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HANS HENRIK LIDGARD
TRIPS & Technology Transfer
TRIPS & TECHNOLOGY TRANSFER

Hans Henrik Lidgard*

TRIPS aims at

"[t]he protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations." ¹

These objectives are in line with the preamble to TRIPS, which recognizes the special needs of the least-developed country Members. They require the maximum flexibility in the laws and regulations implementing TRIPS requirements to enable them to create a sound and viable technological base.²

TRIPS is a trade off between the interest of the developed world in having its technology respected and the need for technology transfer especially to the least-developed countries.³ But this balance of interests is poorly expressed in

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¹ Article 7 of the TRIPS Agreement.

² The second paragraph of the Preamble of the 1994 WTO Agreement establishes: "…that there is need for positive efforts designed to ensure that developing countries, and especially the least developed among them, secure a share in the growth in international trade commensurate with the needs of their economic development." Having said this, the WTO Agreement is devoted to technical affairs and adds nothing about technology transfer to developing countries. The 1947 GATT Agreement, which also forms part of the WTO package has little, if anything, to add in this respect. Article XVIII deals with Governmental Assistance to Economic Development, but focus is on concessions from the Agreement rather than active technology support.

³ Despite the fact that it is a couple of years older than the WTO package, the Convention on Biodiversity is much more open to technology transfer. Article 16 provides that member states shall provide and/or facilitate access for and transfer technologies that are relevant to the conservation and sustainable use of biological diversity. Such transfer to developing countries shall be provided under fair and most favourable terms. Even if the transfer shall be consistent with IPR protection, the Members shall actively support developing countries with technology on mutually agreed terms including access to technology protected by patents and
the Agreement, which is primarily devoted to protection of intellectual property rights and only marginally addresses the other side of the coin – the technology transfer.

Article 66 provides that least-developed countries shall be provided with longer transition periods for introducing certain legislative requirements in their national legislation. Article 67, despite the impressive title of “Technical Cooperation”, only stipulates that richer countries shall provide, on request and on mutually agreed terms and conditions, technical and financial cooperation. This support is, in any event, limited to the preparation of laws and establishment of domestic institutions and training of personnel.

The only provision, which directly addresses technology transfer, is Article 66 paragraph (2)

“Developed country Members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base.”

The objective is limited in recognition of the underlying reality. Member States do not in most cases own technology that can be transferred. Private individuals and industry do. All that the developed countries can promise to do is to provide incentives to industry.

Are there other ways of facilitating the transfer and dissemination of technology? In this brief exposé, I will try to summarize what has been achieved during the last decade paying especial regard to both compulsory licensing and trade diversion rules.

1. INDUSTRY CONTROLS

“Technology” or “technical know-how” relates to the ability to develop, produce, use, distribute, market and sell a valuable good or service. It is an asset of its owner, which may be protected as a trade secret or by formal rules of intellectual property law. Under ordinary circumstances the owner will not voluntarily share this technology without consideration. Much too often, the expect-
tations of a profit driven market are not in tune with the resources and needs of the developing world. There are not the incentives for developed industry to engage in activities, let alone transfer valuable know how for the benefit of developing countries. The question then becomes whether the owner can somehow be forced to share its technology with others?

This question of forced technology sharing is currently the focus of much discussion in the developed world as a result of the US and EU judgments against Microsoft Corporation. But it is certainly also relevant to the TRIPS discussion on how to achieve technology transfer from the developed to the developing world.

1.1 The US attitude to limitations in ownership rights is cautious

Ownership rights are Constitutionally protected in the United States and no real distinction is made between real and intellectual property. An owner is basically free to decide to use her property the way she sees fit though not beyond the point where harm is caused to others. Or, as the Federal Circuit expressed it when Microsoft claimed an absolute and unfettered right to use its intellectual property as it wished: “That is no more correct than the proposition that use of one’s personal property, such as a baseball bat, cannot give rise to tort liability.”4 But apart from this, the right of ownership is carefully protected – and where IP is concerned, the notion of “harm” remains open to interpretation.

1.2 The European view differs

In Europe, the owner of property must not only refrain from harming others by way of property, but s/he actually has an obligation to use it in a socially acceptable way.5 Even if a right is recognized, the exercise of this right may always be subject to substantial limitations. Rules on compulsory licensing in situations where society may benefit come as no surprise to a European.

