

CURBING INTERNATIONAL

PIRACY

OF INTELLECTUAL PROPERTY

POLICY OPTIONS FOR A MAJOR
EXPORTING COUNTRY

THE REPORT OF THE INTERNATIONAL
PIRACY PROJECT

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ABOUT THE ANNENBERG WASHINGTON PROGRAM

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EXECUTIVE SUMMARY

Piracy of copyrights, patents and other intellectual property costs the U.S. economy tens of billions of dollars and thousands of lost jobs every year.

The losses of domestic and export sales and royalties, and the damage to finances and reputation, are especially heavy in the communications and information industries, where the products are often nothing more than the intangible intellectual property itself. Movies, computer programs and recordings can be stolen by merely copying, in ways that a shipment of logs or soybeans cannot. Continued losses in the long run undermine the incentive to invest capital in research and the ability to develop new products.

The losses damage some of the country's strongest industries and those with the brightest export potential as our economy specializes in the production of information products and services. For example:

- Pirates issued their own Chinese version of the *Encyclopaedia Britannica* in Taiwan before the legitimate edition could be published, kept selling it despite court rulings and, with classic chutzpah, warned consumers to "watch out for fakes."
- A thousand video parlors in Taiwan—and many more throughout the Third World—show U.S. and other foreign movies without paying public-performance license fees and, in some cases, without even buying the videocassette from its legal distributor.
- Hundreds of thousands of decoders for receiving satellite transmissions of television have been tampered with, allowing people to view and even

retransmit Home Box Office (HBO) and similar networks.

The intangible nature of intellectual property has always made it susceptible to piracy, and fast-improving technology for accessing, storing, copying and transmitting information has made theft even easier, cheaper and harder to detect.

Facing the challenge requires hard-nosed pragmatism, not moralizing. Our own country pirated Europe's intellectual property a century ago, when the United States was a young country. New, developing countries have short-term incentives to be "free riders" on the creativity of other nations. Permitting piracy is not, however, in the long-term interest of countries that wish to develop their own economies and innovative potential. Free-riding deprives them of an important incentive for creativity, innovation and entrepreneurship.

As a problem for pragmatic solution, antipiracy efforts are increasingly a part of trade negotiations, both multilateral and bilateral. Multilateral agreements, however, have no enforcement powers and allow countries to protect foreign copyrights and patents to the same extent they protect their own citizens' rights, which is very little in some cases.

Some developing countries have recognized their self-interest in strengthening their intellectual property laws. Hong Kong toughened its intellectual property protection in the early 1980s, increasing prosecution of infringements eightfold in six years. Other countries, however, neglect or reject protection; eight were put on the U.S. Trade Representa-

tive's Priority Watch List this spring.

The Annenberg Washington Program's International Piracy Project, consisting of 23 representatives of industry, government and academia, suggests a dozen policy options for the public and private sectors to consider:

Executive Branch Actions

1. Demonstrate and document how intellectual property protection provides economic and cultural benefits for developing countries.
2. Monitor the effectiveness of U.S. Trade Representative actions.
3. Strengthen the enforcement of intellectual property rights abroad and in the United States.
4. Establish a presidential commission to analyze U.S. intellectual property policy and protection and establish mechanisms to implement the policy.

Congressional Actions

5. Hold congressional oversight hearings.
6. Expand criminal penalties for piracy in new media technologies.

International Organization Actions

7. Increase antipiracy efforts of global organizations, and establish worldwide adequate minimum standards to guide national governments.
8. Standardize evidentiary and procedural require-

ments and sanctions for enforcement overseas, and develop an international registry for proof of ownership.

Private Sector Actions

9. Expand private international organizations' initiatives against piracy.
10. Involve local creative industries abroad in the antipiracy fight.
11. Set prices at levels affordable by consumers in foreign markets.
12. Establish educational programs for consumers and professionals, here and abroad.

THE COSTS AND COMPLICATIONS OF PIRACY

Commercial piracy of intellectual property costs the U.S. economy tens of billions of dollars and thousands of lost jobs each year. Particularly hard hit are the communications and information industries. The problem is exacerbated by inadequacies in current international agreements, key foreign countries' reluctance to fight piracy, and the rapid expansion of technologies for accessing, copying and storing intellectual property.

