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Knowledge Power: Intellectual Property, Information, and Privacy

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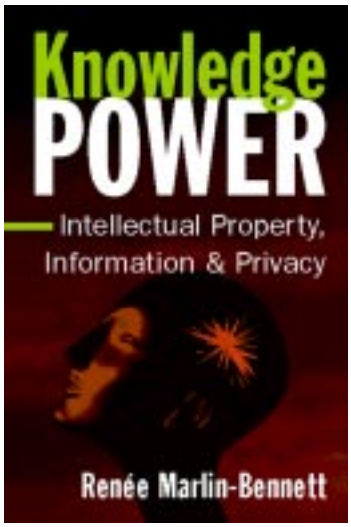

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Introduction: Products of the Mind

To create something from nothing: in all the natural world, this is a uniquely human ability. Using our minds, we originate works of art, generate inventions, accumulate knowledge, and discover truths about the world we live in. What sets the Information Age apart from prior periods in history is the price tag we put on these intellectual creations. The "new" economy depends on buying and selling ideas and facts, intangible and ephemeral though they are. And here lie the policy conundrums that pique public interest and concern. What kinds of creative or innovative products become intellectual *property*, how encompassing should these rights be, and for how long should these rights last before the creation or innovation enters the public domain? When do compilations of *information* become proprietary, and what kinds of property rights are granted to owners of sets of facts? When the information compiled into a dataset is personal information, what rights do the persons whose information has been recorded have? Finally, how is the situation complicated by a globalized economy in which intellectual products flow more freely than ever before?

The triad of intellectual property, information, and privacy, three political-legal concepts, is linked by the connection to the mental efforts of human beings. *Intellectual property* refers to copyrights, patents, trademarks, and similar means of marking ideas as one's own. *Proprietary information* is exemplified by databases of information, generally owned by firms. *Privacy* pertains to the control that individuals have over "their" information.[1] The legal and social meanings of these concepts are contested. The laws of different

countries do not necessarily coincide with each other, and the rules of the game have changed over time and across cultures. Laws regarding intellectual property, information, and privacy are often out of sync with people's expectations. Most important, though, is that intellectual property, information, and privacy are fundamental to power in the interconnected global political economy of the twenty-first century.

There are no "natural" rules for intellectual property and privacy. Who gets to make the rules of the game? The answer can be found in an ongoing political process, grounded in historical and cultural circumstances. The end result is the current convoluted and dynamic situation. For example:

- Scientific inventions are property, but basic scientific discoveries are not. (An x-ray machine could be patented, but the discovery of x-rays could not.)
- Folk knowledge is not property, but a drug formula developed, in part, on the basis of folk knowledge is.
- Some compilations of information are considered to be proprietary (e.g., a marketer's database). Others are owned by governments and are either held in secret (information linking name, address, social security number, and tax filing information) or made public (landownership records, public library catalog holdings). Yet other compilations of information, such as names and telephone numbers listed in a published directory or the facts in an encyclopedia, are considered unowned all together.
- Citizens of the European Union (EU) have much more control over what happens to the information that they disclose to firms than do citizens of the United States. But because Americans have traditionally restricted the government's ability to collect information, one could argue that in the United States government is more limited by law in what it can do with citizens' personal information than are firms. Of course, citizens of countries that do not protect personal freedoms may have no control whatsoever over their personal information.

Better and faster telecommunications technologies mean that we can send ideas almost anywhere on the planet, twenty-four hours a day, seven days a week. The words, images, music, and numbers—"content"—can be transmitted almost instantaneously via telephone, fax, and the Internet. These dramatic changes have led to a fundamental

change in the nature of global markets. A generation ago, Rita Cruise O'Brien and G. K. Helliener presciently wrote: "There is every indication that the sharpest aspect of competition in the future may be based more on the use of specialized knowledge, information, and new technological capacity for its communication and use than on more traditional factors."[2]

Today, intellectual property and information have become increasingly valued assets themselves. In addition, unwanted flows of personal information are an invasion of people's privacy, which can threaten livelihoods, social relations, and physical security. The commercial and security value of content being sent hither and yon heightens the importance of rules and the political process of rule making.

Rules for protecting mental efforts as intellectual property or proprietary information (*information property*) involve balancing the interests of the creator/innovator/compiler versus the public at large. When people and firms can profit from their intellectual labors, they have an incentive to engage in such tasks. Intellectual property rights and newer rights that protect compilations of information make it possible to profit from creativity, inspiration, and the hours spent collecting data and putting it in a useable format. Society as a whole benefits from the added store of human knowledge, the increased productivity, and the additional opportunities for enjoyment of the arts that property rights provide.

Be that as it may, if these property rights are too extensive or strong, we end up endangering the right of the public to share freely in our cultural, scientific, and technological heritage. The oft-cited U.S. constitutional provision enabling the protection of intellectual products is found in Article 1, Section 8 (emphasis added): "The Congress shall have Power . . . *To promote the Progress of Science and useful Arts*, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."

Thus the public purpose of granting intellectual property rights, under the U.S. Constitution, is the promotion of the public good. Overly strong property rights choke off future progress. At what point do we cross the line, elevating the rights to property over responsibilities to contribute to the public good of promoting progress in science and art?

