drug, ready to go on the market, nor for a mere disclosure, as in the case of a patent. It has resulted in a twelve-fold increase in relevant drugs and both actual and relative declines in death rates.³

² Kingston, W. , 1988. *Direct Protection of Innovation*, Maastricht/Boston, Kluwer Academic.

³ Lichtenberg, F. R., 2001. *The Effect of New Drugs on Mortality from Rare Disease and HIV*, New York, Columbia University.

The type of direct protection of innovation most immediately relevant to the topic under consideration here, is that under the UPOV Convention. In this case, what is protected is not any sort of proposal for or specification of a new plant variety corresponding to a patent disclosure, but the actual innovated plant in a form capable of showing its stability and homogeneity in propagation trials.

Direct protection of innovation consequently appears to be more suitable for innovations originating in traditional knowledge than existing intellectual property rights.

Compulsory Expert Arbitration for Settling Disputes

It is altogether remarkable that so much discussion of intellectual property rights ignores the costs of enforcing them. In fact, these are so great as to swing the balance of advantage completely towards large firms and the advanced countries which are home to the majority of these. In these advanced countries, the amount spent on litigation of disputes has been outstripping that spent on research and development.⁴ A U.S. Commission has reported that litigation is quite inappropriate for settling disputes about intellectual property rights and could well remove much of the value of such rights,⁵ while an EU Expert Group noted that much of the excessive cost of resolving disputes of this kind is due to the use of the ordinary Courts for dealing with them.⁶ These costs make intellectual property rights all but worthless to smaller firms.

It is consequently extremely important that whatever arrangements might be put in place to achieve benefit-sharing, their value will not be destroyed by allowing them to suffer from traditional methods of dispute resolution. Instead, *compulsory* expert arbitration of all disputes should be built into these arrangements from the start. There is persuasive empirical evidence that such an approach has the ability to solve the problem of excessive costs in these kinds of dispute resolution.⁷

Furthermore, any international agreement which does not contain this type of arbitration will be largely worthless. In the most comprehensive research yet done on the fate of European small firms' patents in the United States, for example, it was found that the District Court system in that country was strongly biased in favour of local infringers.⁸ This was so evident as to lead to the conclusion that foreign firms should only patent in the U.S. if they have enough resources to appeal from the District Court to the Court of Appeal for the Federal Circuit in Washington, D.C. where (as in the U.S. Patent and Trademark Office itself) they can expect a fair hearing.

⁴ Barton, J. , 1933. *Reforming the Patent System*, 287 Science, p. 1933.

⁵ Advisory Commission on Patent Law Reform, 1992, p. 78, United States Government Printing Office.

⁶ Strategic Dimensions of Intellectual Property Rights in the Context of Science & Technology Policy: an ETAN Report (1999) Section 3.2.2. Brussels, Publications Office of the Commission of the European Communities, EUR 18914.

⁷ Kingston, W. , 2000. *Compulsory Arbitration - Empirical Evidence*, European Intellectual Property Review, pp. 6154-158.

⁸ *Enforcing Small Firms' Patent Rights*, Luxembourg, Office for Official Publications of the European Communities, 2001. Accessible at: <http://www.cordis.lu/innovation-policy/studies/2001/management03.htm>

Bringing Money into the Measurement of Protection

The proper measure of any economic privilege can only be money. No doubt at the time when intellectual property rights originated, any measure other than time was out of the question, since accounting techniques were undeveloped. To persist with such a poor measure as time on its own to-day, however, is simply to ignore all the achievements of accountancy since then. This is now capable of providing the measurement required.⁹ Many of the problems of intellectual property rights, especially in new fields such as biotechnology and information processing, are actually caused by having to use time as the very crude measure of a patent, copyright or other grant. It can only be by chance that any fixed term will be exactly what is needed to attract the relevant investment - in most cases it will either be too long or too short. There is no reason to think that Lord Kelvin's dictum that "we advance according to the precision of our measures" applies only to science.

One way in which a financial dimension could be brought into the measurement of intellectual property rights, which an EU expert Group has recommended for investigation, would focus on the investment which had to be made beforehand to bring about an invention or innovation.¹⁰ It would also introduce compulsory licensing, so that an exclusive right would change from that of "making, using and selling," to that of conditionally allowing others to "make, use and sell."