While no one has made a highly reliable estimate of the scope of piracy, it appears to represent a substantial threat to some of the country's fastest growing and most promising industries. An increasing share of U.S. output is in the nature of "informational goods and devices"¹—precisely the area where creators' and exporters' rights are protected by intellectual property law.

The congressional Office of Technology Assessment (OTA) has estimated that world trade in intellectual property affects more than 2.2 percent of the U.S. labor force and 5 percent of our gross national product.² Exports of intellectual property have doubled in recent years and now represent more than 25 percent of U.S. exports.³ That share would be even greater if it included goods like pharmaceuticals, whose value lies largely in the research and development represented by patents. The potential long-term effects on U.S. trade and welfare are substantial.

We protect copyrights, patents and other forms of intellectual property because, since the early days of the republic, the government has recognized the public interest in granting the inventor, researcher, author, producer or artist some form of exclusive

control over the production, sale or distribution of the new product, process or service. This control gives these creative people the incentive to risk investing the time and money necessary to innovate. Their books, films, inventions and other works add to the store of human knowledge and to the quality of our lives.

The arrangement breaks down, however, when "pirates" misappropriate the intellectual property by making, using or selling it for commercial gain without the owner's permission and without paying royalties to compensate the owner.

LOSSES TO PIRACY

While there are great differences of opinion as to the extent of its damage to the economies of the United States and other developed countries, piracy clearly has a significant impact. It cuts across all types of communications and information industries including broadcasting, movies, publishing, computer software and hardware, and sound recordings.⁴

Part of the problem is defining exactly what falls under the term "piracy." The Annenberg panel settled on: "the unauthorized taking of another person's intellectual property through substantial duplication or production of a substantially similar product or information for commercial purposes."⁵ This definition takes in the more damaging forms of piracy and those for which enforcement is most politically acceptable.

Others define piracy more broadly, including

behavior outside the stream of commerce, such as consumers using backyard satellite dishes and unauthorized decoders to view cable television networks, or home computer users making duplicates of software without permission.⁶

A number of U.S. and international bodies have estimated losses to piracy, but the figures are often disputed because they are usually based on corporations' own, unverified estimates. Perhaps the best known of these estimates came out of a U.S. International Trade Commission (ITC) report to the U.S. Trade Representative (U.S.T.R.) in 1988. The ITC estimated that 431 U.S. companies responding to its questionnaire suffered aggregate worldwide losses of more than \$23.8 billion in 1986 due to inadequate intellectual property protection.⁷ Extrapolating these losses to cover the entire national economy, U.S.T.R. Clayton Yeutter placed all U.S. companies' losses between \$43 billion and \$61 billion.⁸ Some participants in the Annenberg panel, however, questioned the report's methodology and expressed concern that the impressive ITC numbers are unsubstantiated estimates by companies that have an incentive to claim serious damage by piracy.

Many kinds of losses were included in these figures: lost export sales, displacement of U.S. domestic sales by infringing imports, lost fee and royalty payments, reduced profit margins, damage to reputation caused by pirated goods and foregone research opportunities.⁹

Seventy-eight major companies in communications-related industries, surveyed by ITC, incurred some of the heaviest revenue losses:¹⁰

INDUSTRY	ESTIMATED LOSS, 1986
Computers and Software	\$4,130,000,000
Electronics	2,288,000,000
Entertainment	2,060,000,000
Publishing and Printing	128,000,000
Scientific and Photographic	5,090,000,000

Source: U.S. International Trade Commission, 1988

Piracy also curtails employment in U.S. industries, according to the ITC report. Forty-three respondents to the ITC questionnaire reported that inadequate protection of intellectual property rights resulted in the loss of 5,374 jobs.¹¹ A 1984 ITC report on the effects of foreign product counterfeiting estimated that 131,000 U.S. jobs in five industrial sectors were



Videocassette duplicating machines in plant of alleged pirates raided in Manila, Philippines, in 1987. Photo courtesy of MPEAA.

lost in 1982 due solely to foreign product counterfeiting and similar unfair trade practices.¹²

Other reports have also cited substantial losses to piracy. The International Intellectual Property Alliance, which represents 1,600 companies that produce and export copyrighted products, estimated losses of over \$1.3 billion in 1988 in 11 "problem" countries.¹³ Piracy losses in those countries totalled \$547 million for the U.S. computer software industry, \$326 million for the U.S. book publishing industry, \$272 million for the U.S. motion picture industry, and \$192 million for the U.S. recording industry.