Threats to equity emerge as well. First, individuals and firms are more likely to gain property rights to intellectual products than are communities. The system of intellectual property and related law

assumes an identifiable individual (person or firm) as the creator or inventor. The process of applying for and being awarded property rights does not work well when the intellectual product results from communal activity—say, the efforts of generations of village farmers breeding a better plant variety. Second, the process of getting property rights can be extremely expensive. Even more expensive is the cost of monitoring global markets for infringers and litigating to stop them. These obstacles to enjoying property rights in innovation, creativity, and information affect people living in the developing world most acutely. As a result, an *intellectual capital divide* separates rich and poor countries. People in poor countries can reduce this gap only if they have fair access to new knowledge and can themselves benefit from property rights, appropriately implemented and enforced. We need, I believe, to look at intellectual property and proprietary information from the perspective of the *global* public good.

Ownership and control of information are also relevant at the personal level. Individuals' power over their own lives depends on their ability to control the flow of information of concern to them. The opportunity for benefit or harm increases with the economic value of personal information. Databases allow marketers to compile personal information that helps them identify likely consumers of their goods and thus streamlines their advertising. This (arguably) provides consumers with more of the junk mail they want and less of what they don't want. Databases that allow researchers to identify genes associated with disease have obvious benefits. These are tools to help find cures, prevent illnesses, and improve quality of life. The downside is that losing control of personal information really bothers many of us, both as consumers and as citizens. We feel that our privacy is increasingly being invaded. We are even more insecure when personal information is used without our consent for purposes we know nothing about.

Current policy problems concerning intellectual property rights, proprietary information, and privacy point to the role that ownership and control play. *How do the ability to own intellectual property and information and the ability to control how information flows become a source of power?* This is the book's central question. But there are more questions: How does ownership or control of products of the mind translate into wealth or into political-military might? What role do markets play in creating opportunities for the ownership and control of information? What role do technological breakthroughs play

in changing the social, economic, and political playing field? And perhaps most interesting, how did we as a global society get where we are today in terms of placing value on information, and where are we likely to be going?

The political, economic, and legal language surrounding these topics can be off-putting, and the rules can seem arcane and indecipherable. The subject matter becomes much clearer when viewed in the context of our everyday lives. In the section that follows I introduce three familiar examples of the concepts at hand: aspirin, sports statistics, and increased surveillance after the terrorist attacks of September 11, 2001.

■ Intellectual Property: Aspirin

Intellectual property represents the commodification of creativity or innovation. The most common forms of intellectual property are copyrights, patents, and trademarks, but several "related rights" fall into this category as well. Governments grant time-limited property rights in inventions and creative works to encourage people to spend time and other resources innovating and creating. (Trademarks are the exception to the time-limited rule.)

In the United States, *aspirin* is a generic term, but in Canada and several other countries, *Aspirin* spelled with an uppercase *A* is a trademarked brand name. In either case, we are talking about acetylsalicylic acid (ASA). The story of aspirin's development and marketing brings out the contingent quality of assigning (and revoking) property rights in creativity and innovation.

The latter part of the nineteenth century marked the beginning of pharmaceutical research, development, and marketing as an industry. It was during this time that several researchers successfully isolated forms of salicylic acid (derived from willow bark or leaves) for combating fever and pain. The most commercially successful of these efforts was the 1897 synthesis of ASA by Felix Hoffmann, a chemist working for the Farbenfabriken vorm. Friedr. Bayer & Co. (later known as the Bayer Corporation of Germany). The brand name Aspirin was trademarked in Germany in 1899.[3]

Bayer was unable to get a patent on the product in its home country. At that time, German authorities granted patents in the chemical industry only for new processes, and Bayer's representatives were

unsuccessful in making a strong enough case that their process of producing acetylsalicylic acid was innovative. Nevertheless, ASA was an improvement over its closely related variants, such as salicylic acid and salicin, which had been well-known painkillers and fever relievers for hundreds of years. The older formulations caused stomach irritation and had an objectionable taste. Despite its failure to obtain a German patent, Bayer was able to convince examiners in the United States that its product was innovative enough to merit a patent.[4]

The disparity between patent decisions in Germany and the United States highlights the idea that intellectual property rights are not standardized; nor do they derive from natural law. Rather, governments determine what kinds of inventions they wish to recognize, reward, and encourage. At the time, Germany granted patents only to new chemical processes, not new products, whereas the United States granted patents to both. Thus the intellectual work instantiated in the product—the formula—was patentable in the United States but not in Germany.

Though Bayer was not wholly successful in obtaining patents on the product, aspirin, it was successful in getting rights to another type of intellectual property: a trademark. At the time aspirin was first synthesized, the majority of medicines were simply prepared by a druggist from basic products that were widely available and not produced exclusively by a single firm. The pharmaceutical industry was relatively uncommercialized even as late as the first half of the twentieth century, and brand-name drug formulations played only a minor role.[5] Most drugs were made from herbs and other vegetable products, and a patient on a typical visit to the pharmacist might come home with an essential oil, such as oil of clove for a toothache, or with an herb, such as gentian violet for thrush.[6] No company owned the rights to these products; knowledge of their usefulness was simply part of the communal store of available medical knowledge. In those days, pharmacists compounded prescriptions according to the doctor's orders, carefully weighing the required ingredients on a balance scale. The pharmacist would provide a specific commercial product only if the patient's physician specified a brand name.[7]

Bayer was able to use its trademark to full advantage by advertising to promote its brand name. Advertising linked to trademarked brand names more generally led to increased revenues. Writing in 1928, Dorothea Braithwaite noted the disparity in prices between

trademarked products and what we now call *generic* products. Before World War I, bulk ASA sold in Britain for 2 shillings per pound. She continued:

> The price of Bayer's Aspirin was about [18 shillings per pound] (less various discounts). It is extremely improbable that the extra care with which Bayer's Aspirin was prepared entailed a difference in cost at all proportionate to the difference in price between the [brand name] article and the commodity sold in bulk.[8]

