

Intellectual Property: Protection, Innovation and Rights

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Ownership of the products of the mind include the right to bar others from utilising them, just as with actual land. When intellectual property rights are strictly upheld, the creator of a book or new computer chip may utilise the power of exclusion to charge other users a fee. Price-rewarding for the creator leads to more inventions and quicker growth, which is a kind of dynamic efficiency. Disseminating an invention after it is created enables more people to benefit from its benefits. Rights to intellectual property may also promote greater distribution. If the inventor lacks property rights, he or she can strive to keep the idea a secret in order to capitalise on it. In order to ensure that only his company could perform Shakespeare's plays, Renaissance Venetians jealously guarded the secrets of glassmaking. However, the inventor need not worry about the invention being stolen if there are strong intellectual property rights. The owner has the option to make it public and collect payments for its usage, such as licencing fees for patents or performance fees for plays, as opposed to keeping it a secret. Increased diffusion leads to greater usage when property takes the place of concealment, increasing static efficiency.

Even when the owner of an invention is compelled by solid intellectual property rights to spread it, this spread often ends before the point needed for static efficiency. The theory of monopoly explains why. A useful innovation improves an existing product or a method of manufacturing it. If there are no near alternatives to the innovation, obtaining a patent or copyright confers monopoly power, which allows the seller to increase the price. Owner-monopolist makes the user charge excessively high for social efficiency to maximise profits, resulting in insufficient utilization. Therefore, intellectual property legislation could lead to less innovation spread than necessary for static efficiency[1]–[3]. Copyright and patents both have the potential to be brief monopolies with a range in their scope and length. Intellectual property rights that are more restricted or that last for shorter periods of time often result in more dispersion and lower monopoly profits. Let's use an example where someone creates a book and someone else turns it into a movie. The author of the book owns the rights to the novel, while the person who adapts it for the screen owns the rights to the movie. In contrast, a wide copyright law grants the author of the novel ownership of the rights to the book and the movie, which are examples of derivative works.

Similar to this, various nations may have varied period limits for computer chip patents. Starting with limited, brief intellectual property rights, their expansion and extension reward the originator and promote further invention. Expanding and prolonging the intellectual property rights encourages distribution by raising user fees if the breakthrough can be kept a secret. As a result, boosting incentives for invention also, at least initially, enhances incentives for diffusion. Beyond this, however, extending the length or extent of the creator's property rights boosts monopolistic power, rewarding production but discouraging diffusion. As a result, the incentives for invention and distribution compete. Later, we discuss how extending the creator's property rights even more may ultimately hinder their ability to create and disseminate.

Consider bridge tolls to see the issue with diffusion. To be efficient, the toll must be the same as the marginal cost of using the bridge. The ideal toll is essentially \$0 since it costs nothing to let another driver to pass a clear bridge. Someone who appreciates crossing the bridge won't do so if the ideal toll is not \$0, which is a waste. Let's say the fee is \$1. Because no one would cross unless they are ready to pay \$.75, the toll eliminates \$.75 worth of benefits that might have been generated for free. For a crowded bridge, when greater congestion is the price of letting a different vehicle to pass, the conclusion is different. The best user charge is nearly \$0 since it costs nothing to let someone else to use a patented computer programme or musical composition. The charge that maximises earnings for the owner is, nevertheless, far more than zero. Therefore, intellectual property may lead to excessive user fees and insufficient diffusion[4], [5].

There are significant trade conflicts now because of the innovation-diffusion tradeoff. The world's industrialised nations produce far more inventions that lead to patents or copyrights than do its poorer nations. Therefore, the industrialized nations emphasise the advantages of robust intellectual property rights that safeguard its authors. In contrast, emerging nations profit from the rapid and inexpensive spread of technology. Therefore, the emerging nations lack motivation to enforce intellectual property rights that increase costs for their customers. Microsoft therefore wants China to stop duplicating its software illegally, but China doesn't seem enthusiastic about this endeavour. The end consequence is that the most recent versions of Microsoft software can be purchased for the price of a diskette at Hong Kong's open-air markets, and the United States is threatening to sue China in the WTO.¹ As China discovers that lax intellectual property laws hinder its own growth of software and other creative sectors, these tensions should decrease.

