

Who Owns the Knowledge Economy? Political Organising Behind TRIPS

THE CORNER HOUSE

1. The Agreement on Trade-Related Aspects of Intellectual Property Rights is one of 28 agreements that concluded the Uruguay Round of Multilateral Trade Negotiations that began in Punta del Este in 1986. Another of those agreements established the World Trade Organisation (WTO), and it is the WTO that administers TRIPS.
2. Every member, for example, has to have a copyright law that protects computer programs as a literary work, and a patent law that does not exclude micro-organisms and microbiological processes from patentability.
3. Copyright, patents and protection for layout-designs are all used to protect digital technology, whereas patents and trade secrets are the principal means by which biotechnological knowledge is being enclosed.
4. The European Community (EC) became the European Union only after the Maastricht Treaty of the European Union entered into force on 1 November 1993.
5. Moreover, agricultural goods are increasingly the subject of intellectual property rights as patents are extended to seeds and plants. Agricultural countries will find that they have to pay more for the patented agricultural inputs they purchase from the world's agro-chemical companies, and compete with the subsidies that the WTO's Agreement on Agriculture (now being renegotiated) allows US and EU farmers to continue to receive.
6. See Surendra Patel, J., "Intellectual Property Rights in the Uruguay Round: A Disaster for the South?", *Economic and Political Weekly*, 6 May 1989, pp.978, 980.

THE CORNER HOUSE
STATION ROAD
STURMINSTER NEWTON
DORSET DT10 1YJ
UK
TEL: +44 (0)1258 473795
FAX: +44 (0)1258 473748
EMAIL
<cornerhouse@gn.apc.org>
WEBSITE [http://
www.thecornerhouse.org.uk](http://www.thecornerhouse.org.uk)

TRIPS – the World Trade Organisation's agreement on Trade-Related Aspects of Intellectual Property Rights¹ – was the most important agreement on intellectual property of the 20th century. It marked the beginning of a quiet revolution in the way that property rights in information were defined and enforced in an emerging global knowledge economy.

More than one hundred government ministers signed TRIPS on behalf of their nations in Marrakesh on 15 April 1994. Why? Why did states give up sovereignty over something as fundamental as the property laws that determine the ownership of information and technologies?

Intellectual property rights are not like property rights in land or the ownership of physical objects. They are property rights in intangibles – algorithms that drive computers, formulae that underpin chemical processes of production, and methods of doing business. TRIPS is about more than patents on intangibles, however. It sets minimum standards in copyright, trade marks, geographical indications of manufacture, industrial designs and layout designs of integrated circuits. TRIPS effectively globalises the set of intellectual property principles it contains, because most countries are members of, or are seeking membership of, the World Trade Organisation (WTO) that administers TRIPS. It has a crucial harmonising impact on intellectual property regulation because it sets detailed standards of intellectual property law² that will profoundly affect the ownership of two significant technologies in the 21st century – digital technology and biotechnology.³ TRIPS also obliges states to provide effective enforcement procedures against the infringement of intellectual property rights.

Between them, the US, the European Community⁴ and Japan had the world's dominant software, pharmaceutical, chemical and entertainment industries, as well as the world's most important trade marks. The rest of the world had nothing much to gain by agreeing to terms of trade for intellectual property that offered these countries so much protection.

Southern policymakers have argued that "TRIPS was part of a package in which we got agriculture". The WTO Agreement on Agriculture (AoA), however, does not confer anything like the benefits on developing countries that TRIPS does on the US and Europe.⁵

Another response was that "we will be eventual winners from intellectual property". But property rules over knowledge have brought developing countries few gains. Of the 3.5 million patents in existence in the 1970s, the decade before the TRIPS negotiations, nationals of developing countries held about one per cent.⁶ Moreover, developing countries that were industrialising, such as South Korea, Singapore, Brazil and India, were doing so in the absence of a globalised intellectual property regime.

Protecting intellectual property uses public funds to guarantee returns on private investment.

In fact, developing countries signed TRIPS because of a failure of democratic processes, both nationally and internationally, that enabled a small group of men within the US to capture the US trade-agenda-setting process and then, in partnership with European and Japanese multinationals, draft intellectual property principles that became the blueprint for TRIPS. The resistance of developing countries was crushed through US trade power. This briefing paper explores the background to TRIPS and the corporate political organising that orchestrated and paved the way for the agreement.

Global Knowledge Cartels

In the early 20th century, US and European corporations began to see the function of patent and copyright systems less as an opportunity to make returns and more as a public guarantee of returns on private investment – in effect, an investment guarantee. US patent lawyer Edwin J Prindle stressed that corporations had to see the patent system as a fundamental tool of business:

“Patents are the best and most effective means of controlling competition. They occasionally give absolute command of the market, enabling their owner to name the price without regard to cost of production.”⁷

Whereas in the 19th century most patents were owned by individuals, early in the 20th century the bulk of patents came to be owned by big business. The massive corporate research laboratories (*see* Box, p.6) in the chemical, power machinery, electrical, petroleum and rubber industries⁸ produced knowledge to develop into products, but the quest for knowledge was really the quest for monopoly. By means of patents,⁹ competitors could be kept out or made to pay high royalties, depending on the way the numbers panned out. Patents allowed large companies to fix price and control production. Restrictions over price and production could also form part of a patent licence agreement with another producer and were in many cases regarded as a legitimate form of exploitation of a proprietary right.

Corporations could also use intellectual property rights and licences to structure, disguise and enforce a global knowledge cartel and to divide international markets among themselves.¹⁰ Cartels are borne of a desire by business to dominate markets rather than be dominated by them. Individual producers come to an arrangement under which they fix the price of a commodity or limit its production. In 19th-century business life and the first part of the 20th century, cartels of all kinds were simply a fact of international economic life¹¹ – and unsurprisingly were eventually made illegal.

Patents and other forms of intellectual property such as trade marks could, however, hide a cartel. The patent monopoly, by its very nature, gives its owner strong rights over the making of an invention, including the terms on which it can be licensed. An arrangement between two producers dividing market territories and setting limits on production, which would have been illegal in the absence of a patent, could be legal as a patent licensing arrangement.

The details of these arrangements varied as did their legality in different jurisdictions. Usually, two or more international players would come together and negotiate an agreement on the intellectual property rights relating to the products and technologies in the industries in which the players were involved. Typically, the agreement would divide the

7. Quoted in Noble, D.F., *America by Design*, Alfred A. Knopf, New York, 1979, p.89.

8. In 1938, these five industries employed 75 per cent of the staff involved in industrial research (Chandler, A.D., Jr, *Strategy and Structure: Chapters in the History of the Industrial Enterprise*, MIT Press, Cambridge, MA, 1962, p.377).

9. Use was also made of trade marks, trade secret law and copyright.

10. It was unlikely for one company to have all the technology it needed to manufacture a given product. “Nobody”, as one patent attorney put it, “has it all.” To license in the technology it needed, a company had something to offer in return. Each company thus had to have a strong portfolio of patents to negotiate deals from a position of strength.

11. Cartels were present in most commodity markets, including cocoa, coffee, corn, sugar and tea, and in strategically important metal industries, such as steel, aluminium, beryllium, cobalt, copper, lead, magnesium, mercury, tin, iron, brass and zinc. They were also found in the lumber, woodware, flooring, furniture, casket, leather, petroleum, rubber, footwear, explosives, glass, paper and hardware industries. (Chandler, A.D., Jr, *The Visible Hand: The Managerial Revolution in American Business*, Belknap Press of Harvard University Press, Cambridge, MA, 1977, p.317.)

world into areas (the British Empire, the United States, Central America). The agreement might specify that some areas were to be the exclusive territory of party A and others the exclusive territory of party B. Some territories might be shared. Party A would agree to grant party B “sole and exclusive licences” to patents and trade secrets owned by party A and of interest to party B in its exclusive markets. Party B would return the favour. Generally speaking, the more technologically sophisticated the process of production, the more use was made of patent and know-how¹² agreements among competitors. Through these agreements, members of the cartel “networked” their territorially based patents in order to coordinate their actions in world markets. Not every agreement on patents hid a cartel – but many did.

The Patent and Processes Agreement that DuPont concluded with the UK’s Imperial Chemical Industries (ICI) in 1929 is a good example of the way in which patents were used to mask cartels. The Agreement divided the world into exclusive and non-exclusive territories. DuPont took North and South America for its exclusive use and ICI acquired the British Empire. Canada was shared between them by means of exclusive licences. Failure to adhere to the terms of the agreement usually produced a breach-of-licence issue and could be settled in court, or if privacy was important to the parties concerned, through international arbitration and mediation.¹³

The use of intellectual property rights to structure and enforce cartels spread between the two World Wars. Cartels became the “outstanding characteristic of business”,¹⁴ and intellectual property became the outstanding marker of knowledge cartels. The partitioning of the world’s markets using intellectual property rights occurred in all the world’s key industries. The rubber cartel, the nitrogen cartel, the aluminium cartel, the magnesium cartel and the electric light cartel were woven together through the thread of intellectual property agreements.¹⁵

Knowledge cartels were not about sharing knowledge, avoiding the duplication of research or achieving efficiencies. They were about privatising knowledge that would grant the holder of that knowledge the power to discipline markets. When the opportunity came to deprive others of their patent rights, it was rarely neglected.¹⁶

Attacking patent-based cartels, moreover, was far harder for a competition authority than attacking commodity cartels or monopolies because an attack could be construed as interfering in the use of private property. Once the veil of private property had been drawn over what was essentially a state-granted monopoly privilege, it became much harder for public authorities to question the nature of the business arrangements that individual competitors reached with each other using those privileges.

The Changing Knowledge Game

After the Second World War, surveys began to show that the US economy generally was building a comparative advantage in highly research-intensive and knowledge-intensive industries: computing, electronics, chemicals, pharmaceuticals and scientific equipment.¹⁷ US companies looked to new markets for their diverse products. They began to establish overseas production facilities and began a process of expansion, especially into Europe.

But competition was looming from all directions.¹⁸ The Asian tiger economies were experiencing hyper-growth. The great profits to be

Copyright and trade marks are still routinely used by international business to divide up global markets among themselves.

12. Since knowledge was the basis of competitive advantage, all companies wanted to disclose as little of their knowledge as possible. But the patent system required disclosure. Over time, patent attorneys solved this problem by keeping back some of the core knowledge related to inventions as private “know-how”. Know-how was usually the subject of a separate licensing arrangement between commercial parties.
13. Another example involves German chemical giant I. G. Farben, which used its stock of patents in synthetic rubber to strike a deal with US Standard Oil over the world’s rubber markets. I. G. Farben agreed to pass on to Standard any patents it acquired in the chemical field of relevance to the oil business. In exchange Standard offered I. G. Farben control of chemical patents that were not strongly related to the oil industry.
14. Stocking, G.W. and Watkins, M.W., *Cartels in Action*, Twentieth Century Fund, New York, 1947, p.4.
15. The electric lamp cartel agreement, which was signed on 23 December 1924 by the world’s leading producers (Osram, Philips, Tungsram and International General Electric), based its division of the world market on the exchange of patents.
16. Members of knowledge cartels may have swapped patents, but know-how (see note 12) was kept under tight wraps even among cartel members. ICI, for instance, complained that DuPont was holding out on it by not communicating its research and therefore not honouring the spirit of the patent agreement between the two (Hounshell, D.A. and Kenly Smith, Jr, J., *Science and Corporate Strategy: DuPont R&D, 1902–1980*, Cambridge University Press, Cambridge, 1988, p.193).
17. Dunning, J.H., and Pearce, R.D., *The World’s Largest Industrial Enterprises*, Gower, Aldershot, UK, 1981, p.36.
18. Chemical and pharmaceutical companies encountered other problems too, particularly rising R&D costs and falling returns. See Box, p.7.

19. During the Second World War, Pfizer had been required to share its penicillin production techniques with other US manufacturers in order to meet demand.
20. See the Pfizer website, www.pfizer.com/150/1951.htm.
21. In fact, many people in Africa, India and South America relied on a variety of indigenous knowledge systems for their healthcare needs.

made in chemicals had tempted more and more entrants in the market to join established players like DuPont, Dow, Monsanto and Union Carbide. Chemical knowledge continued to be diffused throughout the world by the universities and through journals and the career movements of chemical engineers and researchers. There were only so many patent battles that a chemical company such as DuPont could fight and expect to win. Similarly, the pharmaceutical industry had gone through its happy times of cartels and price-fixing behaviour, for instance, of broad-spectrum antibiotics (*see* Box below), and the large industry players now faced competition from generic manufacturers.

The experience of US pharmaceutical giant Pfizer illustrates the problems a knowledge company faced. Confronted with strong domestic competition in the production of penicillin after the end of the Second World War,¹⁹ the company began to expand into Southern country markets in the 1950s. Manufacturing plants and distribution networks were established “in countries ranging from Argentina to Australia and Belgium to Brazil”.²⁰ In many countries, national pharmaceutical industries either did not exist or were only in their infancy.²¹ Patent

Chemical and Pharmaceutical Patents and Cartels

Patent-based cartels have been strongest in chemicals and pharmaceuticals. Indeed, the chemical cartels of the 20th century were some of the most powerful ever to colonise the world economy, and the companies participating in them were among the first to become genuinely global. They learned to use patents, trade secrets and trade marks to bind themselves together into tight dominant groups that could operate across borders according to agreed production and marketing plans.

For some chemical companies, the move into pharmaceuticals made sense. Drugs could be synthesised through chemical processes, and chemicals were a source of raw materials for pharmaceuticals. German chemical company I G Farben became a prominent player in the pharmaceutical cartels of the 1930s, forming agreements with other European companies such as Ciba and Hoffmann La Roche, as well as US companies such as Sterling Products.

The discovery of penicillin and sulphanilamide led to an era of wonder drugs after the Second World War. Companies like Pfizer, Bristol, Parke Davis and Merck rushed to patent antibiotics because they had seen what a competitive market could do to the price of a drug like penicillin.

Penicillin, which had not been patented, had gone from selling at US\$3,955 a pound in 1945 to US\$282 a pound just five years later.

One obstacle to obtaining a patent hold on antibiotics was the fact that the drugs depended on the discovery of naturally occurring substances in soil samples that killed harmful micro-organisms. As these substances occurred in nature, they were unpatentable discoveries.

For decades, however, the patent profession had been pushing the principle that substances that occurred in nature but had been isolated and purified by the discoverer were patentable. Technically, they no longer existed “in nature”. Progressively, this principle of purification/isolation came to have a wider and wider application in chemical patents.

The US Patent and Trademark Office (PTO) came to accept the principle and grant patents on broad-spectrum antibiotics. In fact, it granted too many of them.

Companies found that they were making life difficult for each other. Rather than live in a world of mutually-assured patent litigation, they swapped patents to form a producers’ cartel. The prices of antibiotics were held constant this way between 1951 and 1961. Countless thousands of people who could not afford to buy them died.

Some companies expanded enormously based on the supra-normal profits they obtained by means of the patent system. But profits tended to come from one or two drugs only. For example, in 1960 Terramycin and tetracycline accounted for 33 per cent of Pfizer’s sales; chloramphenicol for 45 per cent of Parke Davis’s sales, and Merck’s Divril for 39 per cent. When these patents ran out, the companies would be cast back into competitive markets.

They thus had a massive incentive to strengthen and globalise the patent system. They would need longer and stronger patents to protect the blockbuster drugs on which they had become financially dependent. They would need every country in the world to recognise product and process patents for pharmaceuticals so that they could become a monopoly supplier in every market of their choice. They would need standards of patent protection that would make it difficult for the generics industry to compete with them in these national markets. They would need stronger trade mark laws that could not be tampered with by developing countries to protect their global marketing strategies. They would need something like TRIPS.

protection was not yet important to Pfizer because countries like India did not have the technology or know-how to copy its products. By 1957, Pfizer International had more than achieved its target of US\$60 million overseas sales.²²

In India, these sales were aimed at the small but growing class of Indians who could afford Western prices. In the 1960s, despite having one of the poorest populations in the world, India had some of the world's highest drug prices.²³ Increasing political stability and technological development, however, gave India the capacity to produce quality affordable drugs locally, cheaply – and, by using the patent system, legally.