Despite its ability to parlay this brand recognition into significant profits, Bayer's rights remained contingent on the laws and policies of governments; and governments' willingness to award or maintain intellectual property rights depended, at least in part, on the political situation. In 1939, Britain passed the Trading with the Enemy Act, which allowed the Custodian of Enemy Property to take control of a trademark owned by enemy firms. U.S. law contains a similar provision, and it was this rule that allowed a U.S. company to take over the "Bayer" trademark for aspirin during World War I.[9] Today, the global pharmaceutical industry is acutely aware of the power wielded by governments over intellectual property rights. Bayer is the maker of Cipro, an antibiotic effective against anthrax. In October 2001, the company, under heavy pressure from the U.S. administration of President George W. Bush, agreed to cut the price of the drug in half for U.S. government purchases rather than face the possibility of having its patent revoked.[10]

Although many details about intellectual property remain contentious, the category itself is widely accepted. Few people question whether copyrights and patents ought to exist at all. Less firmly established in society is the next subject, the notion of information as property.

■ Proprietary Information: Sports Reporting

Compilations of facts are increasingly recognized as proprietary information, or information property.

Until fairly recently, compilations of facts (telephone numbers in a telephone book[11] or facts in an encyclopedia) did not receive any special legal protection that altered their nature from public good to private property. Increasingly, however, property rights to data—to

compilations of information—are being asserted and protected by legal means.

Information is most valuable when organized in a manner that allows us to make useful (and valuable) connections between facts, but just plain facts may also have value. Imagine sitting in a history class in which you had to deposit a quarter for each historical event you learn about. Imagine restrictions on whether you could subsequently tell friends about those historical events. What if Albert Einstein "owned" his most famous equation, $E=mc^2$? Would we need to pay royalties to his estate to study physics? Though such scenarios sound preposterous, a discernable trend exists toward granting property rights in information.

Some firms have even asserted that they own certain rights, but at least for now the courts have tempered such claims. In 1996, Motorola and STATS, a sports statistics company, operated a joint venture, SportsTrax, to market play-by-play descriptions and other statistics in almost real time via pager messages. The National Basketball Association (NBA) sued Motorola and STATS, claiming that the companies' joint venture infringed on copyright and (according to applicable state law) misappropriated commercial information. The NBA charged that the information about what went on at the game, at least as it was happening, belonged to the NBA.[12] Lower courts ruled in the NBA's favor; but in 1997 a U.S. circuit court of appeals ruled that since STATS reporters collected the information and the company formatted it for distribution, SportsTrax was not taking anything from the NBA. Because the STATS reporters use their own powers of observation to collect information, which is then translated into a new form for distribution, SportsTrax is selling an original product.[13]

But there may be other ways for sports leagues to own information about the events that happen during the play of the game. The National Football League (NFL) and Major League Baseball have adopted other strategies, which may be more resistant to legal challenges. The NFL has asserted that it has a copyright in play-by-play coverage (as opposed to the reporting of statistics and the outcomes of plays every few minutes). By controlling the contractual agreements connected to press credentials, the NFL has been able to maintain control over web-based dissemination of NFL information. To receive credentials, reporters are required to agree that they will not violate the NFL's rules on the dissemination of information. Only the NFL's officially sanctioned website is allowed to post play-by-play coverage

of games.[14] Similarly, Major League Baseball has begun an effort to increase its visibility online and to control access to information.[15]

This approach is not just a North American phenomenon; its impact extends to sports around the globe. It can be seen, for example, in the International Cricket Council's U.S.$500 million in earnings from the sale of media, sponsorship, and Internet rights. Also in Britain, a suit was brought by the British Horseracing Board to prevent owners of online gambling sites from using the board's data.[16] Exclusive contracts can be costly to consumers: in 1992 satellite television broadcaster BskyB won exclusive rights to broadcast English soccer matches, despite the fact that soccer fans would consequently need to purchase satellite dishes to watch Premier League games.[17] Information-starved fans may need to wait for their information when information is intentionally delayed, as the International Olympic Committee (IOC) did when it protected NBC's earnings by restricting Internet access to the Sydney summer games. The IOC even set up a special taskforce to surf the Internet, looking for unauthorized postings.[18] It is not, however, only the giant media firms and the teams themselves who benefit from such arrangements. Sometimes, new media service providers are able to use their skills to greater advantage, securing lucrative contacts. Recently, the Real Madrid soccer club signed a contract with Let Me Know Technology, an Israeli company, giving Let Me Know, in collaboration with Telefonica SA, an exclusive contract to provide sports information to Real Madrid fans via cell phones.[19]

Even though the owners of teams are justifiably concerned with maximizing profits, restrictions on the rights of the individuals to report what they themselves have seen is troubling to journalists and others who are concerned with access to information. "From a journalistic standpoint," noted a managing editor of *Wall Street Journal Online*, "it's hard for journalists to allow people being covered to dictate coverage."[20] By creating property rights in facts, the ability of the public to access those facts is restricted. In a free and open society, there is a tension between respecting proprietary information (e.g., by restricting access to certain facts) and the public's need or desire for facts. Baseball stats do not qualify as essential information, but they contribute to the pleasure that many sports fans and fantasy leaguers have in life. Within our political, social, and economic system, people are able to place value on recreation and the pursuit of happiness as a legitimate goal.