In its three main areas—patents, copyrights, and trademarks—intellectual property law tackles the innovation-dissemination tradeoff and addresses it in a variety of ways. However, intellectual property law is a historical accretion that grew without a sound scientific foundation. Property law has only lately been subject to economic study. However, even today's economic understanding is inadequate for the job. While intellectual property law necessitates an examination of innovation and developing technology growth theory, the standard method of economic analysis compares equilibria with stable technology static equilibrium analysis. The economics of information will undoubtedly advance, leading to fresh and more insightful criticisms of intellectual property law. With the resources at available, the economic examination of intellectual property law must continue in the meantime. In addition to lacking suitable scientific instruments, intellectual property legislation is inefficient from an economic standpoint because lawmakers are influenced by politically influential special interest organisations who prioritise their personal profits above the welfare of the country. High technology sectors are growing, which puts economic theory and the law to the test. The majority of legal concerns relating to intellectual property remain unanswered. This fact makes the topic both fascinating and perplexing[6], [7].

Patent

According to the economic justification for patents, granting an exclusive right to the creator of a novel, useful, and nonobvious invention or innovation promotes the development and adoption of novel processes, devices, and practises. But the need for the patent system has never been universally accepted. Longtime critics have maintained that the purported advantages of such system are not worth the drawbacks, notably the high costs and constrained productivity of monopoly.¹³ throughout fact, throughout the middle and late nineteenth century, numerous European nations, notably Sweden and the Netherlands, suspended their intellectual property systems due to serious worries about the negative impacts of the system. But how can society promote investment in discovery and dissemination if there is no patent system? The giving of rewards is one approach that may be used. These might be monetary incentives for specific successes or for broad ideas, and they can be provided by the state, the private sector, or both at once. The English government's quest for a precise way of determining longitude is maybe the greatest example of a public award intended to spur an innovation. Ships could fairly readily calculate their latitude—the distance north or south of the equator—using observations of the sun. However,

in terms of longitude, they were, uh, at sea. Being lost might have devastating consequences, and in some cases it did. The English Parliament made a decision in reaction to a well-known shipwreck. They offered a £20,000 prize in 1714 for the first person to successfully measure longitude at sea. Parliament established a Board of Longitude with Sir Isaac Newton as its Prime Commissioner to assess the submissions, and they mandated a test journey to the West Indies with predetermined success conditions.

John Harrison, a clockmaker and carpenter from Yorkshire, believed that a highly accurate clock held the secret to accurately determining longitude. Most of the other innovators who sought the award believed the solution resided in precise celestial object observations. Harrison had the realisation that it took the Earth 24 hours to complete one full revolution, or 360 degrees. The consequence is that the Earth rotates 15 degrees every hour of every day. A traveller may set his watch for London time and compare it to the time when he arrived in Moscow if he was travelling from London to Moscow. He would discover that his watch read 9:00 when it was noon in Moscow, allowing him to determine that Moscow is 45 degrees to the east of London in terms of longitude. One might determine how far around the Earth they had travelled if it were feasible to calculate the time difference between a ship at sea and a fixed place on the Earth's surface like London. You would need a very precise clock for this technique of measuring to function. And Harrison set himself the goal of doing just that.

Ship clocks were unreliable in the eighteenth century because the motion of the ship interfered with the mechanism. Harrison ultimately created the H-4 ship's clock, which was very precise, in 1759. Harrison's son, William, travelled to Barbados to supervise the test after the Board of Longitude ordered it to be conducted aboard a ship sailing from Portsmouth to Barbados in 1764. The clock worked flawlessly, but competitors prevented Harrison from winning the award until his son made a powerful and effective plea to King George III. years after starting his search, Harrison at last obtained his prize. This event did not deter England in the least. A prize was subsequently provided by Parliament for the first effective smallpox vaccine.

Numerous individual prizes indeed, a rising number of them are created to encourage a certain kind of creative endeavour. The Ansari X Prize, which was established in 1996, famously offered \$10 million to the first private team that could finance, develop, and launch a spacecraft that could carry three people to a height of 100 km 62.5 miles above the Earth, return to Earth without incident, and then repeat the journey with the same ship in less than two weeks. In October 2005, a team led by Burt Rutan and Microsoft cofounder Paul Allen took home the award. The Progressive Insurance Company has offered a \$5 million reward for the first team or person to create an internal combustion engine automobile that can go 100 miles on a single gallon of petrol.