This difference in viewpoints goes some way to explaining the different attitudes to limiting IPR protection, which have manifested themselves in recent case law developments. They also explain the endless discussions in interna-

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4 *U.S. v. Microsoft Corp.*, 253 F.3d 34, 63 (Fed. Cir. 2001): “Microsoft’s primary copyright argument borders upon the frivolous. The company claims an absolute and unfettered right to use its intellectual property as it wishes … That is no more correct than the proposition that use of one’s personal property, such as a baseball bat, cannot give rise to tort liability.”

tional fora as to what extent ownership rights may be curtailed by exceptions for emergency situations and by the requirements of competition law.

2. TECHNOLOGY TRANSFER RESULTS ARE NOT ENCOURAGING

IPR protection is not some kind of natural right, but a construction which has been gradually reinforced during the last two centuries. TRIPS now provides a worldwide minimum standard of protection which is in line with developed world requirements, all of which, however, depend on fairly arbitrary decisions. Why should a brilliant invention achieve the relatively brief period patent protection, while a more or less "anti-intellectual" computer game is awarded the very much longer copyright protection? Industry lobbyism may help to explain some of this.

2.1 Are there scientific reasons for protection?

There are many empirical studies which seek to determine the benefits of stronger IPR protection. None of them is really conclusive. In 1952 the economist Fritz Machlup concluded that "If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge of its economic consequences, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible on the basis of our present knowledge, to recommend abolishing it."^6^

It could well be asked whether economic science has advanced in the last 50 years and now allows us firmer conclusions. Keith E. Maskus found that the effects of stronger global patent rights were beneficial to the US. A few other western countries – including Sweden – would also receive net inward transfers, but most others would experience a negative impact. Most developing countries would experience a negative effect, most markedly Brazil. He concluded: "Across all countries, the welfare loss induced by stronger patents amounted to as much as 20% of the global efficiency gains from trade liberalization."^7^

The picture is not promising when technological exchange over the last decades is summarized:

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2.2 Trade development in technology expressed in %

<table>
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<th>High technology export</th>
<th>Royalties</th>
<th>Foreign Direct Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Income</td>
<td>75,4</td>
<td>69,8</td>
<td>99,7</td>
</tr>
<tr>
<td>Low income</td>
<td>3,5</td>
<td>1,5</td>
<td>0</td>
</tr>
<tr>
<td>Sub-Saharan</td>
<td>2,0</td>
<td>0,5</td>
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The figures indicate an increase for middle income countries. The richest OECD countries attract the bulk of the benefit and the least developed countries are the losers.

Professor Mascus’ overall conclusion is that the short term impact of TRIPS is that the US profits. In the longer term the pattern may change in favour of technology importing middle range countries. A consequence is that the developed countries need to reform themselves and allow the developing world to gain more from technological development. Much remains to be done.

Based on such studies, it appears as if TRIPS is not a fair deal. The western world protects its own technology and will use it for its own benefit rather than provide it to countries in need. The incentives which might promote change are almost non-existent.

3. URGENCY FORCES COMPULSORY LICENSING

If the incentives for voluntary transfer are limited, the question becomes whether transfer can be forced against the will of the rights holder.

3.1 Paris Convention

The 1883 Paris Convention provides that IPRs are to be nationally based and independent. But the Convention also permits compulsory licensing in certain situations. Article 5(2) provides that

"Each country of the Union shall have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, failure to work."9

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8 Id.
9 Paris Convention Article 5(2) which adds: “(3) Forfeiture of the patent shall not be provided for except in cases where the grant of compulsory licenses would not have been sufficient to
In Europe compulsory licensing exists in most Member States’ legislation, but is not often used. The UK (and Canada) have exercised the option more frequently in the past, whereas US IPR legislation does not provide for compulsory licensing at all. Europeans do not hesitate to use compulsory licensing as a competition law remedy.\footnote{Cf. The “essential facility” discussion in EU practice, where the ECJ enforces compulsory licensing in certain rather restricted circumstances.} US law\footnote{Verizon Communications Inc., v. Law Offices of Curtis V. Trinko, LLP, (“Trinko”), 540 U.S. 398, 415 (2004).} tends to uphold the protection until a serious misuse of the IPR to the detriment of others can be established.\footnote{Nobelpharma AB, v. Implant Innovations, Inc., 141 F.3d 1059, (Fed. Cir. 1998) referring to Walker Process Equipment, Inc. v. Food Mach. & Chem. Corp., 382 U.S. 178 (1965).}

3.2 The TRIPS Agreement

Article 31 of the TRIPS Agreement endorses compulsory licensing in emergency situations and for public non commercial use. Neither term is further defined and it is left to the discretion of the Members to decide when such a situation is at hand. The use of compulsory licensing is, however, limited by a number of requirements. The main stumbling block for the least developed countries has been the requirement imposed by Article 31(f):

\((f)\) any such use shall be authorized predominantly for the supply of the domestic market of the Member authorizing such use;

3.3 A world infected by HIV

The problem this gave rise to came to light with the emergence of the AIDS crisis shortly after the WTO package had been introduced. The scare started in the early 90s in the western world with HIV developing in USA and spreading to other developed countries where high profile representatives of society were infected.