An entire industry has grown up around the provision and dissemination of sports statistics and other information. Sports journalists and fantasy league managers will suffer if the team owners' right to control information is too strong. In 1996, against the backdrop of negotiations at the World Intellectual Property Organization on a database treaty, the then–president of STATS, Inc., wrote:

> The "raw material" for STATS' analyses are sports statistics—the at-bats, shooting percentages, times sacked, goals scored type of figures familiar to every sports fan who reads box scores. STATS regularly accesses and uses the body of sports statistics which are compiled by the major sports leagues or their outside "official statisticians." STATS also compiles its own body of statistical information through STATS reporters who attend games or who observe public sources such as television and radio broadcasts. Both current and historical sports statistics have been a traditional feature of sports reporting and analysis for decades and have uniformly been considered to be within the public domain. Without free access to this data, companies such as STATS could not provide sports fans with the creative analyses they desire.[21]

The question of who has what rights to sports information remains open. Is knowing what is happening as good as seeing it on TV or listening on the radio? The sports industry fears that companies providing sports information in real time will compete with TV and radio networks, which pay handsomely for exclusive media arrangements. The value of the intellectual property in the games broadcast on TV or radio is diminished by the availability of competing proprietary information. As the means of communicating the game's events multiply—websites, 800 numbers, personal data assistants (PDAs), pagers—sports fans enjoy multiple options for keeping track of plays and statistics while doing the other things they need to do, and firms have opportunities for earning profits. With property rights as yet unresolved, the tension between free versus restricted access remains.

■ From Intellectual Property to Proprietary Information

The evolution of property rights in products of the mind—from patents, copyrights, and trademarks to proprietary rights for information—is only part of a larger evolutionary process. New efforts to

create property rights for information are the continuation of a trend that began in the earliest periods of human societies, with the development of rules governing property rights in tangible things.[22] Societies since time immemorial have placed rules on what can be owned, the conditions under which something is owned, as well as the rights the owner enjoys, and what obligations the owner bears.[23] Of course, all property rights are contingent on the historical and cultural context. By prescribing, proscribing, and permitting relations, actions, and outcomes, property rules reinforce the distribution of power and the values (both in the material and in the ethical sense) of society. As R. Kurt Burch notes, "Property rights . . . constitute systems of rule and domination."[24]

Property Rights

Property rights include:

- the right to own something—to have it in one's possession;
- the right to use something; and
- the right to alienate something—to be able to sell it or give it away.

In nineteenth-century England, philosopher John Stuart Mill referred to the right to use and alienate:

> The institution of property, when limited to its essential elements, consists in the recognition, in each person, of a right to the exclusive disposal of what he or she [has] produced by their own exertions, or received either by gift or by fair agreement, without force or fraud, from those who produced it.[25]

Societies develop laws to constrain and enable ownership, use, and alienation. One important set of rules specifies who can be an owner. In many legal systems across time and across cultures, women's rights to own property have been severely limited. In colonial America and continuing through the middle of the nineteenth century, a woman's husband gained all rights to her property when they married, unless a special contract—a *marriage settlement*—protected her rights.[26] In contrast, biblical evidence demonstrates that in ancient Israel both women and men owned property, including land.[27] A different legal relationship is exemplified by Roman law, in which the paterfamilias—the father of the family—was the actual owner of the entire

extended family's wealth (i.e., property held by all the men and women of the family).[28] Laws today specify what can be owned, as well as the conditions for its use and alienation: people can own pets, but it is illegal to treat them inhumanely. People may own cigarettes, but they may not smoke them wherever they choose or sell them to children.

Laws concerning intellectual property and proprietary information create new categories of what can be owned, who can be owners, and the conditions for use and alienation. For example, patents and copyrights provide—for a limited time—property rights to the people who invent and create. Rules protecting databases provide property rights to those who collect and organize information. Intellectual property and proprietary information laws prevent others from taking, using, and alienating the rights holders' intangible product without authorization.

It is fair to say that the overall historical trend has been to increase the scope of property rights: more people can own, more things can be owned, and there are fewer restrictions on use and alienation.[29] Although there are many examples of property rights that have been abolished over the years,[30] in the case of products of the mind the expansion of property rights seems even more pronounced. The evolution of ownership of scientific discoveries is one example. Prior to the middle of the seventeenth century, many scientists kept their findings secret so that no one would misappropriate the new knowledge and claim undeserved credit.[31] The establishment of scientific journals such as *Philosophical Transactions* of the Royal Society of London (1665) provided scientists an opportunity to disseminate the results of their efforts with their names firmly attached to their discoveries; to this day scientists often stress the importance of shared information and openness. However, this norm of openness often conflicts with the material interests of those conducting or sponsoring the research. And this is where the process of commodification comes into play. When a scientific discovery may potentially lead directly to a patentable invention, scientists have an incentive to avoid disclosing what they have discovered until that knowledge is protected by a patent.[32]

Commodification

Rules that create property rights for these products of the mind commodify them. The awarding of a patent, copyright, or proprietary

data right commodifies the invention, creative work, or data collection, and this legal sleight of hand changes the nature of the global marketplace. In the middle of the twentieth century, Karl Polanyi wrote of how new social rules allowing the commodification of land, labor, and money created the "great transformation" from feudal society into the modern market economy.[33] Today, we see how commodification of products of the mind has enabled another transformation, this time into the global Information Age economy. As with Polanyi's transformation, the transformation to the global Information Age has taken a long time but has accelerated with the advent of new technologies.