Some predetermined, socially-acceptable multiple would then be applied to the investment, to define the price of a compulsory license for access to it. Payment of this price would allow a late-comer to use an originator's information by sharing retrospectively in the investment, weighted by the risk which had brought the information into being.

Multiple licenses

It would be essential that the more precise means of measurement did nothing to reduce the incentive to undertake the high risk of investment in invention and innovation. A safeguard for this is that the more important any information is seen to be by competitors, the more licenses will be requested for it, and as each license would earn the same amount, the originator could find that his risky investment was very well rewarded. This reward might be greater than could have been achieved under traditional protection, because several trajectories of incremental development would then be exploited simultaneously, which is also the best possible way of expanding the total market for the originator's benefit. At the same time, any other firm could join in developing a new market as long as it was ready to share retrospectively in both the investment and the risk which the originator took to make that market possible.

It should be stressed that the multiple licenses would only set the price at which the originator of information would *have* to grant a license for its use by another. The proposed arrangements would not prevent any type or number of license agreements between willing

⁹ Kingston, W. , 2002. *Intellectual Property Needs Help from Accounting*, European Intellectual Property Review 24 (11), pp. 508-515.

¹⁰ *Strategic Dimensions of Intellectual Property Rights in the Context of Science & Technology Policy*, Note 6 above, Section 3.4.

buyers and willing sellers. Any license which would be granted under the present system, therefore, would equally be available under the new one.

Introducing a financial dimension to the measurement of patent grants would also ensure that firms could not hi-jack the results of research carried out with public funds, as can happen at present. This is because the multiples which they could charge for a license on any downstream invention of their own would only apply to the amount of R&D investment they themselves had made. The same would apply to investments to make use of genetic resources, traditional knowledge or folklore, and multiples could be adjusted to deliver any desired type or level of benefit-sharing.

Feasibility of measurement

To examine how “multiples” might be calculated in practice, the records of 23,000 cases from United States Small Business Innovation Research Programs (SBIR) were examined.¹¹ What makes these records so valuable for this purpose is that an SBIR award covers all research costs, including the firm’s normal overhead.

The results from them show that at the time when a protected new product has just gone on the market, and a license to compete with it is sought by a second firm, a payment of 2.2 times the originating firm’s investment in research and development to date would put both parties on an equal footing. Information has been generated through investment at different levels of risk by the originator, and his competitor, who has neither invested nor taken any risk, now wants to use it too. Payment for a license at a multiple of 2.2 represents the second firm’s retrospective sharing of the first firm’s investment, along with its risk.

Similarly, at an earlier stage, where enough information had been produced to obtain a patent or to make a prototype, and the second firm wished to obtain a license to use this, the SBIR figures suggest a multiple of about 4 (which of course would be applied to a much smaller amount because it is earlier in the investment process) to make both parties equal. In practice, multiples should be higher than these to give weight to the unmeasurable factor that is the courage of the originator in actually making the first investment. Multiples should encourage action, not “wait and see.”

Comparison with known returns to pharmaceutical R&D offers a further insight into how the multiples could work. This shows that if three licenses on an invention were bought at a multiple of no more than 2, the returns from it would match those of the most profitable “blockbuster” drugs. Two licenses would give the originating firm very significant profits, and even a single one would enable it to cover the costs of its R&D investment.

The convergence of these results from using a multiple of 2 on pharmaceutical inventions with the figure of 2.2 obtained empirically from the SBIR data is encouraging. It suggests that this more precise measurement of intellectual property rights is quite feasible. Its advantages make it worth considering for any new *sui generis* protection arrangements proposed for benefit sharing in relation to generic resources and traditional knowledge.

¹¹ Kingston, W. , 1994. *Compulsory Licensing with Capital Payments as an Alternative to Monopoly Grants for Intellectual Property*, Research Policy 23 (5), November, 1994, pp. 1275-89.

Post Script

Having listened to several presentations at the Workshop about Certification for benefit-sharing, I cannot avoid the conclusion that these are attacking the problem from the wrong end. I explain by analogy:

It is well known that lottery winners often have trouble handling their very large prizes. Imagine, therefore, that a benevolent national government, or a group of such governments, decided to help by providing a counseling service to deal with this harm. They could offer this either to winners or to anyone who buys a ticket, but clearly the latter procedure would be highly wasteful of resources, since only the tiny minority of winners could actually benefit from it.