Passed in 1970, India's patent law²⁴ followed the German system of allowing the patenting of methods or processes that led to drugs, but not allowing the patenting of the drugs themselves.²⁵ This product/process distinction gave Indian pharmaceutical manufacturers an incentive to find cheaper processes for the production of existing drugs. The law opened the path to a highly competitive Indian generics industry, which began to produce quality essential drugs at a fraction of their price in Western markets.

Southern countries also made use of compulsory licensing²⁶ regimes to bring down the price of essential drugs. Countries like Brazil, Argentina and Mexico and the Andean Pact nations limited the scope of patentability in the pharmaceutical and chemical sectors. Other states simply did not have copyright or patent law, and had no legal obligation to recognise the intellectual property systems of other states. All states designed their intellectual property laws in a way that suited their economic interests – or simply did not have them.

As these policies began to bite, Pfizer was faced with unprofitable operations in the South. In the words of Edmund Pratt, the CEO of Pfizer from 1972 to 1991:

“[W]e were beginning to notice that we were losing market share dramatically [in Southern countries] because our intellectual property rights were not being respected in these countries.”²⁷

This “lack of respect” did not amount to illegality. Rather than Southern countries were adjusting the rules of the patent game to serve their local industries in exactly the same way that Western states had used intellectual property for their own protectionist ends.

The loss of market share in developing countries did not greatly affect Pfizer's overall profitability. The world's biggest pharmaceutical markets remained the US, Japan and Europe, where Pfizer was doing well. Pfizer's own sales in developing markets were never much more than 10–12 per cent of its total sales.²⁸ But these Southern countries were not only providing pharmaceutical products to their populations at very cheap prices; some of them, such as India, were also supplying neighbours like Nepal and exporting bulk drugs and formulations to places such as Canada. Southern-produced pharmaceuticals were also finding their way into African states.

The presence of these cheaper manufacturers raised embarrassing questions about the connections between patents and drug prices. Said one Western doctor who had worked in Nepal:

“I am intrigued by the Association of the British Pharmaceutical Industry's statement that ‘the pharmaceutical industry in the UK is highly competitive especially in terms of prices’. Most of the drugs available in Nepal are manufactured in India and their efficacy in clinical practice I have found to be the same as their

22. By the 1980s, Pfizer had 21 manufacturing plants located in less developed countries including India. Four of its six R&D labs were located outside the US (Santoro, M.A., “Pfizer: Protecting Intellectual Property in a Global Marketplace”, Harvard Business School, Cambridge, MA, 1992, p.2).

23. The phenomenon of higher prices in Southern countries is not unusual. For a survey of a sample of 16 drugs in 36 countries that shows the price of some proprietary drugs to be higher in Africa and Latin America than in OECD countries, see Bala, K. and Sagoo, K., “Patents and Prices”, *HAI News*, No 112, April/May 2000, pp.1–9. Even if the price of a proprietary drug is lower in a Southern country than in an OECD country, it may represent a higher percentage of income. GlaxoSmithKline offered its anti-retroviral drugs AZT/3TC for US\$2.00 a day, but this represents twice the daily income of someone living on a dollar a day.

The logic of patent monopoly is to have a safe and secure distribution system aimed at selling smaller numbers of expensive medicines to a wealthy class, rather than trying to distribute large numbers of cheap medicines at a few cents a day to the poor. When large pharmaceutical companies speak about “growing the market” in developing countries, it is the wealthy segment of the market they have in mind.

24. India in fact had a patent law before many European countries, having acquired one in 1856 under British colonial rule. From that time on, British manufacturers used the patent system to obtain the best possible prices in the Indian market. After India's independence in 1947, two expert committees conducted a review of the Indian patent system. Unsurprisingly, they concluded that the Indian patent system had failed “to stimulate inventions among Indians and to encourage the development and exploitation of new inventions” (Vedaraman, S., “The New Indian Patents Law”, *International Review of Industrial Property and Copyright Law*, Vol. 3, 1972, pp.39, 43).

25. *Ibid.* India granted patent protection for pharmaceuticals for five to seven years only as opposed to 14 years for other inventions.

26. Compulsory licensing is authorisation by a government for someone to make, use or sell a patented invention without the consent of the patent holder.

27. See Santoro, M.A., op. cit. 22, p.6.

28. *Ibid.*, pp.2, 4.

UK equivalents but the price is about one-tenth to one-twentieth of the UK price. Any argument about research and development costs can hardly apply to such humble drugs as paracetamol.”²⁹

Developing countries had acquired skills that threatened those at the top of an international hierarchy of pharmaceutical production – the US, Japan, Germany and the UK. They were raising issues that no global knowledge cartel wanted aired.

29. Hill, D.J., “Letters to the Editor”, *The Independent*, 17 December 1998, p.10.

Corporate Laboratories of Knowledge

In the early 20th century, companies such as DuPont and IBM became “knowledge-creating companies”. They did not create knowledge for its own sake, but rather to develop new products or improve existing ones. Their crucibles were large-scale industrial research laboratories.

Germany’s dominance of the international chemical industry in the 19th century was built on an infrastructure of highly organised industrial research. The Germans had realised that nature would give up its chemical secrets only under a collective systematic assault by large groups of scientists. The sheer number of tests required to find a successful dye, for example, meant the lone inventor had little chance of making discoveries of industrial interest.

In the US, General Electric’s laboratory was established in 1900, Westinghouse’s in 1903 and AT&T’s in 1907. Others followed the path of large-scale industrial research. Between 1921 and 1941, the number of industrial research laboratories in the US went from 300 to 2,200; research staff increased to over 70,000. In 20 years, the US had built an industrial research structure that towered over that of other nations (with Germany perhaps the exception). Like a vortex, this structure drew in much of the best and brightest scientific talent in the country, as well as talent from abroad. Graduates working for these large companies were given some of the best-equipped laboratories in the country and salaries exceeding anything they were likely to earn in the university system.

Universities themselves became more and more dependent on funding from large

corporations like DuPont, which by 1958 spent, on average, about double that of its competitors on basic research, and employed PhD graduates in numbers equalling about one-third of those in the entire US academic system. These companies understood that their needs for highly skilled scientific labour could be met only through healthy science faculties.

Large, sophisticated laboratories staffed by thousands of researchers made possible the strategy of product diversification that characterised the chemical, electrical, automobile and machine industries.

Chemical companies like Monsanto and DuPont started from narrow technological bases – the chemistries of saccharin and nitro-cellulose respectively. Research then turned these bases into many different product lines. Nitro-cellulose technology, for instance, gave DuPont “artificial leather, rayon and other textiles, paints, varnishes and dyes, cellulose, and plastic products.”

Individual scientists who participated in the emerging systems of industrial scientific research soon learnt that all scientific communication with outsiders had to be vetted by their legal departments. They had joined a system in which knowledge was no longer thought of as a public good.

Changing Strategies

After the Second World War, IBM became perhaps the best example of the knowledge game. At its height, its spending on R&D roughly equalled one-tenth of all corporate expenditure on R&D in the US. Its network of research laboratories had propelled it to a share of between 65 and 70 per cent of the world’s computer

market (excluding communist countries).

But while the costs of doing R&D continued to rise, the returns from it began to drop. R&D costs in the 1950s were already three times what they were in the 1940s, but by the 1960s and 1970s, the rate of chemical innovation had hit a plateau. In the US, the number of new chemical entities introduced to the market fell from 233 in 1957–1961 to 76 in 1967–1971. Despite spending more, DuPont, for one, had fewer and fewer commercial products to show for it.

The pharmaceutical industry also faced increasing R&D costs. The rate of discovery of new drugs based on the synthesis of chemical compounds had declined considerably.

So DuPont and other key chemical and pharmaceutical players took a strategic decision to enter the life sciences business. Perhaps biology might deliver the kinds of profits in the new millennium that chemicals had in the first two-thirds of the 20th century.

But before this shift could be made, intellectual property protection for biological inventions would have to be much, much stronger. The knowledge game would have to acquire much tougher rules about who was to own the source of profits (see Box, p.19).

Another strategy for the big corporations was to do less basic research themselves and to rely on smaller companies and universities instead. This required the integration of universities into the knowledge game. They would, in effect, become the large-scale laboratories that the big corporate players needed in the knowledge economy (see Box, pp.26–27).

Changing Places For Deciding Rules

Underneath the “development” ideology of intellectual property lies an agenda of underdevelopment. It is all about protecting the knowledge and skills of the leaders of the pack. Leaders of the various Northern knowledge-based industries wanted to close the gaps in the patent system when it came to the global control of knowledge, so that they could continue to accrue the power necessary to discipline markets and states. They wanted to change the rules of the knowledge game.

They also wanted to change the forum in which the rules were debated and decided upon. The rules of the international patents regime revolved around the Paris Convention of 1883, which had formed the International Union for the Protection of Industrial Property and which was administered by a UN organisation, the World Intellectual Property Organisation (WIPO). For much of its history, Southern countries had seen little benefit in joining the patents’ regime. But by the mid-1980s, two-thirds of the members of the Convention were Southern countries,³⁰ largely as a result of WIPO’s “persuasion and advice”.³¹ These countries began to push for the Paris Convention’s reform and for access to the technology of multinationals on favourable terms. The Paris Union, once a quiet club devoted to the elevation of the international patent regime, became a battleground. The fiercest debates took place over the revision of compulsory licensing (authorisation by a government for someone to use a patented invention without the consent of the patent holder) of patented technology.³² For the US, developing country proposals for exclusive compulsory licensing amounted to little more than expropriation of US intellectual property rights.

The revision of the Paris Convention began in February 1980. At its first meeting, the US hoped to obtain higher standards of protection, but instead had to defend existing Paris Convention standards. Moreover, in the words of one commentator, the US at this and subsequent revision conferences in 1981 and 1982 found itself “alone and almost isolated”.³³ The Paris Convention’s change in membership meant that its reform could no longer be dictated by the developed countries.

The US pharmaceutical and other industries concluded that WIPO was no longer a forum that could deliver the standards it wanted. To secure a favourable investment regime for multinationals with global production needs – which for knowledge industries translated into globally-enforceable intellectual property standards that could protect their knowledge in whichever jurisdiction a company went – the “locus” where international intellectual property issues were debated, as one Pfizer employee later said, had to be shifted away from WIPO. When the US began to push in the early 1980s for a multilateral trade round that included intellectual property, it was the clearest possible signal that it was abandoning WIPO as a forum.³⁴ The new locus turned out to be the international trade organisation, the General Agreement on Tariffs and Trade (GATT) and its successor, the World Trade Organisation (WTO).

“Stealing from the Mind”

Bringing about change in the rules governing patents was not just a matter of snapping corporate fingers, however. Other business leaders would have to be convinced, a corporate consensus would have to be built, policy analysts would have to lend legitimacy to the proposed new

30. From 1963 to 1968, membership of the Paris Convention increased from 51 to 79. See Bodenhausen, G. H. C., *Guide to the Application of the Paris Convention for the Protection of Industrial Property*, BIRPI, Geneva, 1968, p.7.

31. WIPO, 1993 interview with the authors.

32. Dealt with in Article 5A of the Paris Convention. See Mills, D. M., “Patents and the Exploitation of Technology Transferred to Developing Countries (in Particular Those of Africa)”, *Industrial Property*, Vol. 24, 1985, pp.120, 122.

33. Kunz-Hallstein, H. P., “The United States Proposal for a GATT Agreement on Intellectual Property and the Paris Convention for the Protection of Industrial Property”, *Vanderbilt Journal of Transnational Law*, Vol. 22, 1989, p.265.

The revision ended in deadlock in June 1985 and was never completed.

WIPO also tended to adopt a “live and let live” attitude towards intellectual property, to contain rather than resolve conflict by trying to achieve consensus. But there was little hope of achieving consensus between the numerous states of the South, which were intellectual property importers, and a few wealthy states, which were intellectual property exporters, when Southern countries were claiming that much technological knowledge was in fact the common heritage of humankind.

34. After the Second World War, the US had pursued a policy of international forum-shifting to secure the results it wanted in various international regimes (see Braithwaite, J. and Drahos, P., *Global Business Regulation*, Cambridge University Press, Cambridge, 2000, Chapter 24). In 1984, for instance, the US withdrew from UNESCO. UNESCO had been useful to the US in sponsoring the development of the Universal Copyright Convention (UCC) in the 1940s (Sandison, H., “The Berne Convention and the Universal Copyright Convention: The American Experience”, *Columbia-VLA Journal Of Law & Arts*, Vol. 11, 1986, pp.89, 97). UNESCO had become the UCC’s secretariat when the UCC came into effect in September 1955. But Southern countries began to use UNESCO as a forum to call for a “New World Information Order”, linking copyright to education and other human rights, a perspective with which the US was not particularly comfortable. By the 1980s, the 1886 Berne Convention for the Protection of Literary and Artistic Works had become the main game for US copyright interests.

direction, and finally the whole thing had to be politically saleable to the US government. US pharmaceutical giant Pfizer and other knowledge industries had to enter “the world of ideas”³⁵ at different levels both within and outside government.

Pfizer had been instrumental in coming up with the radical idea of linking investment and intellectual property to the trade regime, an idea that would lead the company into a major national and ultimately global lobbying campaign. The Chair of Pfizer from 1972 to 1992 and CEO from 1972 to 1991, Edmund T Pratt Jr.,³⁶ began delivering speeches at business fora outlining the links between trade, intellectual property and investment. Other Pfizer senior executives began to push the intellectual property issue within national and international trade associations.³⁷ Like the beat of a tom-tom, the message about intellectual property went out along the business networks to chambers of commerce, business councils, business committees, trade associations and peak business bodies. Progressively, Pfizer executives who occupied key positions in strategic business organisations were able to enrol their support for a trade-based approach to intellectual property. With every such enrolment, the business power behind the case for such an approach became harder and harder for governments to resist.

Part of the domestic strategy to garner support was to talk about “piracy”. On 9 July 1982, an op-ed piece bearing the title “Stealing From The Mind” was published in the *New York Times*. Appearing

35. 1994 interview with the authors.

36. Those who worked with Pratt described his intellectual, business and political leadership on the issue of trade, investment and intellectual property as “crucial”.

Also involved at Pfizer in the campaign were Ted Littlejohn (responsible for much of the detail and intellectual content), Gerry Laubach and Michael Hodin. Hodin had been hired by Pratt to work on public policy issues. Under the direction of these men, Pfizer’s public relations department became a public affairs division. Public relations was about image, about obtaining favourable publicity, giving information about product releases and so on. Public affairs was about influencing the public policy agenda and ultimately securing the right regulatory outcomes.

37. See Santoro, M.A., op. cit. 22, p.8.

Intellectual Property History

For most of their history, intellectual property rights were not seen as property rights, but rather as monopoly privileges or tools of censorship created by states for their own purposes.

The source of patents originally lay in the right of monarchs to grant exclusive trade privileges to chosen subjects. At first, this power was used with some restraint and most probably with the public good in mind. In 14th century England, for instance, “Letters of Protection” were issued to skilled foreign craftsmen to persuade them to come and help develop English industry. Protection against imports was part of the incentive being offered. Letters of protection became “letters patent” (the term simply means open letters). Over the next few centuries, letters patent proliferated so much that hardly any part of English commercial life was unaffected by them.

Over time, monarchs began to reward courtiers with patents not just for inventions, but also to give them the sole right to practise a particular trade, to supervise an industry like inns

and alehouses, or to avoid certain import or export restrictions. Queen Elizabeth I took the granting of these patents to new heights in the late 16th century. A parliamentary speech in 1601 revealed that currants, iron, powder, ashes, vinegar, brushes, pots and oil, along with many other everyday items, were the subject of patents.

When patents are easy to get and apply to anything and everything, prices go up. The monopolist is rarely an altruist. For everyone else, trying to get into business and doing business becomes very difficult. Over time, the ownership of patents becomes more concentrated as they are traded and bought up by the wealthy.

Protectionism

The proliferation of monopolies in Elizabethan England interfered in trade and commerce to such an extent that successive English parliaments worked to eliminate them. In the 19th century, states realised that patent systems could be used to cloak protectionist

strategies and thus attacked the patent system on the grounds that its operation was contrary to free trade.