To be commodified, goods must be *scarce* and *excludable* (the classic definition of pure private goods), and in and of themselves products of the mind are neither. *Scarcity* refers to the finite resources necessary to produce the good or service, the consequence being that one person's consumption of the good diminishes the possibility of others' consumption; *excludability* refers to the ability to allow or disallow others from having access to it. Unlike tangible goods like turnips, ideas and facts do not fit neatly into such categories.[34]

Turnips are scarce because there is a practical and actual limit to the amount of turnips that the Earth can produce. In contrast, there is no limit to the carrying capacity for products of the mind. The fact that one person thought of an idea does not preclude another person from independently thinking of the same idea. Likewise, turnip ownership is excludable: the turnip seller can sell to one person but refuse to sell to another. But when a person disseminates an idea—sells an invention—there is no automatic means to exclude observers from taking the machine apart to see how it works and then building replicas.

Instead, property rights laws for intangible products of the mind create scarcity and excludability where neither existed before. By assigning exclusive, time-limited monopolies, these rules transform ideas and facts into private goods (which are scarce and excludable) or club goods (excludable but not scarce for members of the club). The resulting commodified products—intellectual property and proprietary information—exist because of these rules. The rights holders now have an incentive to create, innovate, and collect data because they are able to sell products knowing that the law prohibits others from imitating or copying their works. Under ideal circumstances, the bargain would provide a win-win solution: the rights holder makes money, and the public gains new creative, innovative, and

informational resources.[35] Of course, finding the perfect balance is difficult.

Balancing the interests of multiple parties is also a challenge for privacy policy, the final component of the knowledge triad.

■ Privacy: Surveillance After September 11

Privacy can be conceptualized as an information space attached to an individual.[36] The content of this space is personal information. *Privacy rights* can be understood as rights to control the flow of information in and out of this private zone. Advances in information storage, retrieval, analysis, and transmission are heightening concerns about violations of privacy.

Citizens and consumers are sensitive to the control of personal information. The terrorist attacks of September 11, 2001, have had the collateral effect of changing how Americans value privacy. Since those events the United States has been engaged in a war on terror against a shadowy network of people whose physical locations remain uncertain. For Americans, our equanimity has been disturbed, and we have come to realize how closely linked we are to the rest of the world, for good or for ill. As a consequence, U.S. political culture has shifted toward a greater acceptance of technologies of surveillance, technologies that cannot help but invade privacy in ways that would not have been acceptable prior to the events of that day. Americans are waiting calmly and patiently in line at airports to have their shoes and other belongings examined for explosives and weapons and presenting picture ID multiple times as they make their way from the check-in counter to the departure gate. Tom Ridge, secretary for homeland security, has called upon people to get to know their neighbors and what they are doing, incorporating terrorism prevention into Neighborhood Watch programs.[37] The U.S. Bureau of Citizenship and Immigration Service's rules for student visas require universities and colleges to put much more effort into keeping tabs on students.

In May 2002, the U.S. Department of Justice issued new procedures for the FBI, which is now charged with fighting terrorism as its primary responsibility.[38] The new procedures allow the FBI more latitude in conducting surveillance, with fewer restrictions to protect the privacy rights of the potential subjects. Many people are concerned about the appropriate balance between what the state needs to know

to protect the nation's security and what the individual has a right to maintain as private.[39]

The new guidelines are a major departure from the post-Hoover restrictions on federal law enforcement's ability to conduct surveillance. During the period J. Edgar Hoover ran the FBI (1924–1972),[40] the agency routinely conducted surveillance on U.S. citizens believed by the administration (or at least by Hoover) to be political foes. Influenced by Hoover's urging, the administration of President John F. Kennedy agreed to the surveillance of civil rights activist Martin Luther King Jr. The Secret Service was similarly involved in spying on Americans (particularly African Americans), and in 1972 *New York Times* columnist Jack Anderson provided the Congressional Black Caucus with a list of 5,500 African Americans on whom the Secret Service maintained dossiers. Included in this group was baseball star Jackie Robinson. The FBI, according to Anderson's investigative report, targeted moderate blacks simply because of their support for minority causes or their opposition to the Vietnam War. The FBI even conducted surveillance on Martin Luther King's wife.[41]

Public outcry over the Hoover-era activities resulted in new rules that limited law enforcement agencies' ability to collect information. Specifically, the new rules required FBI agents to obtain authorization from the Department of Justice before being allowed to intercept any verbal communication, unless they had the permission of all the parties to the communication.[42] This meant that undercover FBI agents could no longer routinely attend political rallies and other events to take notes on what was said or done by whom. The agents needed to convince the appropriate attorney within the Department of Justice that the monitoring of oral communications had a reasonable law enforcement purpose. These restrictions even carried over to investigations in which a civilian participant was willing to be wired with a recording device—so-called consensual monitoring. According to Attorney General John Ashcroft, who took office in 2001 under President Bush, "The number of requests for consensual monitoring that were not approved [in the years since the rule was implemented] had been negligible" because, he claimed, strict guidelines were adhered to.[43]

Nevertheless, perceived threats to security, whether from drug trafficking or politically motivated crimes, led to increased reliance on surveillance by law enforcement agencies during the conduct of their investigations, even before the terrorist attacks on September 11. Louis Freeh, director of the FBI during the administration of

President Bill Clinton, relaxed some of these privacy protections. In the wake of the Oklahoma City bombing, he encouraged increased powers for the FBI, including the use of surveillance to fight terrorism.[44] According to the *Washington Post*, the Clinton administration approved "sharply increased use of federal telephone wiretaps and other electronic surveillance."[45]

In the aftermath of September 11, Americans' sense of urgency for the fight against terror increased. This urgency, born of insecurity, produces pressure to allow the FBI and other law enforcement agencies to work more effectively and proactively by using information better. Attorney General Ashcroft's new rules for the FBI simplify the process for getting permission to collect information via consensual surveillance. Moreover, agents are now authorized to surf the Internet, collect information in public settings (including houses of worship), and purchase information from proprietary data warehouses to screen for potential security risks. The goal, of course, is to protect Americans by identifying terrorists and their plans before they have the opportunity to act. The side effect is that the FBI will end up collecting a lot of information about innocent people while trying to identify miscreants. These new procedures may enhance our security, but the new policies also raise important questions. For example, should the U.S. government be collecting information on people just because they voice opposition to the United States and its policies? The difference between defensible investigations and negative stereotyping based on religion and ethnicity has not yet been determined. Also, how will people even know that information is being collected about them? What kinds of redress are available to persons who are falsely branded as a suspect because of incorrect information?[46] When people lose control over who has access to information about them, their personal power has been diminished.

