### ON THE IDEA OF OWNING IDEAS: APPLYING LOCKE'S LABOR APPROPRIATION THEORY TO INTELLECTUAL GOODS

by

### ROLAND SPITZLINGER<sup>\*</sup>

The concept of property has a long tradition and it is widely accepted as a regulation scheme to allocate tangible scarce resources. Supporters of intellectual property rights tend to base their argumentation on traditional property rights theories as proposed by John Locke, Georg Wilhelm Friedrich Hegel and Jean-Jacques Rousseau. This presentation focuses on the question, whether Locke's labor appropriation theory can be applied to non-material goods.

The results show that despite the fact that labor provides a strong connection between individuals and resources it widely fails to justify appropriation of nonmaterial goods. Strong Lockean property rights in ideas must be refuted since they would harshly interfere with other civil liberties such as free speech, which Locke himself found extremely important. Furthermore, even partial appropriation seems problematic, given that private ownership is a precondition for efficient material production but not for the production of intellectual goods.

Since intellectual production is a social endeavor and creation ex nihilo is implausible intellectual laborers may only (partly) appropriate the fruits of their labor but not the entire value of their final produce.

• Locke argues that individuals are entitled to exclusively possess a resource to secure the production process. Given that intellectual production does not depend on exclusive ownership, intellectual resources remain in the public domain.

E-mail: r.spitzlinger@gmail.com

- It is only justified to appropriate the fruits of one's own labor, not those of others. This finding seems to be particularly controversial, given the prevalent practice of companies seizing the ideas of their employees.
- Appropriation of ideas must not hinder other people to appropriate their own share. Furthermore, this pool of intellectual goods must be bigger than the pool, which people could expect in a natural state, in which an intellectual property regime is absent.

#### **KEYWORDS**

*Intellectual property rights, copyright, patent, John Locke, labor appropriation theory, Second Treatise of Government* 

#### **1. INTRODUCTION**

When we think of property we usually refer to material things that we exclusively possess, such as tools, houses or land. The legitimate owner of such goods is entitled to a number of exclusive rights (or privileges) defined and protected by the local sovereignty. These include the right to exclusively possess, use, benefit, sell, consume and destroy the goods in possession (Honoré 1987). The concept of property has a long tradition and it is widely accepted as a regulation scheme to allocate tangible scarce resources. In recent years, the same notion of property is being increasingly applied to non-material goods as well. Contemporary property rights allow private parties and companies to own a great part of contemporary cultural expression, including literary, musical and artistic works, films, choreography, architecture, design, and advertisements. Furthermore, it has become possible to possess technical drawings, computer algorithms, circuit layouts and databases, geographical indications, maps, medical treatment procedures, business models, and even colors, sounds (e.g. the sound of a Harley Davidson engine), smells, DNA sequences and life forms (e.g. a genetically modified mouse). Arguments in favor of extending property rights to non-material goods tend to be based on traditional property theories. In particular, John Locke's labor appropriation theory is frequently cited as an adequate philosophical basis in support of strong natural property rights in ideas. Ulrich Schatz, director of the international division of the European Patent Office for example stated that:

*"it would be unfair to the inventor to allow his competitors to exploit the invention which is the fruit of his own substantial intellectual effort and fin-ancial investment. It is simply unjust to allow people to steal from somebody else the result of his creative effort. This is the basic ground of intellectual property as a whole (copyright and all the other items of intellectual property). It has been unquestioned for several hundreds of years as a basic moral principle in our society. (Schatz 1997: 224f)* 

Other authors draw a similar connection between Lockean justice and intellectual property (IP). DeLong (2002) acknowledges "real and significant differences" between intangible goods and "plain old property" but insists that changing the definition of IP is sufficient to bring them in line with each other. Epstein (2008) finds evidence of a "robust nature of private property rights" for land and "all forms of intellectual property", and calls for an end of limits on the terms of private licenses. Hull (2009) and others have criticized such moves for widely neglecting the complexity of expanding labor appropriation theory to intellectual goods. To assess whether defenders of Lockean intellectual property rights make a valid claim we shall return to the 17th century and re-capture Locke's original thought, to which we shall stick very closely in order to avoid over simplistic misinterpretation. In a second step we will then apply his theory to intangible goods. The success or failure of this venture shall help us answer the question, whether Locke's labor appropriation theory can indeed be expanded to the intellectual sphere.