Today, this history of free trade opposition to intellectual property rights has been conveniently elided from debates. Monopoly rights, the exercise of which national parliaments struggled over the centuries to bring under democratic control, have been slipped into a world trade agreement. A TRIPS agreement that would have been rejected in another era as a global charter for monopolists has come to be thought of as consistent with free trade and competition. Indeed, an important rhetorical victory that TRIPS represents is the belief that the *absence* of intellectual property protection is an impediment to free trade. In the corridors of power that matter to the global economy, the World Trade Organisation and the International Monetary Fund (IMF), bureaucrats now participate in a trade “think speak” in which global monopoly privileges are entirely consistent with free trade.

under the name of Barry MacTaggart, then Chair and President of Pfizer International, its central charge was that US knowledge and inventions were being stolen. The culprits were other governments: Brazil, Canada, Mexico, India, Taiwan, South Korea, Italy and Spain. These governments, it was argued, designed laws allowing for US inventions to be “legally” taken.³⁸

Although the term “piracy” has rarely been used with much legal precision, it is associated in the popular mind with a history of desperate outlawry and savagery and has thus proved to be a particularly effective rhetorical tool. During the 1970s, 1980s and 1990s, US corporations accused most Asian countries of “intellectual property piracy”.³⁹ The strategy proved very effective because it drew on prejudices and anxieties within the US about the future economic security of the US in a world where successful Asian “tiger” economies were on the prowl.⁴⁰

Pfizer also began to extend its “tentacles”, to quote one company interviewee, by contributing financially to influential conservative US think tanks like the American Enterprise Institute, the Hoover Institution and the Heritage Foundation, to which President Ronald Reagan was known to listen, and even think tanks closer to the centre or even slightly to the left of American politics, such as the Brookings Institution. All of these groups develop ideas and theories as part of the public policy process. As Pfizer funded specific projects or supported conferences, economic reports from these groups turned the intellectual property story from one of moral transgression into the loss of markets and profit.

Most of the think tanks were committed to principles of free trade, but intellectual property has a protectionist history and monopoly nature (*see* Box, p.8). Pfizer thus had to relocate the intellectual property issue within a frame of fundamental liberal values – the individual right of property ownership; the right to a reward for labour; fairness – and appeals to pride in US high-technology achievements and US national interest. By the 1980s, high technology had become a symbol of the nation’s economic and industrial strength.

Pfizer and others portrayed US companies as embattled innovators facing an uncertain future in a world where rapacious Southern countries were ignoring the fundamental rules of business fair play. Its message was that governments of other countries were stealing from the minds of individual US inventors by denying them patent protection. By the time evidence came out that pharmaceutical companies were stealing from the collective knowledge of indigenous peoples – the collective mind of the non-Western Other – the ink had long dried on TRIPS. Pfizer had managed to create its own turf on the intellectual property issue, and as a Pfizer employee pointed out, that is fundamental to winning a campaign on any major issue.

Getting US Government On Board

Within US government circles, intellectual property interests soon found a receptive audience for their message that stronger property rights were desperately needed to protect American ideas and industry from thievery.

After the Second World War, the US had clearly emerged as the world’s most powerful economy. The US dollar became the currency of world trade. The new global financial institutions, the International Monetary Fund (IMF) and the World Bank, created at an international

Corporations could not simply snap their fingers to change patent rules.

They needed to convince business leaders, policy analysts and governments to make intellectual property rights part of the trade regime.

38. The op-ed piece also criticised the World Intellectual Property Organisation (WIPO) for “trying to grab high technology inventions for underdeveloped countries” and contemplating treaty revisions that would “confer international legitimacy on the abrogation of patents”. The support the op-ed piece garnered suggested to Pfizer that moving standard-setting power over intellectual property away from WIPO would have advocates in US policy quarters.

39. Whether piracy of any kind has taken place depends on an important legal principle that goes to the heart of intellectual property rights. The principle of territoriality simply says that intellectual property rights operate in the territory of the sovereign that created them in the first place. US intellectual property rights simply did not apply in other countries. In any case, it was far from clear that what Asian countries were doing was piracy, since intellectual property rights were for most of their history not seen as property rights, but rather as monopoly privileges created by states for their own purposes (*see* Box, p.8).

40. More recently, and somewhat ironically, some of these same US corporations have been on the receiving end of this strategy, as indigenous people have accused them of bio-piracy: the theft of traditional medicines and knowledge.

Better intellectual property protection, it was promised, would improve the US's trade position.

meeting in Bretton Woods in New Hampshire in 1944, had been located in Washington, DC. The US had become a credit provider to Europe and Japan. US banks progressively expanded into overseas markets creating the era of multinational banking. US companies dominated the lists of the world's largest industrial enterprises. In each of the years 1962, 1967, 1972 and 1978, only two non-US companies appeared on the list of the top ten largest industrial enterprises in the world.⁴¹

But possession of the world's largest companies and the world's biggest domestic market did not bring peace of mind. In the 1970s and early 1980s, a policy discourse developed of a United States in decline. Loss of competitiveness became an issue. Other data began to take on ominous significance. The massive share of world trade enjoyed by Northern countries in the 1960s began to lessen in the 1970s. Countries like India and Brazil began to show leadership potential, albeit of a regional kind. New economic competitors emerged. The public images the US constructed of these rivals were neither friendly nor comforting. "The gang of four", "the Asian tigers", "the dragon economies" could hardly do other than make the US uneasy about its share of world markets.

Japanese manufacturing triumphs began to be seen as a portent of US deindustrialisation. Public myths began to be constructed in the US about this success. American ideas, American know-how were being stolen by the Japanese, it was widely believed.⁴² The trade surplus Japan enjoyed with the US gave protectionism within the US a strong political foothold.⁴³ "Japan bashing", even crude xenophobia, occurred, as when the mass media reported burly American auto workers smashing a Japanese car to pieces.

Worsening trade deficits and loss of jobs in manufacturing made it easier to believe in the possibility that the US might, sooner rather than later, become a felled economic giant. The trade deficit had gone from US\$31 billion in 1980 to US\$170 billion in 1987.⁴⁴ During this time, the manufacturing trade balance had swung from a US\$27 billion surplus to a US\$138 billion deficit. The US had financed the deficit by borrowing from foreign creditors (such as Japan), thereby becoming the world's largest debtor nation. Somewhere between two and four million Americans had lost jobs in this seven-year period.⁴⁵

In a climate of insecurity about US political and economic future, a nationalistic story that better intellectual property protection meant more jobs for Americans and would restore the US to a positive trade balance with the world made compelling listening. In fact, US economic hegemony was not really under threat. In 1978, there was one Japanese company, Toyota, in the top 20 companies in the world – and it was 20th. But the truth of the nationalistic story hardly mattered.

Power Through Committees

It is one thing to have the idea of linking investment and intellectual property to the trade regime and entirely another to turn this idea into a negotiating objective and then an international legal reality. Despite expressions of support from government circles, the US corporate elite could not simply demand that the US government globalise intellectual property rules to allow them to form new and better global knowledge cartels. They had to persuade policymakers that intellectual property enforcement was the single most important issue facing the US economy,

41. Royal Dutch Shell and Unilever for each of those years except 1978 when National Iranian Oil replaced Unilever. See Dunning, J.H., and Pearce, R.D., op. cit. 17, p.148.

42. In many cases, however, the Japanese had acquired US technology legitimately. Transistor technology, for example, had been patented by AT&T, but under US antitrust law (intended to prevent cartels and monopolies), the company was required to issue patent licences to qualified manufacturers. The Japanese company, Tokyo Tsushin Kogyo Kabushiki Kasha (eventually to be known to the world as Sony), was granted a licence by AT&T. (Barnet, R. J. and Cavanagh, J., *Global Dreams*, Simon and Schuster, New York, 1994, pp.46–47).

43. At the same time, Japan's trade surplus helped the US economy by helping to keep down world interest rates, as well as enabling the Japanese to become lenders on world capital markets to countries like the US which were becoming net borrowers of capital. See Corden, W.M., "The Revival of Protectionism in Developed Countries", in Salvatore, D., (ed.), *The New Protectionist Threat To World Welfare*, North-Holland, New York, 1987, pp.45, 61–64.

44. See Senator Max Baucus, "A New Trade Strategy: The Case For Bilateral Agreements", *Cornell International Law Journal*, Vol .22, 1989, p.1, fn.4.

45. Ibid, p.1.

so important that the US government would stake the outcome of the entire Uruguay Round of Multilateral Trade Negotiations⁴⁶ on a deal for intellectual property. They had to persuade them to use US trade power against not only Asian countries that were labelled pirates, but also European states like Italy, Spain, Greece and Portugal. Most nations in one way or another were transgressors when it came to US standards of intellectual property.

Getting policymakers to go this far wasn't going to be easy. There were lots of other issues clamouring for attention during the 1970s and early 1980s: the 1972 breakdown of the Bretton Woods system of fixed exchange rates and the consequent problems of international monetary adjustment, OPEC and the oil crisis, the debt crisis and possible collapse of the world's banking system, to mention a few.

Real power in the modern world, however, comes from sitting on committees that filter out other interested decision-makers or parties from key decisions. In such committees, power becomes concentrated in the hands of the few. Its exercise is democratically legitimated by the symbolic links the committee retains with the many that are excluded from the real decision-making.

The Advisory Committee on Trade Negotiations (ACTN) was just such a committee. It had been created in 1974 by Congress under US trade law as part of a private sector advisory committee system, the purpose of which was to "ensure that US trade policy and trade negotiation objectives adequately reflect US commercial and economic interests".⁴⁷ ACTN existed at the apex of this system. Under its charter, its membership of no more than 45 had to be drawn from a range of sectors including labour, industry, agriculture, small business, service industries, retailers and consumer interests.⁴⁸ During the 1980s, representatives from the most senior levels of big business within the US were appointed by the President to serve on the committee.

The committee was a purely advisory one but extremely influential because it had direct access to the US Trade Representative. Its duty was to advise him or her on US trade policy and negotiating objectives in the light of national interests. It was a direct line of communication from US business to the bureaucratic centre of trade policy. Out of this business crucible came the trade-based strategy on intellectual property. As the Uruguay Round unfolded, ACTN became one of the key portals of influence in developing the US international stance on intellectual property.

Pfizer's Chair and CEO Edmund Pratt, with the assistance of other senior executives within Pfizer, had begun to put himself forward within business circles as someone who could develop US business thinking about trade and economic policy. He was appointed a member of ACTN in 1979 by President Jimmy Carter, and became its chair in 1981. As a pharmaceutical company, Pfizer understood better than most the importance of public policy to the operations of business. The drugs that it sold in the US depended on regulatory approval from the Food and Drug Administration; its growth depended on keeping anti-trust enforcement against its monopolistic practices at bay. The sale of Pfizer's products, both in the US and internationally, was thus intimately linked to government decisions and government regulation. Taking a leadership role in influencing that regulation was something to which the company was culturally attuned by virtue of the products it sold.

With Pratt at the helm, ACTN began to develop a sweeping trade and investment agenda.⁴⁹ It established a task force on intellectual property, headed by John Opel, then chair of IBM and a key member of

Real power in the modern world comes from sitting on committees that exclude others from decision-making.

46. The Uruguay Round of Multilateral Trade Negotiations (1986-1994) was the seventh (and most comprehensive) major renegotiation session of the 1947 General Agreement on Tariffs and Trade (GATT). Previous sessions are known as the Conference of Annecy, France (1949); the Conference of Torquay, UK (1950); the Conference of Geneva (1956); the Dillon Round (1962); the Kennedy Round (1964-67); and the Tokyo Round (1973-77).

47. See Private Sector Advisory Committee System, USTR, 1994 Annual Report, www.ustr.gov/reports.

48. See Charter of the Advisory Committee for Trade Policy and Negotiations.

49. During Pratt's six years of chairmanship, ACTN worked closely with William E. Brock III, the USTR from 1981 to 1985, and Clayton K. Yeutter, the USTR from 1985 to 1989, to shape the services, investment and intellectual property trade agenda of the US.

50. Unpublished, but dated 1 September 1985.
51. The recommendations of ACTN are contained in some unpublished papers: “Summary of the Recommendations of the Advisory Committee on Trade Negotiations”, Task Force on Intellectual Property’, undated, 11 pages; “Summary of the Phase II: Recommendations of the Task Force on Intellectual Property to the Advisory Committee for Trade Negotiations”, March 1986, 8 pages.
52. In Phase 1 of its work programme, the Task Force also recommended that:
- work on a counterfeiting code continue;
 - a broader intellectual property code with minimum standards and dispute settlement procedures be developed;
 - the hostility of certain Southern countries be taken into account and consideration given to negotiations of an intellectual property code among like-minded countries;
 - a rapprochement be sought between the WIPO and GATT secretariats;
 - the USTR establish a separate policy committee on intellectual property.
- In March 1986, the Task Force’s Phase 2 recommended:
- an overall US intellectual property strategy endorsed by the President and cabinet;
 - a massive consensus-building exercise, especially with the US’s major trading partners, but expanded to include Southern countries;
 - a massive capacity-building exercise funded by both government and the private sector to bring Southern country officials and members of local legal professions into the Northern intellectual property community;
 - the use not only of Section 301 and the Generalised System of Preferences to link access to the US market to improved intellectual property protection but also of US votes at the IMF and the World Bank, for instance, when countries with poor intellectual property requested access to funds;
 - becoming a member of the Berne Convention to give the US a stronger voice in WIPO;
 - continued support for WIPO to take advantage of its technical expertise to develop intellectual property regimes and its funding for technical assistance programmes that could spread the institution of intellectual property to developing countries.
53. The 1984 Act amended the Trade Act 1974.
54. Title V of the Trade Act 1974.
55. Ironically, the idea for a Generalised System of Preferences had been developed by the UN Conference on Trade and Development (UNCTAD) a few decades earlier. As one of its Indian architects explained in a 1995 interview with the authors, it was an attempt to create real bonds of trade between Northern and Southern countries.
56. See *BNA’s Patent, Trademark & Copyright Journal*, Vol. 27, 9 February 1984, p.358.
57. Sell, S.K., “Intellectual Property Protection and Antitrust in the Developing World: Crisis, Coercion, and Choice”, *International Organization*, Vol.49, 1995, pp.315, 322.
58. 1993 interview with the authors.

ACTN. Jacques Gorlin also became a consultant to ACTN. Gorlin’s paper, “A Trade-Based Approach for the International Copyright Protection for Computer Software”,⁵⁰ which was produced for IBM, had synthesised the key strategic ideas on bringing intellectual property into the GATT. Over time, the recommendations of the task force became the basis of US strategy and action on intellectual property.⁵¹ The task force developed a trade-based intellectual property strategy consisting of three parts:

- **Multilateralism.** To develop in the context of the upcoming GATT round an intellectual property code containing good standards of intellectual property protection, which was binding on all parties to the negotiations and was tied to a dispute settlement mechanism.
- **Bilateralism.** To begin bilateral negotiations with countries that did not protect US intellectual property sufficiently with a view to obtaining agreements from those countries for better protection.
- **Unilateralism.** If necessary, to make use of the fact that many “pirate” countries traded in the US market to threaten or actually impose trade sanctions on those countries if they did not enact and enforce higher standards of intellectual property protection.⁵²

Obtaining a strong multilateral agreement on intellectual property was a long-term strategy, while the use of bilateral negotiations and unilateral trade tools could provide an interim strategy for improving intellectual property protection abroad. The US negotiating position had to become, “no intellectual property, no trade round” – and at the bilateral level, the US had to be prepared to wield the stick of trade sanctions.

The Bilaterals: Carrots and Sticks

During the 1980s, intellectual property was slowly but surely placed at the heart of the legislative provisions that guarded US commerce. Just two years after Pfizer’s “Stealing from the Mind” op-ed article, the link between trade and intellectual property found its way into the US Trade and Tariff Act of 1984.⁵³ Beneath the legal language, two simple approaches were at work to globalise the standards of intellectual property that certain US industries wanted: first, the carrot and the stick, and second, the big stick.