The effects were, however, more dramatic in the developing world. According to UNAIDS, in 2003 more than 25 million people in Sub-Saharan Africa prevent the said abuses. No proceedings for the forfeiture or revocation of a patent may be instituted before the expiration of two years from the grant of the first compulsory license. (4) A compulsory license may not be applied for on the ground of failure to work or insufficient working before the expiration of a period of four years from the date of filing of the patent application or three years from the date of the grant of the patent, whichever period expires last; it shall be refused if the patentee justifies his inaction by legitimate reasons. Such a compulsory license shall be non-exclusive and shall not be transferable, even in the form of the grant of a sub-license, except with that part of the enterprise or goodwill which exploits such license.
were living with HIV, an estimated 3 million people were newly infected and more than 2 million people had died of AIDS. Botswana and Swaziland had the highest prevalence, with more than 35% of their population infected.  

3.4 US protects its vital interests

At the same time the United States was involved in a number of conflicts where it was trying to protect US pharmaceutical industry interests. In 1997 South Africa introduced the Medicines and Related Substances Control Amendment Act\(^\text{14}\) and the large US pharmaceutical producers complained to the South African courts, claiming that this legislation did not contain the TRIPS safeguards for the protection of the patent holder.

Thailand was threatened by US trade sanctions when it allowed for compulsory licensing. Likewise, Brazil had been successful in promoting a nation-wide HIV-program by combining public health initiatives with a tough stance on access to pharmaceuticals. The Brazilian government promoted the production of generic, non-patented pharmaceuticals in Brazil. For products patented in Brazil it initiated negotiations with foreign producers so as to secure access at low prices, using the threat that it would otherwise grant compulsory licenses to local manufacturers.\(^\text{15}\) The Brazilian hard-line position, which held that compulsory licences could be granted when products were not locally produced, was challenged by the U.S. Government in 2001, when it requested that a WTO Dispute Resolution Panel investigate the matter.\(^\text{16}\)

In the end, both the U.S. government and the pharmaceutical companies were forced to withdraw all their actions in the light of public pressure.\(^\text{17}\)

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16 In spite of a U.S. White House Executive Order (13155 of May 20, 2000 regarding access to HIV/AIDS pharmaceuticals and medical technologies) to promote access to medicines in developing countries, the United States has taken action against Brazil under the WTO dispute settlement system (WT/DS 199/5 of January 2001) claiming that the requirement of local manufacture in Brazilian patent law is contrary to TRIPs. Brazil objected and asserted that similar requirements could be found in U.S. patent law. The matter was settled in July 2001 (WT/DS 199/4) without any major undertakings from Brazil.

It became obvious that the matter had to be addressed in a more positive way.¹⁸ The crux was, as stated, that, while allowing for compulsory licensing in emergency situations, the TRIPS Agreement required that “any such use shall be authorized predominantly for the supply of the domestic market of the Member authorizing such use.” This restriction prevented anything being done in the least developed countries, where the infrastructure for pharmaceutical production was lacking and the countries had to rely on imports.

3.5 2001 DOHA Conference

The shortcomings of TRIPS were obvious and in 2001 at the Ministerial Conference meeting in Doha,¹⁹ WTO Members recognized the gravity of the health problems affecting many developing and least developed countries. The Doha Declaration affirmed that the TRIPS Agreement “can and should be interpreted in a manner supportive of WTO members’ right to protect public health and, in particular to promote access to medicines for all.” WTO Members could freely grant compulsory licenses and decide on the grounds for this. To provide relief for countries with no production capacity in the pharmaceutical sector, Paragraph 6 of the Doha Declaration instructed the Council for TRIPS to find an expeditious solution before the end of 2002.²⁰

It is especially noteworthy that the Doha Agreement also reinforced general statements in the TRIPS Agreement regarding technology transfer:

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¹⁸ In contrast to the United States, the European Union had taken a more flexible approach to finding solutions. The European Union regards compulsory licensing as one option to address the global HIV/AIDS pandemic. In September 2000 the European Commission adopted a Communication on a new policy framework entitled: “Accelerated action targeted at major communicable diseases within the context of poverty reduction” (COM (2000) 585). In 2001, the Communication was followed by a Programme for accelerated action on HIV/AIDS, malaria and tuberculosis in the context of poverty reduction, COM (2001) 96 (http://europa.eu/scadplus/leg/en/lvb/r12503.htm). The EU position was further developed in a WTO position paper submitted to the TRIPS Council on 12 June 2001, IP/C/W/280 (01-2903). The Union and its member states have not been involved in legal disputes (at the WTO level or within national fora) with developing countries concerning the compulsory licensing of pharmaceutical, nor have they counteracted different developing country initiatives to secure relief, but have generally tried to promote compromise solutions within international organizations.


²⁰ A subsequent WHO/WTO report concluded that this “landmark” declaration “demonstrates that a rules-based trading system is compatible with public health interests. The careful and systematic attention which WTO Members afforded to fine-tuning the balance that needs to be found in the intellectual property system is indicative of the prominence accorded to public health on the international trade agenda.” WTO Agreement & Public Health: A joint study by the WHO and the WTO secretariat, 2002.
7. We reaffirm the commitment of developed-country Members to provide incentives to their enterprises and institutions to promote and encourage technology transfer to least-developed country Members pursuant to Article 66.2. We also agree that the least-developed country Members will not be obliged, with respect to pharmaceutical products, to implement or apply Sections 5 and 7 of Part II of the TRIPS Agreement or to enforce rights provided for under these Sections until 1 January 2016, without prejudice to the right of least-developed country Members to seek other extensions of the transition periods as provided for in Article 66.1 of the TRIPS Agreement. We instruct the Council for TRIPS to take the necessary action to give effect to this pursuant to Article 66.1 of the TRIPS Agreement.

3.6 2003 Understanding

After interminable discussions, the TRIPS Council was finally able to agree on a compromise on August 30, 2003, shortly before the upcoming Cancun Ministerial Conference. The compromise allows for production in one country to meet the needs in another.

The August 30 Agreement is indeed a compromise. The agreement itself only deals with pharmaceutical products needed to address a certain public health problem and refers to the Doha Declaration. The statement of the chairperson adds that the decision should be used in good faith to protect public health and should not be an instrument for pursuing industrial or commercial policy objectives. It applies to both active ingredients and to finished products incorporating them. The right to use compulsory licensing is not limited to least developed countries, but can be invoked by others as well. The difference is that an emergency situation is presumed in the least developed countries, whereas others have to show that problems exist.

The 2003 Understanding specifies with respect to technology transfer:

“Members recognize the desirability of promoting the transfer of technology and capacity building in the pharmaceutical sector in order to overcome the problem identified in paragraph 6 of the Declaration. To this end, eligible importing Members and exporting Members are encouraged to use the system set out in this Decision in a way which would promote this objective. Members undertake to cooperate in paying special attention to the transfer of technology and capacity building in the pharmaceutical sector in the work to be undertaken pursuant to Article 66.2 of the TRIPS Agreement, paragraph 7 of the Declaration and any other relevant work of the Council for TRIPS.”

21 Decision of the WTO titled Implementation of paragraph 6 of the Doha Declaration on the TRIPS Agreement and public health, WT/L/540.
23 The August 30 Agreement, §1, definitions.
The trade figures referred to earlier do not indicate any subsequent real change. Based on the 2003 Understanding, the Member States have now agreed on an amendment to the TRIPS Agreement, which is thus the first amendment in any agreement in the WTO package. This amendment has now been presented for ratification and will appear as new Article 31(f)(b) upon adoption.

Several developed countries have passed legislation which provides for compulsory export licensing under the conditions determined by Article 31. Indian and Brazilian companies have indicated their readiness to supply products. The number of actual compulsory licenses that have been reported is small. Yet, the mere possibility appears to have lead to a dramatic price reduction for HIV drugs in the developing world and there are signs that the core problem is no longer the price and availability of products, but rather the general infrastructure in the least developed countries. The test of this will come when the world experiences the next outbreak of an epidemic nature – bird flu, for example.

In short, compulsory licensing under TRIPS appears to be one way of effectively securing the forced transfer of technology from the developed to the developing world. Its mere existence appears to lead to an increased willingness for industry to find solutions which provide relief. The advantage is, of course, that technology transfer requires more than access to IPR. The developing countries must also have access to know how and experience and that can only be obtained by voluntary means.