Organizations as Property

Organisations that possess property, such as land, buildings, and equipment include families, clubs, churches, cooperatives, trusts, charities, and the state. But an organisation is not the same as the things it owns. In certain organisations, the assets may be bought and sold by the members, but the organisation itself cannot be sold. For instance, no one owns a state, club, church, cooperative, family, club, or charity. Owners of companies, in contrast, purchase and sell the company as a whole as well as its assets. In a nutshell, many organisations are properties, and some are. Organisations that are owned and those that are not play various functions in society. While businesses are crucial to production and economic expansion, unowned organisations are crucial to social life, religion, and governance. We'll discuss how the differences in ownership and functions relate to one another. Think on what an organisation is to start. Offices like Chairman, Treasurer, and Ombudsman are often formed by laws and contracts and have a structure inside organisations. All members of organisations have responsibilities to fulfil, even if some hold offices. Roles like mechanic, buying agent, and accountant are created through standardisation in the division of labour. An organisation may achieve its objectives by coordinating the behaviour of its members by providing a framework of offices and duties. When coordination is effective enough, observers of the organisation assign the group as a whole, rather than

simply to individual members, objectives. As a result, we may say that an organisation is a set of positions and offices that enable collective activity.

Organisations modify their internal structures to boost productivity or shift objectives. Owned organisations make adjustments in reaction to market demand. For instance, if corporate officers don't perform, their firm could be acquired by a new owner who dismisses the existing management and hires new ones. In contrast, since no one may purchase or sell an unowned organisation, it is not subject to pressure from the market for organisations. We must think about how a market for organisations alters such organisations' behaviour. The bargain theory of property put out in this book states that markets often shift ownership of property from those who value it less to those who do. As a result, the market for organisations tends to shift ownership of organisations from those who value them less to those who do. Since companies are mainly tools for making money, their owners often assign a value to them based on their profitability. As a result, the market for companies favours giving ownership of each firm to those who can benefit from it the greatest. Profitability determines the societal value produced by a firm under the ideal circumstances outlined in the concept of perfect competition. When these requirements come close to being true, the market for businesses increases national wealth by distributing ownership to those with the best skills for managing firms.

There are no markets to transfer ownership of families, clubs, churches, cooperatives, trusts, charities, or states to those who can benefit from them the greatest since no one owns any of these entities. Therefore, making money is not these organisations' main goal. The majority of members believe that these organisations mainly serve other functions rather than being tools for acquiring riches. If these organisations were privately held, pressure from the market for corporations would force them to compromise their mission for financial gain. Therefore, no one should be the owner of a business whose primary goal is not profit, which is exactly what we see. Property is controlled at the owner's discretion, including the ability to change it. When a company is owned, the owner often has the authority to modify the jobs and offices inside it as well as the employees that hold them. Often, the owner's ability to govern an organisation via legal means is sufficient. However, no one may have control over the offices and functions of an organisation if it is not owned. Ownership is often replaced with governance. Politics and group control are components of a government system.

For example, in a tiny business, the owner controls it and uses it whatever he pleases, but in a club, church, cooperative, or democratic state, members make choices together and participate in politics. Ownership is often the greatest way to pursue money, while governance is typically the best way to pursue broader objectives. Various organisations serve a variety of purposes, with corporations' main objective being to maximise profits. The market for businesses aids in maintaining management's attention on this objective. However, markets for companies are often thin, which means there aren't many buyers or sellers. To provide an example, the economic downturn at the start of the twenty-first century and the terrorist attack on the World Trade Centre led to a sharp fall in air travel. Many but not all airlines are not profitable under this situation. The owners of unsuccessful airlines are under pressure to sell them as a result of this circumstance. Due to the high cost of purchasing airlines and the specialised skills required to operate them, there are not many possible purchasers. The airline industry is thin in that there aren't many buyers and sellers. Antitrust regulators may forbid one airline from combining with another, which exacerbates the issue of narrow markets. Blocking mergers that would thicken product marketplaces often makes the market for firms smaller.

Pressure from competitors lessens when a market dwindles. Particularly, firms with narrow marketplaces are free to pursue objectives other than maximising shareholder returns. The history of corporation law must be understood in order to fully grasp this truth. The concept of a corporation is a very ancient one. For instance, the British government formerly partially supported itself by giving huge firms exclusive licences to expand commerce in the colonies. For instance, once the Hudson's Bay Company was established in 1670, it was soon in charge of the fur trade and other enterprises in the region that included one-third of modern-day Canada.