■ The Privacy–Intellectual Property–Information Connection

Rules establishing, protecting, and eroding privacy have a close, policy-relevant connection to rules governing intellectual property and—even more so—to rules governing proprietary information. With the commodification of ideas and information, *personal information* has newfound economic value: others (especially firms and governments) can reap material benefits from having access to facts about individuals. It

is a small step from creating and manipulating large databases to creating and manipulating large databases of information about individuals.

Personal information can be found in government as well as private databases. The state has a dual role, as the legitimate body for making, implementing, and enforcing rules and as a collector and owner of information. Yet access to data enables regulation and enforcement by private actors, as well. Sorted, cross-referenced data can tell a government if I am paying my taxes and whether I am spending more than one would expect given my income. Insurance companies might want to regulate my behavior by charging a penalty on my insurance if I smoke. The gathering of personal information makes it possible for government and private-sector actors to exercise such control. Likewise, governments and firms can also exercise control by preventing individuals from gaining access to information that they have an interest in obtaining.

In essence, privacy relates to the individual ability to control the flow of information across an imagined barrier that divides the private from the public.[47] Even though personal information has not been commodified in a way that gives a person ownership of information about himself, controlling the movement of personal information is critical to the meaning of privacy. Rules, again often in the form of laws, establish the conditions under which an individual can control that flow of personal information. If I cannot stop information about myself from being transmitted against my will, my privacy has been breached. Controlling personal information flows concerns not only unwanted disclosure but also other types of privacy breaches: when information is foisted upon me (e.g., as propaganda or as e-mail spam); when I am not allowed to put my personal information (e.g., political opinions) into the public; and when someone or some institution refuses to disclose information I want or should have (e.g., the failure of the tobacco industry to disclose information it possessed about the dangers of smoking). As we go through life and interact in society, we are constantly negotiating the location of the public-private boundary; and we are constantly trying to maintain control of the passage of information across that boundary.

■ Rule Making: Then, Now, and Tomorrow

The chapters that follow examine rules to regulate intellectual property, information, and privacy.[48] I have paid close attention to the

origins of these rules because history suggests the future trajectory of policy. I also examine current issues, including the challenges of balancing the rights of the individual against the rights of the community. What are the social rules enabling commodification, redefining intangibles as property, establishing property rights, and limiting and expanding the individual's right to privacy? What can be owned, and how does the public welfare—particularly the global public welfare—figure into the mix?

■ Notes

1. I give more detailed definitions later in this chapter.

2. Rita Cruise and G. K. Helleiner O'Brien, "The Political Economy of Information in a Changing International Economic Order," *International Organization* 34, no. 4 (1980): 445.

3. Anne A. J. Andermann, "Physicians, Fads, and Pharmaceuticals: A History of Aspirin," *McGill Journal of Medicine* 2 (1996). Also, for a complete overview, see Charles C. Mann and Mark L. Plummer, *The Aspirin Wars: Money, Medicine, and 100 Years of Rampant Competition,* 1st ed. (New York: Knopf, 1991). The history, as reported by the corporation itself, can be found in Bayer Group, *Company History* (August 2, 2001 [cited June 4, 2002]), available from www.bayer.com/en/unternehmen/historie/index.html.

4. See A. Samuel Oddi, "Un-Unified Economic Theories of Patents—the-Not-Quite-Holy-Grail," *Notre Dame Law Review* 71 (1996): 267. Britain also granted a patent, but it was subsequently ruled invalid.

5. See Robert P. Fischelis, "What Is a Patent or Proprietary Medicine," *Scientific Monthly* 46, no. 1 (1938).

6. Thrush is a yeast infection of the mouth, not uncommon in children.

7. I am thankful for the reminiscences of my father (of blessed memory), who earned his pharmacy degree in 1938.

8. Dorothea Braithwaite, "The Economic Effects of Advertisement," *Economic Journal* 38, no. 149 (1928): 30.

9. Bayer Group, *About Bayer: History* (January 15, 2003 [cited August 28, 2003]) available from www.bayer.com/en/bayer/history/ug_1925.php; "Bayer Takes Sterling North American Business," *OTC Business News,* September 15 1994; Allen Z. Hertz, "Proceedings of the Canada–United States Law Institute Conference, NAFTA Revisited; Shaping the Trident: Intellectual Property under NAFTA, Investment Protection Agreements and the World Trade Organization," *Canada–United States Law Journal* 23 (1997).

10. "Drug Patents," *Financial Times,* October 29, 2001.

11. *Feist Publications, Inc. v. Rural Telephone Service Company,* 499 U.S. 340 (1991).

12. SportsTrax was not paying the NBA for media credentials, but other, similar services were. See Paul Enright, "Sportstrax: They Love This

Game! A Comment on the *NBA v. Motorola*," *Seton Hall Journal of Sport Law* 7 (1997).