A system known as the Generalised System of Preferences (GSP) allowed the US to develop the carrot and stick approach.⁵⁴ Under this system, designated countries were allowed to export eligible products into the US duty-free.⁵⁵ When the US GSP programme began in 1976, authorised by the US Trade Act, protection of intellectual property was not a criterion of eligibility. By 1984, roughly 3,000 products from 140 Southern countries and territories were part of the scheme.⁵⁶ These countries were more dependent on being able to trade in the US than the US was on maintaining trade relations with them.⁵⁷

The GSP programme had to be renewed periodically by Congress. In 1984, it was due to expire in one year. The intellectual property lobby noticed that, in the words of one copyright lobbyist, “major pirates in SE Asia were dependent on GSP”.⁵⁸ Argentina, Brazil, Egypt, India, Indonesia, Singapore, South Korea, the Philippines, Taiwan, Hong Kong and Thailand were among those on GSP benefits. After lobbying by

business organisations such as the Recording Industry Association of America, the Association of American Publishers and the International Anticounterfeiting Coalition, the 1984 Trade and Tariff Act brought intellectual property into the GSP programme. The US President could now look at a country's conduct on intellectual property in deciding whether it would receive or continue to receive GSP benefits.

The whole point of the GSP system was to improve Southern countries' access to the closed and subsidised agricultural markets of the North. In November 1985, some of their representatives suggested that the US was using its GSP system in a way that was "quite alien to the spirit and purpose" of the system.⁵⁹ But at the same time, at least some of them were forced to begin thinking about a change in course on the intellectual property issue.

Ironically, the intellectual property lobby had to push hard for the renewal of the GSP programme – more old-fashioned protectionist elements wanted it removed.⁶⁰ But if old protectionism was about keeping your rival's goods out of your domestic market, new protectionism in the knowledge economy was about keeping your rival out of world markets by securing a monopoly privilege over an intangible asset, and persuading your rival to recognise your "right" to the asset. Opponents of the GSP also argued that it benefited newly industrialising economies like Singapore most although they needed it least. But these were precisely the countries the intellectual property lobby most wanted to influence.⁶¹

Singapore was given a favourable GSP package in 1987 because of its good efforts in copyright especially, while Mexico (1987), Thailand (1989) and India (1992) came in for GSP losses (US\$50 million, US\$165 million and US\$80 million respectively) because they failed to meet certain standards of intellectual property protection.

The Bilaterals: Big Stick Section 301

The big stick that the US gave itself was to amend Section 301 of the Trade Act in 1984 to give the US President the authority to withdraw trade benefits from a country or impose duties on its goods if it failed to provide "adequate and effective" protection for US intellectual property. The US Trade Representative (USTR) was also given the power to "self-initiate" a 301 action against a foreign country. Moreover, any "interested person" could file a petition asking the USTR to launch an investigation under 301.⁶² (Petitions could also be filed to deny GSP benefits to a country.)

In 1988, "Special 301" was added to the existing procedures,⁶³ requiring the USTR to identify within six to nine months those countries that denied "adequate and effective protection" of intellectual property rights or that denied "fair and equitable market access" to US intellectual property owners. Those countries were then put in one of three categories: watch list, priority watch list, and priority foreign country. To put a country on the watch list was to send it a message about its unsatisfactory intellectual property practices. If it did nothing to shut down its piracy, it would be upgraded to the priority watch list. The USTR typically formed a set of precise objectives for the relevant country to work towards. Saudi Arabia, for example, was in 1993 shifted from the watch list onto the priority watch list because it was not a member of the Berne Convention dealing with copyright and had a poorly drafted and badly enforced copyright law. Countries with the

59. See Report of Committee on Trade and Development (L/5913) in *Basic Instruments and Selected Documents, General Agreement on Tariffs and Trade*, 32nd Supplement (1984–1985), pp.21, 26.

60. 1993 interview with the authors.

61. The US and EC had little interest in influencing the poorest countries. As one EC official said in a 1993 interview with the authors, "With Bangladesh, you have nothing to win and nothing to lose. They have no capacity to copy with top quality. So you disregard them in the debate."

If a country enacted domestic intellectual property laws recognising the rights of US intellectual property owners, a US company had three options:

1. To allow foreign competitors to use its intellectual property under licence, earning the company a royalty income.

2. To exploit its intellectual property in the foreign market itself, earning export dollars for the US.

3. To relocate its production facilities to the relevant foreign market because of more favourable labour and tax conditions, knowing that its intellectual property could not be purloined by local rivals. It could then export goods with an intellectual property content back into the US market. This would do little for US jobs or US tax revenues because the multinationals could always play complex transfer pricing games with their income. Because the value of intellectual property, like copyright in new software, was hard to quantify, it could be sold into a tax haven at a low price and sold on at a high price, thus shifting taxable profits to the haven. The intangible nature of intellectual property makes it difficult for tax authorities to prove that a valuation is wrong. Global intellectual property became a boon to global tax planners. In extolling the virtues of globalised intellectual property protection for the US economy, however, the intellectual property lobby drew little attention to this third option.

62. See 19 USC 2412. "Special 301" was an amendment made to Section 182 of the Trade Act of 1974 by the Omnibus Trade and Competitiveness Act of 1988 and codified as 19 USC. There were further amendments under the Uruguay Round Agreements Act of 1994.

63. 19 USC Sec. 2242.

Guesstimating Losses to "Piracy"

The International Intellectual Property Alliance (IIPA), established in 1984 to represent US copyright industries, was a pivotal actor in the bilateral strategy developed for the globalisation of intellectual property rights. It was then, and probably remains, the single most powerful copyright lobbying organization in the world.

It represented some 1,500 companies and "the leading edge of the world's high-technology, entertainment and publishing industries" through its eight member trade associations:

- the Association of American Publishers;
- the American Film Marketing Association;
- Business Software Alliance;
- the Computer and Business Equipment Manufacturers Association;
- the Information Technology Association of America;
- the Motion Picture Association of America;
- the National Music Publishers' Association; and
- the Recording Industry Association of America.

In commenting on the more limited success of the US trade union movement in linking labour standards to trade and the total failure of the environment movement to secure a "green 301", one IIPA

leader said: "The problem with the greens is they're not as united as we are."

Once intellectual property protection had been incorporated into the US trade system, IIPA worked with the US Trade Representative to supply evidence that countries had egregious policies and practices preventing them from protecting US intellectual property and to attempt to work out the impact of their laws and practices on US trade.

The USTR came to rely heavily on figures on piracy provided by US companies, business organizations and intellectual property lobbyists like the IIPA. A February 1993 IIPA press release stated, for instance, that trade losses in 1992 in 28 pirate countries identified by the IIPA exceeded US\$4.6 billion. The IIPA delivered economic analysis, such as its 1985 *Piracy of US Copyrighted Works in Ten Selected Countries*, to make its political argument that the US should act against intellectual property pirates more persuasive. Economic data was also used to justify USTR threats if problems were not fixed.

But how did the IIPA arrive at figures of US trade losses in 1992 like US\$47 million in Bulgaria and US\$490 million in Russia?

The companies represented through the IIPA had offices all over the world. Each year, the IIPA would put out the word among its members – "where are you having problems?" – and companies would send in their estimates of loss of corporate profits due to piracy.

The incentives to be generous

in their estimates were strong. A small estimate implied that a company's products were not worth pirating, and that the USTR would put the pirate country far down the queue of its priorities. Company employees in Southern country markets also found it useful to blame piracy for slow progress on sales. And who was going to contradict the figures being put forward?

Estimates from far-flung corporate offices were written into analyses and sent on to the USTR, Congress, other relevant federal government departments, the media and consulting economists. They became part of officialdom, making their way into government reports. A process of constant recycling followed and after a while these estimates came to be seen as hard facts – and the estimates grew ever larger. By 1985, Jacques Gorlin was able to state in his seminal paper written for IBM, "A Trade-based Approach for the International Copyright Protection for Computer Software", that:

"Foreign pirating reduces the revenues of the US software industry by several billion dollars. One personal computer manufacturer has commented that it has lost 80 per cent of its potential revenue in Southeast Asia to competitors who have illegally copied its intellectual and industrial property."

worst records on intellectual property were tagged "priority foreign countries", which led to a US investigation of their laws and practices on intellectual property. These countries on trade's death row had, in the words of the legislation, "the most onerous or egregious acts, policies, or practices" when it came to intellectual property. Countries in this category lived with the possibility of trade retaliation by the US.

Special 301 was in effect a public law devoted to the service of private corporate interests. It was the brainchild of just a small group of people and business associations.⁶⁴ Its purpose was to bring *all* the United States' trading partners up to a standard of intellectual property protection satisfactory to the US. A 1989 USTR *Fact Sheet* stated that "no foreign country currently meets every standard for adequate and effective intellectual property protection".⁶⁵ Japanese and European companies rather than Brazilian and Indian ones offered US companies the most serious competition.⁶⁶

Global Surveillance

Between 1985 and 1994 (the year in which TRIPS was signed as part of the Final Act of the Uruguay Round), the USTR brought Section 301 actions dealing with intellectual property against Brazil (1985, 1987 and 1993), Korea (1985), Argentina (1988), Thailand (1990 and 1991), India (1991), China (1991 and 1994) and Taiwan (1992).⁶⁷ Given that by the end of 1994, 95 Section 301 actions had been initiated, the launching of just 11 Section 301 actions related to intellectual property against only seven countries would seem to be a modest use of coercive economic power. Further, in only one of those cases (Brazil in 1987) were punitive tariff measures actually imposed.

But Section 301 was much more about barking than about biting. Aggression brings costs. Trade thuggery rips apart the webs of dialogue on which trade negotiators rely to manage their long-term negotiating objectives. Closing deals, the mark of every good negotiator, becomes much more difficult. Moreover, international trade relations on intellectual property were part of a larger set of international trade issues that were in turn part of an even broader set of international economic, foreign and defence issues. Because intellectual property was nested in a much larger game of complex interdependency, the USTR could not punish every single transgression of US intellectual property whenever the private sector demanded it.

In any case, because the aim of the 301 process was to prod developing countries into accepting intellectual property rules that would allow their economies to be integrated into a global knowledge economy being led by US entrepreneurs, it was more important to give countries the feeling that their behaviour on intellectual property was under constant surveillance than to punish them. This drew them into an atmosphere of threat. Rather than risk a full-blown dispute, countries would attempt to appease the USTR. Every year, as the deadline for the USTR's Special 301 review approached, countries would rush through some amendment to their intellectual property law, perhaps put a few more pirates in jail, increase penalties or take some other action to demonstrate their commitment to respecting US intellectual property.

Sovereign states, no matter how big or small, are now caught up in a global surveillance network comprising US companies, the American Chamber of Commerce, trade associations and US embassies. All gather and report on the minutiae of social and legal practices that relate to US intellectual property. Corporate America picks up the tab for Section 301 by providing the global surveillance network, the numbers for the estimates on piracy (*see* Box, p.14), and much of the evaluation and analysis. The US state provides the legitimacy and the bureaucracy that negotiates, threatens and, if necessary, enforces.

An Eye to Multilateral Action

The bilateral 301 actions taken in the 1980s and early 1990s, however, were part of a coordinated strategy that had a multilateral dimension. The US:

“targeted its Section 301 action on forms of conduct that it was seeking to control through the Uruguay Round, such as disrespect for US intellectual property laws and restrictions on US foreign investment.”⁶⁸

Korea, for instance, was making strides in the manufacture of semi-

***Old protectionism
was about keeping
your rival's goods
out of your
domestic market.***

***New protectionism
was about keeping
your rival out of
world markets
by securing
monopoly rights
over intangibles.***

64. Linking intellectual property to trade had been the work of a few key individuals. Pfizer, led by Edmund Pratt, had played a central role in pushing this linkage. Under Pratt's leadership, the Advisory Committee on Trade Negotiations (ACTN) had argued that the US government should develop an integrated multilateral and bilateral intellectual property strategy based on trade linkages. Jacques Gorlin, adviser to ACTN, headed the Intellectual Property Committee, the key lobbying body on the industrial side of intellectual property (*see* p. 17 and footnote 81). Eric Smith, the Executive Director of the International Intellectual Property Alliance (*see* Box, p.14), had helped to put the relevant language into the Generalised System of Preferences programme. Smith and another copyright lawyer, John Baumgarten, had a significant influence on the framing of the language of Section 301 (1993 interview with the authors).

65. The Fact Sheet is reproduced in *BNA's Patent, Trademark & Copyright Journal*, Vol 38, 1 June 1989, pp.131-134.

66. Indeed, Japan was the first to feel the heat of the 1984 amendment to 301. In 1984, US trade officials pressured Japan to drop its support for special laws for software protection and use copyright law instead. Japan complied. Europe was needed as an ally in the multilateral game, however.

67. Details of these cases are available from the table of initiated Section 301 cases on the USTR's website at www.ustr.gov.

68. Braithwaite, J. and Drahos, P., *op. cit.* 34, p.180.

69. The USTR self-initiated a 301 action on 4 November 1985 against Korea for its lack of effective protection for US intellectual property rights. This action produced the first significant bilateral agreement on intellectual property, signed on 28 August 1986. The agreement was simply a deal in which US companies wanted money for their patents, protection for their trade marks, the pirates jailed and Koreans to open their markets, culture and wallets to US copyright and patent products. A former US negotiator said that it “became the blueprint for other agreements plus the GATT” (1994 interview with the authors). The USTR Clayton Yeutter described it as sending a message to GATT members and the rest of the world (cited in *BNA’s Patent, Trademark & Copyright Journal*, 30 October 1986, Vol. 32, p.736).

Patents soon became a “number one priority” for companies like Samsung. They saw that building up a portfolio of thousands of patents, many of them of doubtful validity, and then springing them on competitors was going to be an important route to profits in the future. Korean officials now describe intellectual property as “an issue of survival within the world system” (1995 interview with the authors). It is the price that countries have to pay, largely to US companies, to enter the world trading system.

70. 1994 interview with the authors.

71. US retaliation against Brazil also sent a message about the level of the US private sector’s commitment to the intellectual property cause. US multinationals, among others, had a strong presence in the Brazilian economy in the 1980s. By imposing trade sanctions on a wide range of Brazilian goods, they risked hitting their own Brazilian-made goods. The internationalised nature of production thus set some limits on the use of 301: “When we retaliate, we will find we have no clothes” (1994 interview with the authors). In the case of Brazil, however, the stakes were so high that US business was prepared to bear the possible costs.

72. See, for example, Hudec, R. E., “Dispute Settlement”, in Schott, J. J. (ed.), *Completing the Uruguay Round*, Institute for International Economics, Washington, DC, 1990, pp.180, 198. On the action against Brazil, trade expert John H Jackson observed that the “United States action is clearly a violation of the GATT”. See “Remarks of Professor John J Jackson” in “Symposium: Trade-Related Aspects of Intellectual Property” in *Vanderbilt Journal of Transnational Law*, 1989, Vol. 22, pp.343, 346.

73. But as an IBM lawyer pointed out in a 1994 interview with the authors, the US could always block GATT dispute panels on the use of 301 “while the tariffs did the job for you”.