These historical businesses are distinct from contemporary corporations because to two significant legal changes. First, the ancient corporations were subject to geographic and activity restrictions due to their charters, much as the Hudson's Bay Company. Modern organisations, on the other hand, may engage in nearly any kind of business wherever. As an example, a company founded in Indiana is able to do nearly any kind of business in any other state in the United States. Corporations are prohibited in the United States from operating in a few business sectors that are exclusive to partnerships, such as law and accounting, or that need separate formation, such as commercial banks. Increased rivalry among firms results from the removal of geographic and activity constraints.

Second, the debt of the historical companies was owed by their owners. For instance, if the Hudson's Bay Company had declared bankruptcy in the eighteenth century, its creditors could have been able to collect their debt by taking the investors' riches. People who invest must closely monitor and oversee the firm's policies since they are subject to infinite responsibility for the debts of the company. Modern businesses, on the other hand, are not held responsible for their obligations. To provide an example, if an airline declares bankruptcy, its creditors may sell off its property, but they are prohibited from seizing the houses, vehicles, or bank accounts of its investors. Due to restricted liability, stock investors incur the risk of losing only their original investment. Investors are able to invest in a firm thanks to limited liability without having to closely monitor or regulate the company's practises. A part of the larger issue of separating a company's assets from those of its owners and management is limited liability. Limited liability shields the company's owners' personal assets from the company's creditors.

An equally significant corpus of legislation shields the company's assets from the creditors of the owners. When assets are divided, this is referred to as partitioning, and when they are not, it is referred to as co-mingling. In contrast to previous practise, modern corporate law separates the assets of businesses from their owners. The separation of ownership from control—commonly referred to as a situation has been made possible by limited liability. This statement alludes to the reality that many investors in big businesses that are traded on stock exchanges don't closely watch them and have little power over them. Occasionally, a small group of powerful investors keep an eye on and manage the company. However, it happens often that none of the shareholders actively manages the firm. Instead, the management of the company is in charge. The majority of investors want to profit, hence they want the management to increase revenue. But the managers have their own objectives that they must achieve. Managers may be prevented from pursuing objectives besides maximising the company's earnings by a competitive corporate market. The price of a company's stock is often bid up by the stock market until it reaches the total of the company's estimated future profits discounted to present value. The predicted future earnings of the firm decrease and its stock price drops if management are unable to maximise profits.

In these situations, a third party may try to acquire the business and install a new management team. Econometric data supports this theory's prediction that a successful hostile takeover raises a company's stock price and keeps it there. Therefore, the new executives must increase the purchased company's profitability. Managers are less likely to stray too far from their objective of maximising the company's profitability when they are aware of the risk of a hostile takeover. In contrast, a small market for firms reduces the likelihood of hostile takeovers, allowing management to focus on objectives other than earnings. Recent scholarship and research on businesses have focused heavily on how the law either resolves or exacerbates issues brought on by the separation of ownership from control. For instance, managers use several legal strategies such as poison pills, golden parachutes, lock-ups, and non-voting stock to lessen the likelihood that someone would purchase the business and hire new management. Additionally, managers have been successful in convincing lawmakers to pass laws that would weaken the market for corporate control, most notably the Williams Act.

We want to tie this discussion of organisations as property to the consideration of contracts in Chapter 8 before moving on to a new subject. There is a broad analytical structure to the issue of ownership and control separation in contemporary corporations. Owners often give someone else authority over their possessions. Economists refer to the owner in these situations as the principal and the controller as the

agent. Writing a contract that offers the agent incentives to handle the asset in the best manner for the principle is the principal-agent dilemma. The principal-agent model is used in a subsequent chapter to establish the theory of contracts.

Public and Private Property

The number of individuals impacted determines the differences between private and public externalities. The number of owners may also be used to differentiate between private and public ownership. Private resources are those that belong to a single person. A closely held corporation or close corporation is a business that has a limited number of investors and is referred to as a private company. Public companies are businesses with plenty of stockholders. Likewise, the government is referred to as the public sector. When the state possesses a resource, like a public park, we may refer to it as belonging to all residents or as belonging to no one except the state.

What difference does it make how many owners there are? We mentioned negotiating between different property owners, such the farmer and the rancher, while addressing the Coase Theorem. When numerous individuals possess the same property, bargaining also happens. For instance, the company partners will haggle about how to divide up the duties. The distinction between private and public ownership may be characterised as a variation in the negotiating framework.