Any form of Certification would be just like giving counseling to every buyer of a lottery ticket, and just as wasteful, since the odds against their being relevant are of the same order of magnitude in both cases. Clearly, therefore, just as the focus in the counseling case would have to be on the trivial number of winners, so in that of the CBD it must be on the very limited number of products which contain some genetic material. With modern techniques, this material can now be traced back to its origin, whose owners, it is accepted, are entitled to share some of the value of the products to which it has contributed.

How could this be achieved? There seemed to be an underlying assumption in the discussion, going back to the Convention, that this should be by agreement between the parties on the basis of PIC, and furthermore that such agreement would be mandated by whatever is finally negotiated internationally. Agreement, however, could only be a practical arrangement if it comes about before a product starts to be developed, because at any time afterwards the developer could be held to ransom by the owner of the material. Even then, it would be very wasteful, because it would require large numbers of trans-national negotiations about the sharing of potential rewards which in all but a trivial number of cases will never be realized in practice.

The logic points instead towards allowing products to be developed and marketed freely, and then imposing a small "source levy" on their sales. This could be collected by national governments and paid over to an international Benefit-sharing Secretariat for distribution to the owners of the original genetic material, or of TK, through these owners' own national governments.

It seems to be unrealistic to think that the requirement of prior informed consent could be provided by any smaller entity than the national government of the source country, whether the subject matter is genetic material or traditional knowledge. Furthermore, it should be possible for this consent to be counted upon by potential users. Ruth Okediji's contribution to the Workshop discussed the difference between a property rule and a liability rule in relation to information. In the former, there is no access without the permission of the owner, but in the latter access is free, with whoever takes advantage having to pay compensation for doing so. Clearly, in the biodiversity resources and benefit-sharing cases, it is the liability rule which should be used. One drawback which it has is that it can lead to wasteful litigation about the amount of compensation to be paid. For this reason, measurement by money rather than time, and compulsory arbitration by technical experts, should be built in to the

intellectual property rights component of any international agreement, for the reasons advanced in my Workshop paper.

I was told that in earlier negotiations industry representatives balked at any suggestion of imposing a tax. To make the "levy" approach more acceptable to industry, two conditions are required: firstly, that the rate should be low and secondly that it should only apply once a product has reached some minimum level of turnover. Since it would be applied to sales, it would allow benefit-sharing throughout the product's lifetime, and would not be limited to any period of patent protection. A levy on sales can be very low indeed and yet provide very substantial funds over the long term, because trade mark protection for such sales has no time limit. I stressed in my presentation why those responsible for drafting CBD protocols should pay particular attention to trade marks under the TRIPs regime.

As to the use of the intellectual property system in general, I also discussed how in its present form this is inappropriate for preserving biodiversity and achieving benefit-sharing. It is not likely to be repaired in the near future. However, a change, not in the law which shapes this system, but in the procedural rules of Patent Offices, could be useful, and might be achievable within the time-scale needed for the CBD.

This change would apply to the requirement, in the United States Patent Office for example, that an applicant for a patent must call the Examiner's attention to all prior art of which he is aware. Failure to do this carries the powerful sanction that any patent granted as a result could be invalid. It would be an easy matter for this requirement to be extended both to any knowledge of relevant genetic material or from traditional sources, irrespective of whether or not this could be considered to be prior art.

Any significant acceptance of a scheme along the above lines by developed countries would contribute towards redeeming the great loss of trust in them by others, which is the legacy of the way in which the WTO, and, above all, TRIPs, were brought into being. Also, since the only countries which could receive levy funds would be those which subscribed to the international arrangements as suggested, this would be an incentive for them to join in these, which seems to be lacking at present.

The point made by Susan Finston in her Workshop paper that the pharmaceutical firms have been moving away from developing new products based upon genetic materials or traditional knowledge in favour of synthesizing products from resources they already have, deserves closer attention. This trend seems to owe as much to unrealistic expectations on the part of people in developing countries and their advocates in developed ones, as it does to inappropriate procedures for obtaining access. Since the entire population of the world losses from this, solving the problems of access and benefit-sharing is worth a great deal of effort.