74. In 1991, India also received a 301 action on intellectual property. But as one Indian negotiator explained, India hardly cared. No Indian politician could afford to be seen as part of a bilateral deal in which the Indian market was handed over to a US pharmaceutical. India had a large domestic economy and so placed less weight on its trade relationship with the US than did Brazil. It was the multilateral game that brought the Indian tiger down.

conductor chips and showing every sign that its markets would remain beyond the reach of US knowledge companies. Brazil had attempted to turn the UN into a forum to re-examine critically the patent system. India had for 30 years led developing country resistance to Western business initiatives to ratchet up standards on intellectual property protection. All three became the subject of 301 investigations.⁶⁹

The 301 action against Brazil in 1987 illustrates how important US bilateralism was to the multilateral strategy. Brazil had chosen not to have patent protection for pharmaceutical products to keep their prices as low as possible. The US feared that Brazil might team up with India in the GATT negotiations to lead a developing country bloc against the patenting of pharmaceuticals. But if Brazil could be pressured bilaterally into adopting US-style patent laws on pharmaceuticals, then they would have little reason to dig in its heels at the subsequent GATT negotiations. They would only be agreeing multilaterally to patent standards to which they had already agreed bilaterally. As one former US trade negotiator put it: “Each bilateral brought that country much closer to [the] TRIPS Agreement, so accepting TRIPS was no big deal”.⁷⁰

In addition to depriving India of a potential ally in multilateral trading negotiations, breaking Brazilian resistance on pharmaceutical patents would send a message to other South American states, such as Argentina, Mexico and the Andean Pact countries, which had all decided not to protect pharmaceutical invention or to offer only weak protection. When, on 20 October 1988, the US President imposed US\$39 million of tariff increases on Brazilian paper products, non-benzoid drugs and consumer electronic items being imported into the US market, Brazil was faced with a cost-benefit calculation. The cost of not complying with US wishes was roughly equal to the death of their markets in these sectors. At that time, almost one-quarter of Brazilian trade was with the US. The gain of complying with US wishes was the removal of tariffs, the recovery of their markets and the end of further threats under the 301 process on this particular issue.⁷¹

Brazil did not cave in immediately. Cheap drugs were important to Brazilian people, particularly as the incidence of HIV/AIDS kept increasing. Brazil commenced a counter-action against the US, arguing that the use of 301 was illegal under GATT. Some US trade experts had reached a similar conclusion.⁷² Most 301 actions would have been illegal under GATT.⁷³ But the longer Brazil resisted, the less likely it would be to get its US markets back – and it faced a long, uphill battle trying to get justice in a trade system that was more about power than playing by the rules. In 1990, the Brazilians began to draft the necessary legislation, and the tariffs were lifted in July of that year. In 1996 a USTR *Fact Sheet* on Special 301 stated that Brazil had taken “the admirable step of enacting a modern patent law”.⁷⁴

Thus the amendments to the US Trade Act during the 1980s gave legal backing to a bilateral process of ratcheting up standards of intellectual property protection in other countries. The process had a chance of success only because other countries wanted to get their hands on the vast US market. As long as these countries calculated that the cost of complying with US demands on intellectual property was outweighed by the benefits of access to the US market, then the 301 process would bring positive results. But there was the danger of an over-reliance on bilateralism.⁷⁵ Lead “pirates” like Singapore, Hong Kong, Korea and Taiwan were developing fast and would in time lose their GSP status, or it would cease to matter to them.⁷⁶ Pushing multilaterally for higher standards of intellectual property protection had to be the long-term objective.

Yet the US continued to use the 301 system aggressively, even after the WTO dispute resolution system came into effect in 1995. Indeed, if anything, 301 has acquired a more machine-like efficiency in the post-TRIPS period as the WTO dispute resolution system has come to be treated as part of the US 301 process. And the US continues bilaterally to negotiate ever higher standards of intellectual property protection. Its 2000 Free Trade Agreement with Jordan, for example, contains higher standards of patent protection than are to be found in TRIPS. With all eyes upon the WTO and its current crisis of legitimacy,⁷⁷ the US has shifted the intellectual property game back to the bilaterals.

Persuading Europe and Japan

For the US, the key imperative of the Uruguay Round of Multilateral Trade Negotiations became a globally enforceable agreement on intellectual property. Industry leaders knew this would be a long process that would have to start with putting intellectual property on the agenda in the first place.

Leading Southern countries like India and Brazil, however, opposed US efforts to deepen GATT involvement with intellectual property issues. Nor was there much support from the other “Quad” countries (the US, the European Community, Japan and Canada) to merge intellectual property and trade. “In 1986 the USTR said: ‘I’m convinced on intellectual property, but when I go to Quad meetings, they are under no pressure from their industry. Can you get it?’”⁷⁸

Thus a massive US lobbying campaign got underway to build an international business coalition that would pressure other governments to negotiate an agreement on intellectual property in any forthcoming trade round. US business had to convince business organisations in other Quad countries to pressure their governments – and that meant first convincing European and Japanese business that it was in their interests for intellectual property to become a priority in the next trade round.

In March 1986, Pratt and Opel created the Intellectual Property Committee (IPC),⁷⁹ an *ad hoc* coalition of 13 major US corporations,⁸⁰ that described itself as “dedicated to the negotiation of a comprehensive agreement on intellectual property in the current GATT round of multilateral trade negotiations”.⁸¹ The IPC became another elite committee that helped make the TRIPS agreement a reality.⁸²

Europe was the IPC’s key target. Once Europe was on board, Japan was likely to follow, or at least not raise significant opposition. CEOs of US companies belonging to the IPC contacted their counterparts in Europe and Japan, urging them to put pressure on their governments to support the inclusion of intellectual property in the next trade round. Small but very senior and powerful business networks were activated. The IPC sent delegations to Europe in June 1986 and Japan in August of that year to persuade businesses there that they too had an interest in seeing the GATT become a vehicle of globally-enforceable intellectual property rights.

Previously, neither European and Japanese business had been giving intellectual property the same priority as US corporations. Perhaps what US CEOs were able to sell to their European and Japanese counterparts was a vision of a globally secure business future in which US corporations would be dominant because they would do best out of the globalisation of intellectual property standards, but in which European

75. See Gorlin, J.J., “A Trade-based Approach for the International Copyright Protection for Computer Software”, unpublished, 1 September 1985.

76. In January 1988, President Reagan announced that Taiwan, Hong Kong, South Korea and Singapore would go off GSP benefits in 1989. All four states, which had enacted intellectual property laws, expressed disappointment. The US still had the option, however, of pursuing a 301 action against them (*BNA’s Patent, Trademark & Copyright Journal*, 11 February 1988, Vol. 35, p.282).

77. The “legitimacy” of the WTO was first called into question publicly in December 1999 in Seattle, USA, when the third ministerial (the meeting of WTO member states that takes place every two years) collapsed because of protests outside the meeting room, Southern country resistance to Northern country proposals for new trade negotiations, and unresolved trade conflicts between the EU and the US, particularly in agriculture. Since then, several issues have deepened the “crisis”: the WTO’s lack of transparency, both internally and externally; the continued attempts of the WTO Secretariat and Northern countries to launch a new trade round despite opposition from many Southern country members; the WTO’s judicial, legislative and executive powers to force a country to change its laws and policies; and the dominance of trade and corporate interests over health and safety, environment, labour rights and national development. Many countries and public interest organisations are now calling for fundamental reform of the WTO process and the WTO rules.

Besides Jordan, the US has also negotiated bilateral deals with Chile, Singapore and Australia and is working on agreements with 13 other countries.

78. 1994 interview with the authors.

79. See Pratt, E., “Intellectual Property Rights and International Trade”, speech to US Council for International Business, available at www.pfizer.com/pfizerinc/policy/forum.

80. Bristol-Myers, DuPont, FMC Corporation, General Electric, General Motors, Hewlett-Packard, IBM, Johnson & Johnson, Merck, Monsanto, Pfizer, Rockwell International and Warner Communications.

81. IPC, “Accomplishments and Current Activities of the Intellectual Property Committee”, 14 June 1988.

The IPC’s consulting economist was Jacques Gorlin, whom IBM had engaged to write a paper outlining in detail how a trade-based approach might be developed for the copyright protection of computer software. Gorlin had a background in trade and had left his government position in autumn 1984 to write the strategy paper for IBM. In the mid-1980s, Gorlin became a consultant on the intellectual property issue to the Advisory Committee on Trade Negotiations (ACTN) that advised the US Trade Representative. Many of the strategies that Gorlin had written about in his paper for IBM found their way into the work programme of ACTN.

82. The US delegation that travelled to Punta del Este in Uruguay in September 1986 when the GATT negotiations began was accompanied by advisers from the IPC.

83. The European Commission is the central executive body of the European Union (and since 1967 of the European Community), comprising 20 commissioners nominated by member states and selected for a five-year term. The Commission negotiates on behalf of the EU in international trade negotiations and develops proposals for the initiation and content of such negotiations. Its mandate, however, comes from the Council of Ministers (comprising ministers from each EU member government), which establishes the objectives for trade negotiations and has the ultimate authority to implement their results.
84. By the time of the Uruguay Round, successive GATT negotiations had reduced tariffs on industrial production, but movement on other barriers to trade, such as national rules on technical standards, subsidies and customs valuation, had been much slower. States had begun to inch their way towards reducing these kinds of barriers by means of optional side codes. During the 1973-1979 Tokyo Round, the US had pushed for a counterfeiting code to deal with cross-border movements of counterfeit goods, but, despite some support from the EC, Japan and Canada, was not successful. Developing countries argued that WIPO, the specialist UN organisation for intellectual property, had primary jurisdiction over intellectual property matters, not GATT. This failure led key players in the private sector to think in much bigger terms about linking the trade and intellectual property regimes.
85. Article 113 of the 1957 Treaty of Rome (which established the European Community) provided for a special committee to advise the European Commission (see footnote 83) as part of the legal framework for trade policymaking. The 113 Committee comprises civil servants from the member states and helps member states influence European trade policy. Formally, it has a consultative role only, thus its deliberations are not published. In practice, the Commission tends to follow its advice because it reflects the wishes of national ministers who ultimately have the power to refuse to conclude any trade agreement negotiated by the Commission. The 1997 Treaty of Amsterdam amended Article 113 – and renumbered it 133; thus the Committee is now called the 133 Committee.
86. This was despite considerable differences between US, European and Japanese businesses. There was, for example, an open patent war between US and Japanese corporations (Warshofsky, F., *Patent Wars*, John Wiley, Chichester, 1994). US companies such as Texas Instruments were aggressively pursuing their patent rights against Japanese corporations in the courts. For years, US corporations had made plain their frustrations with the slowness of the Japanese patent office (leading the US to place Japan on its 301 watch list in 1989). Patents had become more strategically important to large Japanese companies, who had learnt patent “flooding” practices from US companies, albeit largely as a defensive measure. IBM dominated the computing industry while Microsoft’s march to dominance of the software industry was well under way. Fujitsu and Olivetti were simply not in the same league.

and Japanese corporations would remain powerful players and strategic partners. Such a future, US business may have argued, was preferable to one in which corporations from all these countries faced competition from increasingly efficient Southern manufacturers. It would make sense, after all, for the most powerful corporations from the world’s three strongest economies to collaborate on a project that would enable them to lock up the intangible assets of business in the new millennium and allow them to use those assets to set up production facilities wherever it suited them best. The international character of their production along with their need to capture new markets was the basis of the mutual interest needed for an alliance between them. In the final analysis, European and Japanese business probably reasoned that even if the fruits of cooperation with US business might not be shared equally, they would all benefit from fencing off the orchard for themselves. And there was also the enticing prospect for all multinationals that a GATT-based intellectual property regime would be enforceable against states.

Yet European Commission⁸³ bureaucrats were not at first keen on trying to harmonise intellectual property standards via the trade regime. They already had experience trying to harmonise intellectual property standards in Europe. Some states, such as Germany and the UK, had been keen on higher standards while others, such as Spain and Italy, were not so inclined. The Commission thus favoured pressing on with an initiative in the GATT on counterfeiting⁸⁴ (a lot of luxury European trade marks were the subject of counterfeiting) and making a general intellectual property code a much longer-term priority.

Moreover, business in Europe did not have so direct a role in the development of the trade agenda. European companies had access to the European Commission, but tended to travel through a route of procedural steps involving national business organisations, UNICE (the Union of Industrial and Employers’ Confederations of Europe) and the 113 Committee (the committee dealing with Community commercial policy matters⁸⁵).

In Japan, business and the Ministry of International Trade and Industry (MITI) persistently sought consensus with each other, making it difficult for Japanese business to start setting the agenda in intellectual property in the way US business did. Japanese corporations and MITI thus initially adopted a wait-and-see attitude towards the US initiative to include intellectual property in the trade negotiations. In addition, the case for global intellectual property standards was not clear to some sectors of Japanese industry.

Nonetheless, as a result of IPC’s consensus-building exercise carried out at the highest levels of senior corporate management, both European and Japanese industry did end up putting pressure on their governments to put intellectual property on the trade agenda. From 1986 onwards, US, European and Japanese companies set aside their differences and worked together to make an intellectual property code in the GATT a reality.⁸⁶

Getting Intellectual Property on the Negotiating Table

At the GATT Ministerial Conference in Punta del Este in Uruguay in September 1986, a group of key Southern countries, as expected, resisted the US proposal on intellectual property rights. They argued that

WIPO, not GATT, was the appropriate forum for the development of intellectual property standards, and that the trade dimensions of intellectual property, because of its close connections to technology transfer and development, fell squarely within the trade and development remit of the UN Conference on Trade and Development (UNCTAD).

Re-engineering Patent Law

In the early 1970s, genetic engineering appeared to offer some multinationals the possibility of an almost endless range of products in the global markets of agriculture, food, medicines, medical therapy and chemicals.

Genetic engineering breakthroughs provided companies with four broad patent targets:

- life forms (cells, micro-organisms, plants, animals);
- molecules and other elements of life (proteins, amino acids);
- instructions for the “assembly” of those molecules (DNA sequences); and
- methods and processes for the analysis and manipulation of DNA instructions and molecules.

But patenting these targets presented some hard problems. The targets were living, were discoveries rather than inventions, and scientists rarely knew how they could be used in products or processes.

Living?

In 1980, the US Supreme Court set a precedent in the *Diamond v Chakrabarty* case when it upheld a patent granted on a genetically engineered, oil-digesting bacterium. The fact that the bacterium was living did not prevent it being patented. Similar decisions had already been reached in 1969 by the Supreme Court of the Federal Republic of Germany and by the Australian Patent Office, but the US decision had a catalysing and global effect on biotech patenting simply because of the size of the US market.

Plants and animals also became the subjects of patents. Genetic engineering, argued patent applicants, resulted in new structures not previously found in nature. In 1987, the US PTO

announced that as a matter of patent policy “nonnaturally occurring nonhuman multicellular living organisms, including animals” were patentable subject matter. The following year, two Harvard professors were granted a patent on, among other things, a mouse into which activated human cancer genes had been inserted. It was DuPont that ended up with the exclusive rights, however, because it had sponsored the research.

Inventive?

The foundations of patent law had been laid in an era of mechanical invention, when drawing a distinction between invention and discovery was comparatively easy, for instance, in the case of a steam engine.

But as companies in the 19th and 20th centuries moved to patent chemical compounds, the invention/discovery distinction became fuzzier. Drawing on the metaphor of engineering, one could liken the synthesis of new compounds to invention in mechanical engineering. The use of the metaphor became more problematic in organic chemistry, however, where the chemist finds useful molecules that exist in nature. In the case of patent claims over DNA instructions and their corresponding proteins, the metaphor seems even weaker. It is hard to claim an entitlement to a fragment of DNA that has been in existence for thousands of years.

But chemical companies had been rehearsing technical arguments about the patentability of chemical inventions for almost one hundred years. They had argued that one could, through an act of isolation and purification, transform a naturally existing product into an invention. For the principle to apply, however, the courts ruled in 1958 that the invented product had to be different in kind from the

naturally existing product.

By the 1990s, this rider to the principle was being largely ignored by patentees and patent offices. Patent offices were granting patents on DNA codes “purified” by the removal of “redundant” segments of code, even though the purified DNA coded for the same protein as the naturally occurring sequence.

Useful?

Before an invention can be patented, it must be shown to be useful. Applied strictly in the case of DNA code, the requirement of utility might defeat many patent applications since the applicant often has little idea what the DNA segment’s function is and what product it might yield.

In 1966, the US Supreme Court stressed that the basic *quid pro quo* for the grant of the patent monopoly was an invention possessing a specific and defined benefit to the public. If an inventor could not specify a concrete and practical use for the invention and a patent was granted, the effect of the patent might be “to confer power to block off whole areas of scientific development”.

The Supreme Court’s approach, however, did not stick. During the 1990s, utility turned out not to be a hurdle in biotech filings with the US PTO. “You get utility if you can spell it,” said a US patent attorney in 1999. Patents were granted on DNA sequences, the practical utility of which the patent office, the inventor and the public had very little idea. Patents had become hunting licences, the very thing the Supreme Court had said 30 or so years earlier that they were not.

Intellectual Property Webs in Biotechnology

By the late 1980s, the use of the patent system in genetic engineering and molecular biology was well under way. For the pharmaceutical and chemical industries, genetic engineering had opened up a biological Eden filled with overwhelming temptation.