People are divided into tiny groups by private ownership. Secret owners may enhance their interests by working with a limited group of individuals as long as externalities remain secret. Small-group negotiations often lead to collaboration and increase productivity. Therefore, when production and utility functions can be separated or when externalities only impact a small number of individuals, the argument for private ownership is simple to present. Public ownership is a costly error under these conditions. A study of the oyster beds along the Atlantic and Gulf coastlines of the United States provides an example. Oysters develop a permanent attachment to a subaqueous substance early in their life, such as rock. It is easy to envision establishing private property rights in oysters for commercial fishing operators thanks to this connection. However, the states with commercial oyster businesses on the Atlantic and Gulf coastlines have not agreed on a uniform system of oyster property rights.

Some states have ruled that oyster harvesters must share the subaqueous places where oysters tend to gather; any of them may pick oysters from such locations without excluding another. According to other states' rulings, the state must make certain lands accessible for private leasing, and the lessee will have the typical rights to exclude and transfer with some restrictions. Professors Agnello and Donnelly were able to examine the relative efficacy of the private and communal property-rights regimes because to this distinction. Their standard for efficiency was labour productivity or, in the case of oyster fishing, output per person-hour. They discovered that the privately leased oyster beds were considerably more productive places to work than the community oyster beds. Simply put, the researchers of this study came to the conclusion that if all oyster beds had been leased privately in 1969, the average oyster harvesters.

The mountain pasture would need to be fenced, which would be prohibitively costly, in order to be divided among the different owners. Instead, the highland pasture is shared by all the villages, with each possessing a unique pasture that is divided by landscape features like lakes and mountain peaks. The meadows may be ruined and undermined by overuse if every resident of the community had the freedom to keep as many sheep they want in the communal pasture. In reality, the communities' efficient governance structures have prevented abuse and destruction of the shared pastures in Iceland's highlands. To safeguard and maintain the common pasture, they have established bylaws. The sheep are reared on separate farms in the lowlands during the winter after spending the summer grazing in communal pasture in the highlands.

The summertime permitted sheep population in the mountain pasture is adjusted to the pasture's carrying capability. According on how much acreage each villager uses to produce hay to feed the sheep in the winter, they each earn a piece of the overall income. Some debates about whether private or public

ownership is preferable to the other associate public ownership with free access to resources. This equation is too simple. In actuality, most public property is not open to the general public for free. For instance, while the national parks in the US are publicly owned, there is a price to access; many activities need reservations in advance a type of time restriction; and no one is allowed to chop wood or graze animals. In order for the tragedy of the commons to be totally devastating, there must be political inaction on the part of the government to allow resource devastation to continue. Some resources, including fisheries, seem to be at an advanced stage of this paralysis. There are signs of paralysis for other resources, but not the entire catastrophe. For instance, the federal government controls vast tracts of property in the American West and offers mining, forestry, and grazing leases on these grounds. The management of the federal domain is ineffective. The effect is a decline in the environment.

The fall of communism in Eastern Europe revealed a certain kind of property issue that had gone overlooked. For many years, many of Moscow's stores remained shuttered while crowded street kiosks sprung up in front of them. Too many individuals had the legal or practical ability to prevent anybody from utilising the potentially lucrative stores, so they stayed closed. The excess of socialist legislation passed by the communist government led to several vetoes. The mirror image of a sea where no one could stop anybody from fishing is a scenario where everyone could prohibit anyone from utilising a Moscow store. The issue with the Moscow stores was dubbed the tragedy of the anticommunist since the issue with the sea had previously been dubbed the tragedy of the commons. Collecting rights into bundles of useful private property may be severe and slow if an anticommunist forms.

Each resource has a private owner who has the power to restrict access by excluding certain individuals. Maintenance of boundaries is the responsibility of private landowners. When utility and production functions can be separated or when externalities only influence a small group of individuals with the ability to negotiate, private ownership works effectively. There are three types of public ownership. First of all, open access means that nobody can prevent anybody from utilising a resource. Boundary maintenance costs are nonexistent. When a resource is not crowded, open access is beneficial, but crowded conditions lead to fatal misuse. Second, political dominance enables legislators or regulators to enact access regulations. The most typical restriction on state property, including public areas, is limited access. Thirdly, the polar opposite of free access is unanimous consent, which forbids entry unless everyone concurs. Tragic underuse results from the necessity for unanimous agreement among numerous owners, while serendipitous underuse occurs in unique cases when the goal is to conserve a resource in its underutilized state.