DAMAGE BEYOND THE CASH REGISTER

Foreign commercial piracy also causes other, often noneconomic harm to the public. Consumers buy pirated goods that tend to be of lower quality than legitimate goods, with little or no warranty protection.¹⁴ In the case of some pirated products, their poor quality can cause personal financial loss, substantial losses in business productivity or data, and even dangers to consumers' health and safety.¹⁵ Bogus amphetamines and tranquilizers have been blamed for deaths and paralysis, and application of a counterfeit fungicide led to the loss of 15 percent of the coffee crop in Kenya, the General Accounting Office has reported.¹⁶

Finally, many economists and officials of developed countries argue that adequate protection of intellectual property rights is necessary to provide economic incentives for future technological and creative innovation.¹⁷ Without protection, investment in creative activity withers, and the flow of new technology and information to the public dwindles.

TECHNOLOGY HAS BEEN GOOD TO THE PIRATES

Piracy of many kinds of intellectual property has soared in recent years with the spread of the same electronic technology that makes it easy and inexpensive for consumers and legitimate businesses to get access to, copy, store and transmit data, pictures and sounds. Fiber-optic technology can transfer 100 average-length novels over a distance of 100 miles in one second, for example.¹⁸ Optical disc systems enable users to collect entire libraries in their own homes.¹⁹ The proliferation of video- and audio-taping equipment has undermined the movie and music industries' ability to stop unlawful copying of their productions.²⁰



A relatively small investment (for equipment such as this set-up in a raided California plant) puts a pirate in business. Photo courtesy of Recording Industry Association of America.

The equipment makes possible black-market industries. Audio pirates in this country use sophisticated machinery to produce cassette tapes virtually indistinguishable from legitimate recordings: label printers print and apply labels directly onto tape shells, hydraulic machines load blank tape into the cassette shells, duplicating machines record several blanks simultaneously from a master at 64 times the playback speed, and other machines finish the packages in shrink-wrap. Similarly, personal computers enable operators to make exact replicas of computer software in the privacy of their homes or offices, or enable them to access, retrieve, copy, and store information from someone else's computer, often without their knowledge or consent.²¹ Before xerography, good copies of text were available only by printing. Before compact discs and digital audiotape, high-quality copies of music were available only through very expensive analog tape systems or record press-

ing. Now an unprincipled entrepreneur can go into the piracy business for a relatively small capital investment.

These advances hamper the enforcement of antipiracy laws and far outpace governments' ability to respond. As OTA has noted, these technologies are making traditional civil suits largely ineffective as a means of enforcing intellectual property rights.²² Unlike traditional publishing and broadcasting, computer networks and personal computer use are highly decentralized and virtually impossible to monitor, as is access to satellite transmissions.²³ To a great extent, many rights holders have no way of knowing when their rights are being infringed and royalties are due to them.

New technologies often do not neatly fit into existing types of intellectual property protection, particularly copyright law.²⁴ As a result, rules to determine royalties in various media have developed separately. For example, the United States, Japan and Sweden now protect semiconductor design with legislation drawn up specifically for that technology.²⁵ Biotechnology is gaining patent protection in the United States, but many countries have not yet extended similar protection.²⁶ When cable television systems began to retransmit "distant signals" from out-of-town TV stations, Congress responded by requiring the systems to pay royalties to program copyright owners under a compulsory license.²⁷ As communications networks begin to interconnect different media, the old rules begin to break down, leaving copyright protection partial and often uncertain.²⁸

Copyright has traditionally protected the way an idea is expressed, rather than the idea or information itself.²⁹ In the area of computer software, copyrighting a program may leave it unprotected because a competitor can often skirt the law, altering the originator's expression of the program slightly while maintaining its substance.³⁰

Despite the passage of laws, however, the broad diffusion of video, recording and computer technology has made copyright enforcement extremely difficult. Two examples:

CASE STUDY IN HIGH-TECH PIRACY I: SUBSCRIBER FEES LOST IN SPACE

Tampering is believed to have compromised perhaps 400,000 of the decoders designed to allow cable tele-