A patent could be used to claim a DNA sequence and the protein that it encoded. An obvious strategy was to patent as many DNA instructions as possible, even if a company could not be sure what they were instructions for or exactly what tasks the relevant proteins performed.

Of course, all firms, small and large, were making the same calculation, thus triggering a herd-like rush to the patent office to patent DNA sequences, genes and proteins of human, plant and animal origin.

In the US, human partial gene sequences were a favoured target. In 1991, the US PTO had applications covering 4,000 such sequences. By September 1998, the number of sequences being applied for had climbed to over 500,000. Of the 1,175 patents granted worldwide on human DNA sequences between 1981 and 1995, 76 per cent went to companies, mostly of US or Japanese origin.

From the point of view of the larger players in the industry, this rush to patent was at first alarming. Many small, start-up firms – and there were large numbers of them because of strong venture capital markets in the US – were filing patent applications. The US public sector was also heavily involved. In 1992, for example, the National Institutes of Health (NIH) had applied for patents on more than 2,750 partial gene sequences, and in 1993 for 2,421 of them. Universities had also joined the queues at the patent office.

Because a lot of the foundational work in genetic engineering was being done in the universities and other public sector organisations, most notably the NIH, there was no guarantee that the major breakthroughs in genetics and

genetic engineering – and therefore the major patents – would come out of corporate laboratories. This posed potentially serious problems for the chemical and pharmaceutical knowledge cartels. With so many players in the biotech field all holding patents, forming a cartel, let alone enforcing one, was almost impossible, especially if government entities were holding some of the vital patents.

So many new players could also mean that the ownership of the knowledge would be diffused among many, forcing all players into licensing, and only ordinary profit levels. If the US government owned such basic information, it might impose licensing conditions designed to encourage the emergence of competition or keep prices of the products based on the genes down in some other way.

The Pharmaceutical Manufacturers Association in 1992 thus argued that government ownership of gene sequences was undesirable, while the Industrial Biotechnology Association urged the NIH to put the sequences into the public domain.

But the patenting culture adopted by small firms and the university sector turned out in the end to be an advantage for multinationals. If a small biotech firm has patented a gene which looks promising in the drug field, it will have to enter into an alliance with a big pharmaceutical company because only such a company can bear the development, regulatory, distribution and marketing costs of any resulting drug.

For most small biotech firms and universities, the market for their patents is multinationals with interests in chemicals, pharmaceuticals and agriculture. The preferred destiny of many biotech start-ups is to be swallowed in one way or another by the very large fish. Patents act as a signal that they are worth swallowing. The incentives for multinationals to form strategic alliances with smaller players in the biotech industry or to take them over are strong since the internal R&D effort of even a multinational cannot be guaranteed to fill its product pipeline.

In short, the competitiveness of the market in biotech information

extends only to the discovery phase rather than the development and marketing phase. The tradeability of biotech information from the discovery phase means that much of it will eventually end up in the hands of the large players in the pharmaceutical, chemical and agricultural sectors.

Patent Challenges

The large chemical and pharmaceutical companies have been not only the biggest users of the patent system and the biggest proponents of the re-engineering of patent law; they have also been the only actors rich enough to absorb the cost of appeals against patent office decisions.

The complexity of chemical science combined with the complexity of patent law has resulted in companies applying for new patents on existing chemical inventions on which patents have expired. Eli Lilly tried this with its blockbuster drug, Prozac, for instance. Patent offices, with their more limited budgets, have not been in a position to keep up with litigation games or pick up instances of double patenting. Moreover, patent offices over time have undergone a cultural change aimed at keeping their multinational customers happy because, increasingly, patent offices have to fund their operations from patent fees.

Courts, too, have noted that companies have persisted in very expensive litigation once patents have expired, spurning out-of-court settlements. The deeper game here has been the pursuit of precedents. Sometimes courts have understood what game is being played, sometimes not.

Biotechnology reaches into all aspects of food, health, reproduction and environment. Unless they are challenged, the reach of multinational intellectual property webs over biotechnology will be much greater than it was over chemical technology. All states will find the gossamer threads of intangible property growing ever tighter around their economies and their people.

This blocking strategy had proved effective as long as there was no unified push by the US and Europe to include intellectual property in the trade talks. With the US-European consensus, however, the South's jurisdictional argument had no support, and Southern countries had no real fallback strategy.

Despite the long hours of negotiation both inside and outside the negotiating rooms, it was hard to find a form of words acceptable to all. Southern countries were primarily interested in getting better deals on agriculture and textiles in a future multilateral trade negotiation.⁸⁷ Nonetheless, three paragraphs under the heading "trade-related aspects of intellectual property rights, including trade in counterfeit goods" made it into the Ministerial Declaration on the Uruguay Round of 20 September 1986.⁸⁸

Although the IPC described this Declaration as "including a strong negotiating mandate for intellectual property in the new round", one is struck by how weak a mandate it seems. The first paragraph speaks of the negotiations clarifying GATT provisions and elaborating new rules and disciplines "as appropriate"; the second of developing a multilateral framework for the trade in counterfeit goods; and the third of the negotiations being without prejudice to complementary initiatives taken in WIPO and elsewhere. As lawyer and intellectual property expert Daniel Gervais observes, the entire edifice of TRIPS rests on the words "... and elaborate as appropriate new rules and disciplines".⁸⁹ Southern countries may have thought they were giving away very little with these words. But exact phrasing was irrelevant. In the culture of the trade negotiator, all that mattered was that a subject matter had been put on the dealing table. Any agreement on intellectual property would not be constrained by the words in the Ministerial Declaration, but rather shaped by negotiating context. Against the background of US 301 unilateralism, the issue of what had been decided in the Ministerial Declaration would quietly fade away. US officials had given assurances that Southern jurisdictional arguments against the GATT dealing with intellectual property would be revisited,⁹⁰ but this never happened in any serious way. One Southern country official concluded that Southern objections to GATT's dealing with intellectual property had been managed rather cleverly.

With the US and the European Commission becoming increasingly united on the need for some kind of code on intellectual property in the GATT, and with the US (and the EC to a certain extent⁹¹) turning up the heat bilaterally, developing countries were being given a choice between a bilateral or multilateral negotiation. They were outgunned in the former and not collectively prepared for the latter.

Persuasion and Principles

It was one thing to place intellectual property on the negotiating table and entirely another to achieve the outcome the Intellectual Property Committee (IPC) wanted – and the last thing the IPC wanted was a compromise. Left to their own devices, US and European negotiators might make too many concessions in order to achieve a final deal. Clearly, they would need some help. Pfizer's Edmund Pratt said:

"Having been successful in getting 'TRIPS' on the GATT agenda, government asked the US private sector to provide specific proposals for an agreement, and to form an international private sector consensus to achieve it . . . The US Trade Representative

Southern countries had a "choice" between bilateral or multilateral negotiations. They were outgunned in the first and not collectively prepared for the second.

87. Their resistance to the inclusion of intellectual property was broken by raising the costs of resistance and increasing the rewards of the agreement.

88. Document MIN.DEC of 20 September 1986, reprinted in Stewart, T.P., (ed.), *The GATT Uruguay Round: A Negotiating History (1986–1992)*, Vol. 3, Kluwer Law and Taxation Publishers, Deventer, Boston, 1993, pp.1–10.

89. Gervais, D., *The TRIPS Agreement: Drafting History And Analysis*, Sweet and Maxwell, London, 1998, p.11.

90. 1999 interview with the authors.

91. The European Community, despite its protestations about the use of 301 by the US, had in the same year (1984) as the US reformed its trade law to accommodate intellectual property and created its own version of 301 in the form of the "new commercial policy instrument" to protect the Community's intellectual property interests (*see* Council Regulation 2641/84). It moved against Indonesia and Thailand for record piracy, as well as suspending Korea's GSP privileges for failing to provide satisfactory intellectual property protection for European companies.

was impressed [with the IPC] and suggested that we increase our effectiveness internationally by joining forces with UNICE, the principal pan-European business group, and its counterpart in Japan, Keidanren.”⁹²

The IPC thus continued its systematic activation of international business networks. The two years following Punta del Este in 1986 were critical years of coalition building. Groups of European and Japanese businessmen gathered to meet with IPC delegates in cities they all knew: Brussels (November 1986, May 1988), New York (March 1987) and Tokyo (January 1988). The message was that international business had to provide states with leadership on the intellectual property issue in the Uruguay Round negotiations. This message appealed to a common identity shared by some of the larger US, European and Japanese corporations, that of genuinely global, high-technology-based companies with core intangible assets, global brands and distribution networks to protect. Working on and reinforcing this common identity was important to the IPC. Ultimately, it wanted to present states with a model GATT intellectual property agreement in the name of the international business community. It knew that opposing a model bearing the approval of international business would be hard for any state.

The IPC realised early on that the Uruguay Round of negotiations on intellectual property would have to be a contest of fundamental principles, principles that did not necessarily square with existing laws. No trade negotiation over intellectual property could be conducted with negotiators having to wade through, let alone argue about, thousands of sections and cases of intellectual property law. Moreover, there were just too many sharp differences between the domestic laws of the US, Europe and Japan for it to be possible to aim at harmonising the rules of intellectual property.⁹³ The chair of the TRIPS negotiating group, Lars Anell, made sure that negotiators stuck to the game at the level of principles:

“I said: ‘This argument that we can’t do that because our law does not allow it should be an argument you cannot use.’ And it was after that not used again.”⁹⁴

His gentle but strategic diplomacy was a velvet glove over the iron fist of US and European corporate power.

On 14 June 1988, a text that was to have a decisive influence on the course of the negotiations on intellectual property was released in Washington, Brussels and Tokyo. Bearing the title *Basic Framework of GATT Provisions on Intellectual Property: Statement of Views of the European, Japanese and United States Business Communities*, it represented, in the words of Edmund Pratt, a “multilateral blueprint” for trade negotiators. The report, almost one hundred pages long, was the culmination of almost two years’ hard work by the IPC on improving cooperation on global regulatory policy issues among key players in the US, European and Japanese business communities. The senior members of three distinct corporate cultures had agreed to the prescription of a set of basic principles that would pattern the domestic regulation of knowledge and information by states.

The function of the fundamental principles in the Basic Framework was, in the words of one of its drafters, Friedrich Kretschmer, to provide states with “reference points” or a “yardstick” by which countries could judge the adequacy or efficiency of their intellectual property laws.⁹⁵ Their chosen fundamental principle of patentability, for example, stated that a “patent shall be granted for . . . products and

92. Speech by Edmund T. Pratt to US Council for International Business, “Intellectual Property Rights and International Trade”, available at www.pfizer.com/pfizerinc/policy/forum.

93. An example being the debate over the merits of “first to file” versus “first to discover” in patent administration.

94. 1994 interview with the authors.

95. Kretschmer, F., Head of the Legal and Insurance Department, BDI (Federation of German Industry), “The Present Position of the US, Japanese and European Industry”, in Beier, F.-K. and Schricker, G. (eds.), *GATT or WIPO?: New Ways in the Protection of Intellectual Property*, Max Planck Institute for Foreign and International Patent, Copyright, and Competition Law, Munich, and VCH Publishers, Weinheim, New York, 1989, pp.95, 96.

96. *Basic Framework of GATT Provisions on Intellectual Property: Statement of Views of the European, Japanese and United States Business Communities*, The Intellectual Property Committee (USA), Keidanren (Japan), UNICE (Europe), 1988, p.32.

97. “Existence, scope and form of generally internationally accepted and applied standards/norms for the protection of intellectual property”, World Intellectual Property Organization, WO/INF/29 September 1988, issued as GATT document number MTN.GNG/NG11/W/24/Rev.1.

98. For a discussion of US bilateralism on copyright and computer software, see Dreier, T., “National Treatment, Reciprocity and Retorsion – The Case of Computer Programs and Integrated Circuits”, in Beier, F.-K. and Schricker, G., op. cit. 95, pp.65–74.

The WIPO study did identify internationally accepted standards, but the US did not accept them. For example, the report points out that there is a “general trend towards the elimination of formalities as a condition of copyright protection”, an important exception being the US where the copyright notice is a “condition of enjoyment and exercise of copyright”. See WIPO, op. cit. 97, Part II: Copyright, Section 2, para (iii).

processes without discrimination as to subject matter”.⁹⁶ Yet a study undertaken by WIPO in 1988 for the GATT negotiating group on intellectual property revealed that, of the 98 members of the Paris Convention, 49 excluded pharmaceutical products from protection, 45 excluded animal varieties, 44 excluded methods of treatment, 44 excluded plant varieties, 42 excluded biological processes for producing animal or plant varieties, 35 excluded food products, 32 excluded computer programs and 22 excluded chemical products.⁹⁷ The fundamental principle for the subject matter and scope of copyright simply stated that copyright should be granted over computer programs. Yet the same WIPO study pointed out that only 20 countries protected computer software through copyright legislation – and did not point out that about half these countries did so because of US trade pressure and bilateralism.⁹⁸

Implicit in the Basic Framework was also a morality of investment in information that states would have to foster if they wished to see the benefits of a high-technology entrepreneurialism within their borders. “Piracy” would have to be eliminated, infringement of intellectual property would have to be criminalised, states would have to set severe limits on public interest exceptions to intellectual property protection and, finally, states themselves would have to agree to become the subjects of meaningful enforcement procedures if they did not comply with their obligations to spread the fundamentals of intellectual property.

The Basic Framework was in many ways the seminal document of the TRIPS negotiations. It was a declaration of principles of property wanted by big business for the global information economy; it was a set of negotiating objectives for the USTR.⁹⁹

While its principles had been drafted to match the business goals of the companies that had been enrolled to support it, different forms of intellectual property mattered to different industries. The US semiconductor chip industry, for instance, had pushed for restrictions on compulsory licensing and the option of multiple protection for semiconductor chips (patents, copyright, trade secrets and semiconductor chip law modelled on US legislation).¹⁰⁰ European and Japanese industry went along with this because their access to the US market was at stake. Hollywood’s agenda was to obtain strong copyright and trade mark protection for its global film and merchandising interests, but it did not want globalised rights that protected the intimate relationship between author and work or between performer and performance.¹⁰¹ The large players in the US software industry, IBM and Microsoft, wanted to use copyright to protect their software.¹⁰²

The Basic Framework, as one who had been involved in its production pointed out, united companies which under “normal circumstances . . . are competitors, and this competition also extends to the legal systems of our countries or continents”.¹⁰³ They had united around a set of principles. Whether it would be possible to keep together such a large coalition with its considerable internal tensions over the course of a lengthy multilateral trade negotiation was another matter.

Negotiating Circles

In early 1987, the European Commission was indicating support for a weaker agreement on intellectual property that dealt with counterfeiting and piracy as its main priorities but left other matters for another time. In Europe’s hierarchically-ordered world of business lobbying, the Union of Industrial and Employers’ Confederations of Europe

99. The Basic Framework was circulated widely within US policy circles and to US diplomatic missions. Two official USTR communications to the GATT, one dated 19 October 1987, the other 13 October 1988, illustrate its influence. The first document, issued before the Basic Framework, was sparse on the detail of the different aspects of intellectual property and on what the US wanted. The second detailed the internal procedures that states would have to adopt for the enforcement of intellectual property, the kinds of border measures that states would have to implement and the shape of a consultation and dispute settlement mechanism. In places, echoes of the Basic Framework were replaced by the same language. See “Suggestion by the United States for Achieving the Negotiating Objective”, GATTDoc.MTN.GNG/NG11/W/14 (20 October 1987) and “Suggestion by the United States for Achieving the Negotiating Objective – Revision”, GATT-Doc.MTN.GNG/NG11/W/14Rev.1 (17 October 1988).
100. The US semiconductor chip industry was feeling the strain of competing with the Japanese. By 1986, it was Japan, not the US, that was the world’s biggest producer of chips. By 1989, Japan’s trade surplus with the US in semiconductors was past US\$1.5 billion (Angel, D.P., *Restructuring For Innovation: The Remaking of the US Semiconductor Industry*, The Guilford Press, New York, 1994, p.1). Companies like Texas Instruments saw intellectual property rights as a means to recover their market share. The industry also saw a chance to take out some insurance against new entrants like Korea.
101. Most European countries did not have copyright, but rather an authors’ rights system under which authors had very strong moral rights to control the release and use of their work, as well as the economic rights recognised by the Anglo-American tradition of copyright. These moral rights never made it into the Basic Framework or TRIPS. (Article 9 of TRIPS excludes moral rights as set out in the Berne Convention for the Protection of Literary and Artistic Works.) Hollywood’s superstars, though, had more than enough bargaining power to protect their interests, but strengthening the rights of those lower down the production ladder was seen as potentially inconvenient in unpredictable ways.
102. To many copyright and computer experts, the long duration of copyright protection (life of the author plus 50 years) did not seem suitable for software and computer code, which was closer to a technological device than a literary work. The large software firms, however, wanted to protect a mass market plagued by piracy and competition. Copyright protection was a way to maximise Microsoft’s hold over its industry standard of DOS and later Windows (and therefore markets in application programs). That meant rammung protection for computer software into copyright.
103. Kretschmer, F., op. cit. 95, p.95.