13. Maria D'Amico, *Sports Statistics on the Net, Online FAQ* (April 1997 [cited March 12, 2002]), available from www.madcapps.com/writings/faqsports.htm. D'Amico is an attorney specializing in intellectual property.

14. Kevin Featherly, "NFL, Other Leagues, Sell Exclusive Online Rights," *Editor and Publisher* 132, no. 44 (1999). Website owners try to get around the NFL's restrictions by posting descriptions that fall just shy of play-by-play. For example, PioneerPlanet's *Vikings Now* site "does not recount every single play. But it doesn't miss much. During the October 17 [1999] contest between Minnesota and the Detroit Lions, [the sites' reporters] posted messages to users a total of 50 times during the course of the game." See also Cicely K. Dyson, "Online Journalists Have Major-League Issues over Sports Credentials," *Asne Reporter 2001* (April 6, 2001 [cited March 14, 2002]), available from www.asne.org/2001reporter/friday/sports6.html.

15. "Major League Baseball Adds MLB Radio to Official Website Line Up," press release, July 7, 2000 [cited March 13, 2002], available from cbs.sportsline.com/u/baseball/mlbcom/pressrelease/mlbradio_070700.htm [note: link is no longer available].

16. The law invoked by the plaintiffs in this case was the new EU Database Directive, which I discuss in Chapter 10. Tony Samuel, "Sports Rights Are Valuable Too," *Managing Intellectual Property,* May 2001.

17. Joe Arace and Mark Hayes, "World League," *USA Today,* May 27, 1992.

18. Ariana Eunjung Cha, "Olympic Fans Face Online Hurdles: IOC Limits Airing of Sydney Games on Web," *Washington Post,* August 13, 2000.

19. Gregg Gardner, "Silicon Wadi," *Jerusalem Post,* January 24, 2002.

20. Rich Jaroslovsky, quoted in Dyson, "Online Journalists Have Major-League Issues over Sports Credentials."

21. John Dewan, *Comments [of the President of Stats, Inc.] on the WIPO Database Treaty and Sports Statistics; Letter to the US Commissioner of Patents and Trademarks* (November 22, 1996 [cited March 12, 2002]), available from www.public-domain.org/database/stats.html.

22. Brander Matthews, "The Evolution of Copyright," *Political Science Quarterly* 5, no. 4 (1890).

23. In this analysis, I am strongly influenced by Nicholas Greenwood Onuf, *World of Our Making: Rules and Rule in Social Theory and International Relations* (Columbia: University of South Carolina Press, 1989). Onuf, drawing on the work of John Searle and Max Black, provides a typology of social rules, depending on their purpose. *Instruction rules* identify social relations and define what objects are or are not; *directive rules* articulate orders or requests; and *commitment rules* specify promises that one party makes to another. What can be owned and who can own it can be understood as instruction rules, which identify what something is. In this book, I detail historical moments when instruction rules emerge. When, for example, did a sound recording become something ownable under the law?

The focus is on when and why something becomes property and when and why that property is commodified. Looking at commodification—the ability to buy and sell kinds of property—shifts the attention to directive and commissive rules. What are the limits of the sound recording owner's rights? How will governments promise to enforce those rights? What does the rights holder have to do to uphold the bargain? My discussion of rules is also influenced by Anthony Giddens, who divides rules into two types, those that relate to the constitution of means (rules about *relations*), and those that are normative (rules about *actions* and *outcomes*). Anthony Giddens, *The Constitution of Society* (Berkeley: University of California Press, 1984). See also Sue E. S. Crawford and Elinor Ostrom, "A Grammar of Institutions," *American Political Science Review* 89, no. 3 (1995); Howard Margolis, "Equilibrium Norms," *Ethics* 100, no. 4 (1990); and a review essay by Gregory A. Raymond, "Problems and Prospects in the Study of International Norms," *Mershon International Studies Review* 41, no. 2 (1997).

24. R. Kurt Burch, *"Property" and the Making of the International System* (Boulder, CO: Lynne Rienner, 1998), 154.

25. John S. Mill, *Principles of Political Economy with Some of Their Applications to Social Philosophy*, edited and with an introduction by W. J. Ashley, based on 7th ed. (London: Longmans, Green, 1909 [1870]).

26. Marylynn Salmon, "Women and Property in South Carolina: The Evidence from Marriage Settlements, 1730 to 1830," *William and Mary Quarterly* [3rd ser.] 39, no. 4 (1982).

27. See Joshua 15:17-19, for example.

28. Charles Donahue Jr., "Symposium: Relationships among Roman Law, Common Law, and Modern Civil Law: Ius Commune, Canon Law, and Common Law in England," *Tulane Law Review* 66 (1992).

29. For a discussion of this topic, see Suzanne Holland, "Contested Commodities at Both Ends of Life: Buying and Selling Gametes, Embryos, and Body Tissues," *Kennedy Institute of Ethics Journal* 11, no. 3 (2001); Christopher May, *A Global Political Economy of Intellectual Property Rights: The New Enclosures?* Routledge/RIPE Studies in Global Political Economy (London and New York: Routledge, 2000); and Edward A. Comor, "Governance and the 'Commoditization' of Information," *Global Governance* 4 (1998).

30. For example, the delegitimization of the institution of slavery eliminated the "right" of people to own human beings. See Ethan A. Nadelmann, "Global Prohibition Regimes: The Evolution of Norms in International Society," *International Organization* 44, no. 4 (1990). This is not to say that slavery no longer exists, because there is much evidence that it does. However, the predominant global norm no longer considers anyone to have a property right in another human being.