4. EMBRACING PRICE DISCRIMINATION CREATES INCENTIVES

Another important element regarding technology transfer is how industry evaluates the risk of harmful consequences of transfer activities. If products supplied to developing countries are simply re-exported, they create harm. Only if such risks can be eliminated will the right incentives for industry to participate in technology dissemination appear. This raises the question of national, regional or international exhaustion.25

This matter has been carefully avoided in the WTO package. Article 6 of the TRIPS Agreement states that

"For the purposes of dispute settlement under this Agreement, subject to the provisions of Articles 3 and 4 nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights."

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As a consequence no guidance can be found in the TRIPS Agreement, and the dispute settlement system cannot shed further light on whether a rights holder can prevent his own goods from making a return trip to the developed world.

Countries have taken different positions and under its previous government, Sweden has campaigned against the EU policy of creating regional exhaustion. Sweden argued that a wider international exhaustion would lead to inflow of less expensive goods from developing countries to the benefit of Swedish consumers. EU support for the Swedish position has been lukewarm and in Silhouette the ECJ clearly opposed this viewpoint, emphasizing that if the Union wanted to agree on an expansion of the regional exhaustion principle, it must be made through bilateral agreements. The Court was not going to supply such a rule.

Since the AIDS crisis, the call for international exhaustion has basically vanished. Given the discrepancies in economic development, the risk with international exhaustion is that pharmaceutical products, when exported to low price countries at prices affordable in those countries, will quickly make their way back to the developed world by way of re-export. The negative effect is easily seen: margins intended for future research and development will end up with the parallel trade organizations and not with the R&D industry. Above all, the products will not do good where they are most desperately needed – in the developing world. Industry would always tend to counteract any such effects by avoiding selling products at discount prices to the developing world.

Neither Europe nor the United States will allow re-importation or parallel trade in pharmaceutical products. The European position was strengthened in 2003 with Council Regulation 953/2003 prohibiting the re-importation of certain key medicines. Producers are encouraged to make products easily available at low prices. Therefore Article 2 provides that “(i)t shall be prohibited to import into the Community tiered priced products for the purposes of release for free circulation, re-export, placing under suspensive procedures or placing in a free zone or free warehouse.”

These fairly recent steps appear to be supportive of the supply of low priced products to developing countries, as well as reducing the risks of technology transfer. Production may take place in the developing country without fear of unauthorized exportation aimed at the developed world.

The Silhouette Court’s proposal that the exhaustion principle should be extended through bilateral agreements appears to be a good one and one may

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28 OJ 2003 L 135/5.
add that economic theory suggests that this should mainly happen between countries of more or less similar levels of economic development.

5. TRIPS FLEXIBILITIES OPENS FOR NEW INITIATIVES

It is one thing for rules and regulations to eliminate obstacles to increased trade with developing countries, but it is another question whether the developed countries are actually actively supporting technology transfer in the way suggested by the TRIPS agreement. Admittedly, the undertakings in the agreement are not framed in strong, binding language, but rather, as general statements covering the promotion of technical information transfer and the grant of incentives to industry.

How shall this transpire and what has actually been done? The developed countries are supposed to report on their efforts to the TRIPS council on a yearly basis. Perusal of these reports do not show much happening. How can the developed world create incentives for industry to contribute to technological development, when they are governed by economic realities rather than philanthropic considerations? The question still begs an answer. It appears quite obvious that the failure in Cancún and the present difficulties of the Doha round can be explained by the developing world’s lack of trust when it has to provide IPR protection to the benefit of the developed world without getting much in return.

Seeking the right balance is imperative. Ownership attitudes create tensions between developed and developing countries. One stumbling block is the whole attitude to individual versus collective ownership. Whereas individual ownership of intellectual property has long since been recognized in the developed world, this is not the case in developing countries. Indigenous rights are often common rights with no specific owner. However, the position on ownership is a always a question of degree, with countries in the developed world not necessarily agreeing among themselves. The US position appears to be the most far reaching, only allowing for intervention where ownership is misused or abused. Under the civil law position, ownership creates a positive obligation to use it for the public good. This tension may well delay a constructive discussion on how technology may be transferred to developing countries. The present WTO problems seem to have led the developed world into seeking bilateral TRIPS+ agreements thereby endangering the harmonious development of world trade. Solving international problems is always secondary to protecting self interest and that is probably the reason for the position in which we find ourselves today.