The international business community knew that states would find it hard to oppose a model agreement that had corporate approval.

(UNICE) was the key portal of European business influence on the EC. During 1986 and 1987, close cooperation developed between UNICE representatives and EC officials; UNICE was given the opportunity to comment on the EC's negotiating position and drafts. In May 1987, UNICE produced its own position paper on GATT and intellectual property, arguing that the EC's approach was "deemed too narrow by European industry" and that the "scope of the negotiations must be broadened" to include other areas of intellectual property where European industry was making heavy R&D investments.¹⁰⁴ In the following months, this became the position of European Community negotiators.¹⁰⁵

Bringing the EC into an inner circle of consensus with the USTR was itself crucial to obtaining the support of the most important group of all within the actual negotiations, the Quad. Of all the groups within the Uruguay Round, the Quad was the most powerful, having the capacity to move an agenda forward and decide on the most difficult and important issues. And once the US and the European Union came together on intellectual property, the other two Quad members, Japan and Canada, would follow.

The Intellectual Property Committee (IPC) established a regular interaction with European officials, because in its own words this provided it with "an opportunity to shape the views of these key officials, who at the time were only beginning to focus on the issue".¹⁰⁶ Informal discussions between Quad members and other developed countries on the US proposal for standards of intellectual property and their enforcement¹⁰⁷ allowed negotiators to develop a sense of what was possible in a negotiation over intellectual property. At the same time that negotiators were getting a lock on the expectations of their counterparts, they were also building a Northern consensus on intellectual property that could be used to overcome Southern resistance.

The IPC also worked on building an outer circle of consensus among developing countries. The strategy outlined in the Basic Framework assumed that initially a GATT code on intellectual property would be negotiated and adhered to by only those states interested in higher standards of intellectual property.¹⁰⁸ It would not be a condition of GATT membership. Once the code was in place, Southern countries could be given incentives to join. In 1988, IPC delegations travelled to newly industrialising countries such as Korea, Hong Kong and Singapore to point out that their interests were not the same as India's and Brazil's.

Having managed to get a diverse group of information industries gathered around a set of principles, US negotiators would have to negotiate a text of an agreement that would deliver a payoff to each of those industries and the countries behind them.

At the Negotiating Table

The Uruguay Round of multilateral trade negotiations was a big trade round organised into two broad groups: a Group of Negotiations on Goods (GNG) and a Group of Negotiations on Services (GNS), both of which reported to the overall Trade Negotiations Committee (TNC) chaired by Arthur Dunkel, the Director-General of the GATT. The Group of Negotiations on Goods subsequently became 14 negotiating groups for different issues. Group 11 was the Trade-Related Aspects of Intellectual Property Rights including Trade in Counterfeit Goods. The fate of TRIPS was in part dependent on what happened in the other

104. UNICE Position Paper, "GATT and Intellectual Property", 12 May 1987, p.2.

105. The best evidence of this is the communication to the GATT by the European Community, entitled "Guidelines proposed by the European Community for the negotiations on trade-related aspects of intellectual property rights", 19 November 1987, GATT-Doc. MTN.GNG/NG11/W/16. The document referring to the Punta del Este Declaration suggests that new rules and disciplines need to be drawn up for intellectual property and that these "should apply to all IPRs". Much like the Intellectual Property Committee, the European negotiators now saw in the Punta del Este Declaration a strong mandate to develop a trade-based intellectual property regime that went well beyond the problem of counterfeiting and piracy.

106. Intellectual Property Committee, "Accomplishments and Current Activities of the Intellectual Property Committee", 14 June 1988, p.4.

107. One meeting produced a document outlining areas of agreement and difference among the respective delegations. See "Notes on Informal Meeting on Intellectual Property Standards, 7-11 March 1988", in Beier, F.-K. and Schrieker, G. (eds.), op. cit. 95, pp.335-352.

108. *Basic Framework*, op. cit. 96, p.8.

negotiating groups. No one expected the negotiations on agriculture to go smoothly.

Each group had its own chair and operated “as a separate entity”.¹⁰⁹ Deadlines, timetables and negotiating plans were set. Group 11 had to have its first meeting in the week beginning 23 March 1987 and the initial phase of its negotiating plan completed “by the end of 1987 at latest”.¹¹⁰ It was a tight timetable, especially given the complexity of the subject matter.

For the next couple of years, the negotiation on intellectual property became a game of paper flows. Northern countries easily won. In October 1987, the US and Switzerland each submitted a proposal followed by submissions from Japan and the European Community in November.¹¹¹ The following year, 1988, kicked off with a submission from the Nordic states in February, and so it went on.

A group of ten Southern countries led by India and Brazil¹¹² continued to insist that a comprehensive code on intellectual property could not be negotiated within the GATT.¹¹³ In a 1993 interview, a member of the GATT Secretariat said that all that Southern countries did in the TRIPS negotiations was “to complain to the bitter end”. Actually, there was quite a lot to complain about.

Northern countries flooded the negotiating process with the most far-reaching proposals on intellectual property. Between 1987 and 1990, 97 working documents were submitted to the TRIPS negotiating group by governments, the GATT Secretariat and international organisations. Of these, only 19 came from Southern countries.¹¹⁴ The papers provided information on the relationship between GATT norms and intellectual property, and membership of intellectual property conventions, on intellectual property treaties and international standards. The idea that the negotiation would be confined to border control issues and the problem of counterfeits was swept away.

Southern negotiators making the long journey from the negotiations in Geneva back home found US negotiators waiting on their doorstep. After the 1984 trade amendments, the US began to use its 301 process. Everybody knew how it had knocked over South Korea in 1985 using 301 and that Brazil was next. By 1989, USTR fact sheets were reporting successes: copyright agreements with Indonesia and Taiwan, Saudi Arabia’s adoption of a patent law, and Colombia’s inclusion of computer software in its copyright law. Special 301 was swung into action at the beginning of 1989. When the USTR announced the targets of Special 301, five of the ten Southern country “hardliners” in the GATT found themselves listed for bilateral attention. Brazil and India, the two leaders, were placed in the more serious category of priority watch list, while Argentina, Egypt and Yugoslavia were put on the watch list. The USTR’s action plans for these countries included “constructive participation in multilateral intellectual property negotiations”.¹¹⁵ TRIPS was thus less a negotiation than a “convergence of processes”, in the words of a US trade negotiator at the time.

Although Southern opposition to TRIPS was solidifying, the GATT Secretariat sowed seeds of doubt by stating that India was isolated on the issue.¹¹⁶ The seeds grew into rumours among Southern country negotiators about India’s commitment to the cause. A comment from a former Indian official to the GATT captures the lesson from the experience:

“The impression went round that the show of firmness that the negotiators were making in the period from Sept. 1986 to Dec. 1988 was only a facade not backed by a firm political support at

Negotiations on intellectual property became a game of paper flows that Northern countries easily won.

109. See para 2 of Annex 2A of *Decisions of 28 January 1987* (GATT/1405 5 February 1987), reprinted in Stewart, T.P., op. cit. 88, pp.11–25.

110. Ibid.

111. A list of the working documents within the TRIPS negotiating group can be found in the bibliography in Ross, J. C. and Wasserman, J. A., “Trade-Related Aspects of Intellectual Property Rights”, in Stewart, T.P., op. cit. 88, pp.2241, 2320–2329.

112. The others were Argentina, Cuba, Egypt, Nicaragua, Nigeria, Peru, Tanzania and Yugoslavia.

113. Bradley, A. J., “Intellectual Property Rights, Investment, and Trade in Services in the Uruguay Round: Laying the Foundations”, *Stanford Journal of International Law*, 1987, vol 23, pp.57, 81, fn. 72.

114. This is based on a count of the working documents found in Ross, J. C. and Wasserman, J. A., op. cit. 111, pp.2320–2329.

115. See USTR Fact Sheet for “Special 301” on Intellectual Property, in *BNA’s Patent, Trademark & Copyright Journal*, 1 June 1989, Vol. 38, p.131.

116. For a detailed account of the role of the GATT Secretariat, see Raghavan, C., “India Yields in Uruguay Round”, *Mainstream*, 6 May 1989, p.15.

the capital. No negotiators can hope to muster support from other countries on difficult issues involving disagreement and even confrontation with major powers, if those countries suspect the inherent strength of the stand or even the sincerity of its proponents.”¹¹⁷

At a time when Indian officials should have been working the lines of communication with the capitals of other Southern countries, they did not. Cooperation between India and Brazil began to falter as the Brazilians became worried by the strength of Indian support. In early April 1989, India failed to attend a crucial informal Third World Group meeting.¹¹⁸ It all began to fall apart.

117. S. P. Shukla, Indian Ambassador to the GATT at that time, quoted in *Agriculture in Dunkel's Draft of GATT – A Critical Analysis*, Third World Network, New Delhi, 1993, p.6.

118. See Raghavan, C., op. cit. 116, p.22.

The University-Industrial Knowledge Complex:

The fundamental reason for the pre-eminence of the United States as a source of innovation in the 20th century was not its intellectual property law, but the pre-eminence of its universities. The three most consequential technological breakthroughs of the century were the fruits of public investment in the scientific talent of universities, not of the commercial pursuit of patents or copyright.

- The foundations of the Internet were laid by conceptual breakthroughs in computer software that preceded the application of copyright to computer software. (The pioneering work of IBM in laying the foundations for the computer hardware revolution, however, was very much motivated by patent laws.)
- The new molecular biology spawned by unlocking DNA – the explanation given by James Watson and Francis Crick in 1951 of the structure of the DNA molecule, and the techniques found in the early 1970s for directly cutting and splicing DNA code – was publicly funded.
- Nuclear energy, was a product of US public investment's ability to attract the best minds to the Manhattan project not only from US universities, but also from those of Germany, the UK, Australia and Canada,

In all these cases, the US government decided to put knowledge into the intellectual commons rather than into the realm of intellectual property. (In the case of atomic secrets, US President

Eisenhower did so, however, only on condition that other Northern economies sign up to an "Atoms for Peace" accord – one that performed better than expected in preventing the proliferation of nuclear weapons.)

Thus the oft-heard pharmaceutical company PR assertion that the accumulated drug breakthroughs of the 20th century are a result of Western intellectual property laws is a very partial truth because it ignores the important role of US federal funding in drug development, especially development of those drugs which afford significant therapeutic gain. Of the 327 drugs and biological products approved by the Food and Drug Administration in 1991, only five were classified as offering significant therapeutic gain. All five were developed with federal funds.

The Public Pays

The corporate owners of intellectual property still rely heavily on the public sector and the public domain. Much of the research that really matters to the biotechnology and pharmaceutical industries goes on at taxpayer expense in public universities. More than 70 per cent of scientific papers cited in biotechnology patents, for instance, originated in solely public science institutions, compared with 16.5 per cent that originated in the private sector.

Through various legal mechanisms, however, the relevant knowledge now ends up in patent portfolios where citizens pay for the same knowledge again. This process started in earnest in the US during the 1970s when Congress

feared that the country was losing its mastery of the knowledge required for an international information economy. Birch Bayh, a US Senator from Indiana, was one of the many who began to push the idea that the stronger the patent system became, the better the US would do against its competitors (at that time, West Germany and Japan) and in regaining lost markets. Together with Senator Robert Dole, he introduced the Patents and Trademark Amendments Act, which became known as the Bayh-Dole Act and took effect in 1981.

The Bayh-Dole Act allowed universities and small businesses to own patents in inventions that they had developed with federal funds. Prior to the Act, patents in such inventions ended up with the relevant federal funding agency or the inventions were put straight into the public domain by means of publication. The Bayh-Dole Act saw US universities and hospitals hurrying to the patent office. In the next five years, these organisations increased their patent applications in human biology by 300 per cent. In health technologies, universities now account for 15 per cent of all patents.

As a result of Bayh-Dole, the university sector saw its income from the licensing of its intellectual property in technology soar, but that income was unequally distributed. In 1992, of the top 31 royalty leaders in the US, six universities earned between US\$12 and US\$26 million each, while the other 25 earned between US\$500,000 and US\$6 million. That left a lot of other

At the same time, the GATT Secretariat put relentless pressure on Southern countries through the “Green Room” process.¹¹⁹ Key countries were hauled into small group consultations. The groups grew smaller and the strain of resistance greater, so much so that Southern country negotiators began to refer to them as the “Black Room” consultations.

Meanwhile, in Brazil, the US had for the first time followed up its threat under 301 in relation to intellectual property by increasing duties on selected Brazilian goods being imported into the US. In June 1990, the President of Brazil announced that he would seek the legislation the US wanted on patent protection for pharmaceutical products, and on 2 July 1990 the increased duties were terminated by the USTR. In that

119. The “Green Room” process was initiated by the Director-General of the GATT during the Uruguay Round negotiations. He or his staff invited selected countries to discuss and draft compromise texts on specific items informally behind closed doors. These Green Room discussions constituted the bulk of the negotiations. Whatever was decided had to be ratified by consensus in the main GATT plenary, but it proved difficult to change any deals that had been made in private.

The Importance of the Publicness of Knowledge

universities earning a lot less.

Only so many universities were at the leading edge of biotech. The universities clustered in and around Boston and San Francisco, for instance, gained enormously from the patent-based commercialisation of biotechnology. For most other universities, however, it brought complications because their researchers now had to navigate their way through patents owned by others on the research tools of biotechnology.

The Bayh-Dole Act (and other legislation that Congress passed in the 1980s making it easier for universities and businesses both large and small to obtain patents on federally funded inventions) did one important structural thing. It integrated universities much more deeply into the corporate knowledge game. Many entrepreneurially minded academic scientists in the 1980s left their universities to set up small biotech companies, knowing that they could draw on federal funds for the development of their technology and still retain a patent position. This migration again followed a distinct geographical pattern, with most start-up companies being established in the Boston and San Francisco areas.

Most of the knowledge patented by the public sector flowed to the private sector via licensing. In most cases, a university did best by licensing a patented technology as widely as possible rather than by hanging onto the relevant knowledge and doing its own product development. University patenting thus assisted rather than hindered the private sector. The same was true of patenting by biotech start-ups.

Some scientists working in the public sector have continued to

place sequences in the public domain. But this practice does not necessarily prevent companies from obtaining patents on “purified” versions of the same genetic sequences.

The US private sector needs the fruits of publicly-funded basic science. Its challenge has been to find ways in which to help itself to this basic research to use it in its commercial strategies. Patent offices, the patent profession and the courts have all played a role in reinterpreting patent law to allow this lifting from the public domain to take place. Patents, instead of being a reward for inventors who place private information into the public domain, have become a means of recycling public information as private monopolies.

Universities have been great incubators of innovation for centuries. Rewarding universities for securing patents and other intellectual property rights, as governments are increasingly doing, puts this process at profound risk because patents lock up knowledge rather than open it up as a platform from which further advances spring. University researchers end up making the same kinds of profit calculations about basic research that companies do. Like companies, they may decide not to pursue a problem if the solution does not promise some commercial payoff.

Moreover, tying the funding of public universities to their success in securing private patents accelerates the privatisation of the intellectual commons.