31. National Academy of Engineering, National Academy of Sciences, Institute of Medicine, Committee on Science, Engineering, and Public Policy, Panel on Scientific Responsibility and the Conduct of Research, *On Being a Scientist: Responsible Conduct in Research* (Washington, DC: National Academy Press, 1995).

32. National Academy of Engineering, National Academy of Sciences, Institute of Medicine, Committee on Science, Engineering, and Public Policy, Panel on Scientific Responsibility and the Conduct of Research, *Responsible Science: Ensuring the Integrity of the Research Process* (Washington, DC: National Academy Press, 1992).

33. Karl Polanyi wrote the seminal work that revealed how what becomes commodified is contingent on historical circumstances. Karl Polanyi, *The Great Transformation,* 1st Beacon paperback ed. (Boston: Beacon, 1957).

34. The commodification of services works in a similar fashion, though it is a bit more complicated because a service does not have the discrete characteristic of taking up a fixed amount of physical space, of having edges and borders. Nevertheless, the purveyor of a service controls the provision of that service. The service is provided only where and when the service provider is willing to work. The worker providing a service can easily stop the flow of the service by simply not providing it.

Commodification and the creation of markets for a good or service also requires the agreement in at least some part of society that it is legitimate for the good or service to be bought and sold. These markets may be legal or illegal (e.g., the market for heroin). A black market is no less a market for being illegal. An introduction to public and private goods can be found in Paul A. Samuelson and Peter Temin, *Economics,* 10th ed. (New York: McGraw-Hill, 1976). See also Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action.* Political Economy of Institutions and Decisions (Cambridge, UK, and New York: Cambridge University Press, 1990), which discusses common pool resources.

35. A caveat to this admittedly simplified discussion: in some circumstances, governments (and others) choose to provide products of the mind as public goods. By law, the U.S. government does not have copyright in its publications. Therefore, neither the government nor the workers writing at their federal jobs have a copyright in any thing they write for their jobs. Government scientists who publish articles in scientific journals, for example, cannot sign over their copyright to the journal because they do not have one to begin with. The situation for patents is different, however. The government does own patents.

36. Chapter 8 provides a more complete discussion.

37. White House, "Strengthening Homeland Security since 9/11," press release, April 11, 2002 [cited June 4, 2002], available from www.whitehouse.gov/homeland/six_month_update.html.

38. Federal Bureau of Investigation. "Facts and Figures 2003" [cited February 9, 2004], available from www.fbi.gov/priorities/priorities.htm.

39. And, in light of revelations about the failure of law enforcement agencies to use the intelligence reports that they received about the terrorists prior to the acts of September 11, whether the state has the ability to make sense of the information that it does gather.

40. Federal Bureau of Investigation, *History of the Federal Bureau of Investigation* [cited June 7, 2002], available from www.fbi.gov/libref/historic/

history/text.htm. At the time Hoover took the helm, the agency was named the Bureau of Investigation.

41. "Anderson Alleges Surveillance of Many Blacks," *New York Times*, June 28, 1972.

42. John Ashcroft, U.S. Attorney General, "Memorandum for the Heads and Inspectors General of Executive Departments and Agencies, on 'Procedures of Lawful, Warrantless Monitoring of Verbal Communication'" (May 30, 2002 [cited June 3, 2002]), available from www.usdoj.gov/olp/lawful.pdf.

43. Ibid.

44. Helen Dewar and Kevin Merida, "FBI Chief Urges Broader Federal Reach," *Washington Post*, April 28, 1995.

45. Jim McGee, "Wiretapping Rises Sharply Under Clinton: Drug War Budget Increased Lead to Continuing Growth of High-Tech Surveillance," *Washington Post*, July 7, 1996.

46. It is not unusual to find incorrect information or information taken out of context in databanks. According to the Electronic Privacy Information Center,

> in January 2002, a New York jury awarded $450,000 in damages to an individual who lost a job opportunity because his profile [in a commercial database] contained a false criminal conviction.

Electronic Privacy Information Center, Privacy and Electronic Records (June 1, 2002 [cited June 1, 2002]), available from www.epic.org/privacy/publicrecordsa. The source cites Obabueki v. IBM, 145 F. Supp. 2d 371 (2002).

47. Perhaps the most famous definition of privacy, the right to be left alone, was first outlined by Samuel Warren and Louis D. Brandeis, "The Right to Privacy," *Harvard Law Review* 4 (1890). My more expansive definition of privacy, as introduced below and elaborated in Chapter 8, encompasses this definition and the more recent definition of privacy as autonomy, which arises from *Griswold v. Connecticut*, 381 U.S. 479 (1965).

48. In essence, these rules comprise overlapping international regimes. Among the most widely referenced works on regimes are Oran Young, *Resource Regimes: Natural Resources and Social Institutions* (Berkeley: University of California Press, 1982); Stephen D. Krasner, *International Regimes*, Cornell Studies in Political Economy (Ithaca, NY: Cornell University Press, 1983); Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton, NJ: Princeton University Press, 1984); Fredrich Kratochwil and John G. Ruggie, "International Organization: A State of the Art on an Art of the State," *International Organization* 40, no. 4 (1986); and Volker Rittberger, ed., with Peter Mayer, *Regime Theory and International Relations* (Oxford, UK: Clarendon, 1993). I detail a dialectical approach to international regimes in Renée Marlin-Bennett, *Food Fights: International Regimes and the Politics of Agricultural Trade Disputes* (Langhorne, PA: Gordon and Breach, 1993).

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