It would be unexpected if a tiny, isolated hamlet in Iceland became politically paralyzed to the point that it was unable to administer public funds. However, managing public resources is significantly more challenging in a big, diverse nation like the United States. Selling federally held property is one way to lessen public ownership. If the land in the American West were turned over to private ownership, the market value of the goods produced by those areas would undoubtedly increase. However, this argument is unlikely to convince people who favor underutilizing the wilderness. The majority of ecologists agree that public lands shouldn't be managed to maximise their commercial worth. Everyone tends to believe that certain values, like liberty or truth, are more precious than riches at least on the margin; for some individuals, wildness is one such value. Liberty-loving individuals would never assess whether someone has the freedom to speak by considering whether others would pay more to listen to them or to silence them. In a similar vein, folks who value wildness would never determine whether to put condos where California condors' nest by comparing land prices between developers and ecologists. The transfer of public lands to commercial interests is often opposed by ecologists since their goal is to restrict development rather than to boost yield. Given how strongly ecologists and developers disagree, it is certain that significant resources will be spent in political battles for the control of public lands in the western United States.

Privatize Open-Access Resources

When land is held in common and open to the public, the rule of first possession often applies. An open access resource is a piece of real estate that is available for usage by a large audience. As an example, the public has access to the oceans, which are common property. The fish and marine creatures in the water are often the property of the person who captures them. Fish and marine animals have been hunted as a result, some to the point of extinction, much above economic levels. Similar to how public forests are over-harvested, common hunting grounds are over-hunted across most of the globe. The open-access policy is responsible for a significant portion of global soil erosion and forest loss. The economic absurdity of the issue is explained using a few technical terminology that follow. The biggest yield that is long-term maintainable is known as the maximum sustainable yield.

The application of labour and capital must increase until their marginal products are zero in order to maximise yield. Since the maximum sustainable yield has been exceeded in all of the world's main fisheries, the marginal product of labour and capital is presently negative. In these conditions, putting up less effort and spending less money on labour and capital would result in an increase in the catch in the fisheries. Similar to how chopping fewer trees and exerting less effort would enhance the production on many open-access forests, doing the same would increase the yield on many open-access pastures. Fisheries, woods, and pastures that are overused may be compared to factories that have too many employees and cause them to impede and slow each other down. In these factories, the overall output would rise simply by decreasing the total workforce. Assigning individuals to tasks with low productivity is the definition of irrationality.

Common resource overuse may be avoided by regulating usage in ways other than the open-access principle. One strategy is tied ownership. Small towns in Iceland, for instance, have historically linked access to shared pastures to productivity on private pastures in order to minimise overgrazing of such pastures. In particular, a calculation based on the number of animals each farmer supported in the winter from hay cultivated on private pastures in low lands determined how many animals each farmer was permitted to graze in the summer on the common, high grounds. Privatisation, which in this sense refers to the transition from public to private ownership, is another tactic to limit misuse. For instance, numerous people might cultivate land, go fishing, or collect coral from reefs. In contrast, a private owner has the right to restrict access to their resource. Giving whales, elephants, or land private property rights would restrict access by allowing only the owner. Thus, certain salmon streams have been turned over to private ownership, some towns have been awarded ownership of coral reefs, and homesteading property is transformed from public to private ownership.

This tradeoff occurs when common ownership is changed to private ownership: An open access policy encourages excessive resource usage, while private property rights call for expensive exclusion of non-owners. This concept predicts the point at which a society that is economically sensible converts a resource's open access regulation to private ownership. Open access is more affordable than private ownership when the resource is not overused and border upkeep is costly. But as time goes on, congestion might become worse and border maintenance technologies could advance [1], [8], [9]. There may come a day when private ownership is less expensive than open access. When border upkeep is less expensive than the waste produced by resource abuse, an economically sensible community will privatise the resource. This hypothesis provides conclusive claims about privatisation. It asserts, for instance, that the development of barbed wire, which reduced the expense of border upkeep in regions with a dearth of fence supplies, would encourage the privatisation of public lands in the American West. Another example is the prediction that when broadcasters start interfering with one another, property rights will be developed in the electromagnetic spectrum. Some facts support this theory's predictions, while others refute them. As the theory predicts, civilizations are apparently often rational, but not always. Politics produces negotiations and agreements that go against the dictates of economic efficiency.

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