For most of their history, medical schools in universities gave the greatest plaudits to the fundamental scientific

breakthroughs that promised the greatest long-term benefits to human health. This was an ethos with egalitarian effects because the greatest unsolved health problems happened to be concentrated among the poor, particularly among those who live in the tropics. The commercialisation of university medical research had a reverse effect. Only 13 of the 1,223 new drugs marketed between 1975 and 1997 were specifically developed to treat tropical diseases (and only four of these were a direct result of pharmaceutical industry R&D). Universities should cease rating medical research according to its commercial possibilities.

Ironically, by dismantling the publicness of knowledge, intellectual property will eventually rob the knowledge economy of much of its productivity.

When knowledge becomes a private good to be traded in markets, the demands of many, paradoxically, go unmet. Patent-based R&D is not responsive to demand, but to ability to pay. The blockbuster mentality of the large pharmaceutical companies takes them to those markets where there is the ability to pay.

And citizens pay and pay again for patented information. Their taxes are used to fund public research that often ends up as a private monopoly. But costs of patenting are generally tax deductible, as are many research and development costs. In turn, the profits of multinationals from patents become the subject of transfer pricing games that minimise the tax they pay by shifting profits to the lowest tax jurisdiction.

A year after TRIPS entered into force, the US began collecting rents from the rest of the world.

same year, a Brazilian negotiator in the TRIPS group informed an Indian negotiator that “I am only here to observe”.¹²⁰ The Brazil–India axis had been broken and India was on its own.

By April 1989, at a mid-term review of the negotiations, trade ministers had agreed that negotiations would encompass “adequate standards and principles” of intellectual property protection and “settlement of disputes between governments, including the applicability of GATT procedures”.¹²¹ The very things that developing countries had been opposing well before Punta del Este were now well and truly on the table. The flood of paper from Northern countries had done its job.

The negotiations on TRIPS are said to have begun properly in the second half of 1989, when a number of countries made proposals, or in the first part of 1990, when five draft texts of an agreement were submitted to the negotiating group.¹²² A more sceptical view is that the negotiations were by then largely over. Southern countries had simply run out of alternatives and options. If they did not negotiate multilaterally, they would each have to face the US alone. If they resisted the US multilaterally, they could expect to be on the receiving end of 301 actions. If developing countries negotiated multilaterally, there was at least the possibility of being able to obtain some limits on the use of 301 actions. At any rate, this was what Northern negotiators and the GATT Secretariat told them.

From 1990 onwards, the main issue to be decided was how far an agreement on intellectual property would deviate from the blueprint that had been provided to negotiators in 1988 by Pfizer, IBM, DuPont and other members of the international business community.

To push the Uruguay Round negotiations towards a conclusion, and under pressure from the USTR, the Director-General of the GATT, Arthur Dunkel, tabled on 20 December 1991 a compromise document, the “Draft Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations”.¹²³ No part of the Draft Final Act was considered agreed until the entire package was agreed. On TRIPS, the Dunkel draft (an amalgamation prepared by the Chair of the TRIPS Group, Lars Anell, of five draft versions of an agreement on TRIPS, four emanating from Northern countries and one from a group of Southern countries) gave every major state a win of some kind. The US won on the extension of patents to all fields, but had to tolerate countries having the option of excluding some things within these fields from patentability. Southern countries were given transitional periods to comply with TRIPS (four years for developing countries and ten years for least-developed countries). Given the magnitude of the institution-building task they faced in intellectual property, they did not regard this as much of a win. It wasn’t.

In India, the Dunkel draft text was labelled “DDT” and thought to be just as dangerous for the health of the country as the chemical of that name. For those who had seen the Indian-designed patent system produce a flourishing pharmaceuticals sector capable of competing in global markets, DDT was very hard to swallow: “All our efforts were wiped out in one second by Dunkel”, said a former Commissioner of Patents in India in 1996. If any country could have mustered the willpower to resist the US agenda on TRIPS to the end, it would have been India. It had, after all, not so many decades earlier thrown out the British Empire. Hundreds of thousands of Indian farmers protested in the streets about the patenting of seeds, but there were no negotiations in which the mass unrest could have been utilised to support a position.

The US worked tirelessly, pointing out that the Indian government’s

120. Interview with the authors, 2000.

121. WIPO, *op. cit.* 97.

122. *See, for example, Gervais, D., op. cit.* 89, p15; Gorlin, J. J., *An Analysis of the Pharmaceutical-Related Provisions of the WTO TRIPS (Intellectual Property Agreement)*, Intellectual Property Institute, 1999, p.2; Ross, J. C. and Wasserman, J. A., *op. cit.* 111, p.2273.

123. MTN.TNC/W/FA (20 December 1991), available in Stewart, T.P., *op. cit.* 88, p.457.

analysis would change when the reforms it was putting in place to become a more open economy were realised and that it had a software and film industry that gave it very different interests from other developing countries in ASEAN. Seeing the shift of geo-political sands that followed the fall of the Berlin Wall in 1989, the Indian government thus decided to send India into the WTO regime, the most far-reaching trade regime ever negotiated by states. It was time for India to enter in a more significant way the world of trade in merchandise, services and intangibles. Indian industry, the pharmaceutical industry included, would have to learn to play by rules set in Washington and New York. In 1993 the GATT Council reviewed for the first time the performance of India and “warmly welcomed the fundamental policy changes in India since 1991”.¹²⁴ India had at last embraced the neo-liberal agenda of market globalisation. Although it had held out the longest of any Southern country, India did sign the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations on 15 April 1994 in Marrakesh, Morocco, and thereby assume the obligations of TRIPS.

Indeed, most countries accepted the Dunkel draft as more or less the final deal on intellectual property.¹²⁵ After the conclusion of the Uruguay Round on 15 December 1993 and the April 1994 signing of the Final Act, TRIPS entered into force on 1 January 1995. A year later the US began an action against Japan arguing that Japan had breached its obligations under TRIPS in relation to sound recordings.¹²⁶ The time had come for the US to begin collecting rents from the rest of the world.

The Puzzle of TRIPS

Why did more than one hundred nations that were large net importers of intellectual property rights sign a TRIPS agreement that was so transparently against their interests as well as being an economic and health disaster for them? First, most importer nations were not in the room when the important technical details were settled and the deals were done. The WTO formally meets the conditions of equal democratic representation for all states, but the informal reality was that most states were not represented until the virtual *fait accompli* of a chairman’s draft being put on the table.

Second, most states did not have a clear understanding of their own interests or were misinformed. Without intellectual property experts on their WTO delegations, they could not have understood the implications of TRIPS – for instance, of 20-year patent terms on pharmaceuticals – even if their representatives had been in the room. TRIPS had all the transparency of a one-way mirror, with only the US and EC knowing exactly what was going on.

And, third, most nations were threatened by US trade power. US strategy¹²⁷ has proceeded as follows. First, use threatened trade sanctions to negotiate strategic bilateral agreements one by one. Place particular importance on knocking over the most likely opponents to your favoured multilateral deal. Then go into the multilateral negotiations having made certain terms of the favoured multilateral deal a *fait accompli*. The multilateral agreement then pulls those not subject to bilateral agreements up as far as the new standard. After the multilateral deal is done, the US then returns to a new round of bilateral negotiations to begin a new cycle of raising the bar.

For example, having failed to rule out parallel importing¹²⁸ and

124. *FOCUS* (GATT Newsletter) November 1993, Vol. 103, p.7.

125. The US pharmaceutical industry was unhappy with the Dunkel draft of TRIPS because of the concessions to Southern countries, which the Senior Vice President of the Pharmaceutical Manufacturers Association, Harvey Bale, regarded as “an enormous break for the biggest pirates (*Inside US Trade*, 10 January 1992, Vol. 10(2), p.2). One or two years to implement TRIPS was more than enough, he figured (even though Northern countries had evolved their own systems of intellectual property protection over hundreds of years). Giving the states of sub-Saharan Africa ten years in which to be TRIPS compliant seemed “overly long and discriminatory” (Testimony of Jacques J Gorlin, Consulting Economist to the Intellectual Property Committee, before the Subcommittee on Economic Policy, Trade and Environment of the Committee on Foreign Affairs, United States House of Representatives, 8 March 1994, p.3).

But Southern countries would have to find tens of millions of dollars to set up an infrastructure of intellectual property protection (patent offices, copyright offices, courts, judges) that would largely service the needs of foreign rights holders. This in countries where the legal system could not afford its citizens the most basic protections against violence. The US pharmaceutical industry publicly suggested that the US should stay out of any final agreement and use its 301 process to open up markets, while privately lobbying to get the USTR to change the draft TRIPS text.

The US Administration also wanted the draft of TRIPS changed to give US industry a share of copyright levies collected in Europe and full “pipeline” protection on filed pharmaceutical patents, and to limit the transitional provisions to two years. When Peter Sutherland, the director-general who succeeded Dunkel, closed the Uruguay Round negotiations on 15 December 1993, these changes had not been made.

126. See Japan-Measures Concerning Sound Recordings, complaint by the US (WT/DS28), 9 February 1996. The case settled on 24 January 1997.

127. See Braithwaite, J. and Drahos, P., op. cit. 34.

128. Parallel importing occurs when a product protected by intellectual property rights and sold by or with the rights-holders’ consent in one country is imported into another country without the rights-holder’s authorisation. The product is usually cheaper in the exporting country, which is why the importing country follows this route.

The US is now implementing TRIPS-plus standards via new bilateral agreements.

Pro-TRIPS interests were organised; anti-TRIPS interests were not.

129. Olson, M., *The Logic of Collective Action*, Harvard University Press, Cambridge, 1965.

130. As it turned out, the agriculture payoff was itself uncertain as the US did not honour its agriculture commitments to Australia.

The Cairns Group of 17 countries (Argentina, Australia, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, the Philippines, South Africa, Thailand and Uruguay) account for one-third of the world's agricultural exports. It was formed in August 1986 to ensure that agriculture was put and kept on the multilateral trade agenda. Its inaugural meeting was held in Cairns, northern Queensland, Australia. The Uruguay Round agreements subject agriculture for the first time to trade liberalising rules.

weaken compulsory licensing in TRIPS, the US is now aiming at these goals in its new round of bilateral negotiations. The US is also seeking to short-circuit the TRIPS transitional arrangements for Southern countries by persuading them bilaterally to implement all the TRIPS obligations earlier than required.

Other Answers to the Puzzle

But other factors were also at work. The organised consumer movement was not active in lobbying against TRIPS when it counted in the late 1980s and early 1990s (apart from in India). Diffuse public interests tend to be unrepresented because the costs to individuals of organising in large groups are not matched by the small gains for each individual.¹²⁹ Producer interests were decisively more organised than consumer interests.

For members of the Cairns group of agricultural exporters, the Uruguay Round promised immediate and greater access to European markets for agricultural products and reduced US subsidies for its competing agricultural exports. In a deal in which Australia, for one, got agricultural export benefits and the US got intellectual property, there were loud voices for the agricultural deal, while those who would lose from intellectual property were silent. Agriculture was seen as a here-and-now priority, intellectual property a long-term matter with uncertain structural effects.¹³⁰

In sum, pro-TRIPS interests were concentrated while anti-TRIPS interests were so diffuse they generally did not even recognise their interests until after the horse had bolted. The carrots and sticks arranged by intellectual property-owning interests involved short-term incentives, while the costs TRIPS would impose seemed (and often were) much further in the future.

Once a majority of states had decided to jump on the TRIPS bandwagon, any country holding out faced the worrying risk that foreign investors would brand them as hostile to innovation-based investment, the most useful kind to have in the new information economy. Pharmaceutical companies began signalling that they were mainly interested in investing in states that supported standards even higher than TRIPS – such TRIPS-plus standards included patent protection of more than the 20 years guaranteed by TRIPS. States began to compete with one another to show that they were committed to TRIPS, to TRIPS plus, and to extravagant enforcement gestures directed at “pirates”. China executed a few.

The Visions of a Few

Yet the TRIPS story is not only a deeply structural one, but also one which showcases the brilliance of a few visionary individuals who came up with the simple idea of linking intellectual property to the trade regime. Jacques Gorlin and Eric Smith (the Executive Director of the International Intellectual Property Alliance, *see* Box, p.14) were not powerful men; they were Washington legal and economic entrepreneurs who got things done by getting powerful people like Edmund Pratt of Pfizer and John Opel of IBM interested in their big idea. During the 1980s, almost everyone in the US business community who thought about it at all considered TRIPS a pipe dream. It wasn't just

that it was against the interests of almost everyone except a comparatively small number of powerful US and European knowledge firms: TRIPS seemed like a bad idea to most key individuals in the GATT secretariat and the EC. It seemed implausible to link an agreement to expand monopoly rights to a regime that was about dismantling trade monopolies and removing barriers to competition.

Yet the visionaries held out. Taking one step at a time – first getting US business on side, then US government, then European business, then their governments, then Japanese business, and so on – they rendered the implausible plausible. The visionary few realised their long-term strategy for making the US a richer country at the expense of most of the rest of the world by orchestrating shorter-term payoffs for key global actors who lacked the clarity of vision to see longer-term interests. TRIPS was pulled off because it mattered so much to those who lobbied for it.

Hence, the explanation for the globalisation of the US intellectual property regime by the linking of trade and intellectual property requires both a structural grasp of economic interests and an understanding of entrepreneurship in ideas by individuals who knew how to harness structural power. Two decades ago, it took a leap of imagination for ordinary citizens to think that what they were doing in copying an item of software or music or videotaping a television programme was theft. Such actions had never been criminal offences in most nations before TRIPS. But the public relations campaign to define information “piracy” as a crime has reframed popular consciousness of intellectual property. It was important to define TRIPS as a matter of simple justice precisely because it is a matter of complex injustice. TRIPS pulled off a huge structural shift in the world economy. As the information economy develops, the implications of this for widening inequality in the world system, even within the US and Europe, will become more profound. There will be a digital divide, an access-to-drugs divide, and a divide between those who avoid taxes by shifting their intellectual property rights around the world system and those who simply have to pay them.

Uniting in Resistance

Intellectual property rights, and TRIPS especially, are now linked to much bigger matters than just rewards to an individual inventor. These matters include widening income inequalities, excessive profits, the power and influence of big business on government, the loss of national sovereignty, globalisation, moral issues about the use and direction of biotechnology, food security, biodiversity, sustainable development, self-determination for indigenous people, access to health services and the rights of citizens to cultural goods.

The decline of the moral respectability of intellectual property rights has been accompanied by increasing levels of transnational activism against the use and extension of intellectual property regimes. The US academic community, especially in the field of copyright, has ironically become one of the principal defenders of the public domain. In alliance with other groups such as librarians, it has fought the expansionist agendas of corporate intellectual property owners. The Free Software Foundation has been a vital force in showing how a society can meet its needs for software without incurring the predatory costs of a Microsoft, which relies on copyright and patents to lock up software development.

The TRIPS agreement was pulled off because it mattered so much to those who lobbied for it.

Industry took care to define TRIPS as a matter of simple justice because it is a matter of complex injustice.

131. See, for example, www.grain.org.

132. See Boyle, J., "A Politics of Intellectual Property: Environmentalism for the Net?" *Duke Law Journal*, Vol. 47, 1997, p.87.

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In the health field, the US Consumer Project on Technology, the South African Treatment Action Campaign (TAC) and Medecins Sans Frontieres (MSF) have forced governments to reconsider the impact of patents and TRIPS on access to medicines. Others have drawn attention to bio-piracy and led the fight against the privatisation of genetic resources through intellectual property rights, forcing states to take notice of the creep of intellectual property into agriculture and food.¹³¹

Many of the NGOs, businesses, individuals and professional organisations fighting for the preservation of the intellectual commons do so in isolation from each other. The groups that attempt to hold back the encroachment of intellectual property on the Internet and in our public libraries have not yet forged alliances with groups defending the rights of farmers to seeds and indigenous peoples to use their knowledge. If the inequalities of "information feudalism" are to be successfully resisted, then broader global coalitions will have to be built.¹³² TRIPS was only possible because an elite of knowledge-based companies in the US, Japan and Europe set aside their differences and united around their need for global intellectual property protection. Resisting this new paradigm requires that diverse groups and communities fight to unite in a global politics that forces governments to design intellectual property rights that serve the welfare and basic freedoms of citizens.

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