#### 2. JOHN LOCKE'S LABOR APPROPRIATION THEORY

In the Second Treatise of Government (TG II) (see Locke 1988) Locke identifies property as the most important element of a just civil society, claiming it was primarily to protect individual property that the political state was created. To overcome the moral problem of private entitlements, Locke does not rely on any theory of positive right based on conventions or political decisions. Instead he argues that the legitimacy of private property derives directly from the (God given) equality of man in the state of nature (TG II §19) and the property rights in one's own body.

Though the earth [...] be common to all men, yet every man has a property in his own person: this no body has any right to but himself. The labour of

his body, and the work of his hands, we may say, are properly his. (TG II §27)

Locke then goes on saying that even though the fruits of the earth belong to humankind in common, it is hard to believe that God gave the earth to man without permitting him to take "a kid or a lamb out of the flock, to satisfy his hunger" (TG II §39). Therefore there must be a just way to appropriate natural resources, even without the need to reach consensus among all people. Locke believes to have found that solution in the mix of personal labor and common land.

Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property. It being by him removed from the common state nature hath placed it in, it hath by this labour something annexed to it, that excludes the common right of other men: for this labour being the unquestionable property of the labourer (TG II §27).

Locke's argumentation is based on the idea that nature itself - until labored on - has very little or no practical value for the human kind, and that its value is created almost entirely through labor. Comparing a privately owned, farmed land on one side with common land lying idle on the other side, he claims that at least ninety percent of the value of the land is the effect of labor (TG II §40). The same he believes to be true for water taken out of a fountain, for which it should belong to the person that drew it out and carried it away (TG II §28).

#### 2.1. PROVISOS: LOCKE'S SELF-LIMITATION

Locke was aware that granting infinite property rights may cause severe problems and eventually undermines the moral justification of the entire property system; hence he tried to adjust for it. Examining his work we find at least four important limitations that constrain the bold argument that everyone should be entitled to exclusive unlimited property rights over one's personal creations. (1) Do not steal. The first restriction is the moral imperative not to steal. It derives from the very heart of the property regime itself, which holds that an individual must never appropriate fruits of labor other than her own. This is because taking from other people as if it were mine would mean to deny the other person's right to enjoy the fruits of her hands. Hence, the deprived individuals would be no more but slaves, leaving them worse off than in the natural state, where men are born "with a title to perfect freedom [...] equally with any other man" (TG II §87). (2) Spoilage. The second restriction addresses the problem of spoilage. To avoid excessive claims, Locke delimits the amount of appropriable property by arguing that God gave the world to men for the purpose that the latter enjoy it. Therefore an individual may appropriate no more than "any one can make use of to any advantage of life before it spoils" (TG II §31). Since one can only enjoy limited amount of resources, anything "beyond this, is more than his share, and belongs to others" (TG II §31). (3) Sufficiency. Locke's initial theory assumes that there are enough resources for everyone to appropriate a fair share. However, in a world of increasing population and limited resources Locke has to account for scarcity. The third proviso therefore states that acquisition is only permissible if "there was still enough and as good left in common for others" (TG II §33). Only this way he can keep up his position that "he that leaves as much as another can make use of, does as good as take nothing at all" (TG II §33). (4) Social concerns. The fourth limitation addresses the social aspect of property. Given the social injustice of the time, Locke is aware that a strict property regime may cause severe inequality. Particularly old and sick people are often unable to fence off and farm their land. Even if every person invested equal labor, differences in the fertility of soil may lead to substantially different yields. Over time, this natural inequality will increase the gap between rich and poor, eventually leading to a point where the former accumulate so much wealth and power that they gain dominion over life and liberty of the poor. It is unlikely that people would have agreed in the first place to leave the natural state and sign a social contract leading to such consequences. Locke makes clear that the powers derived from private property must never trump civil liberties. In the First Treatise of Government (see Locke 1988) he writes:

[N]o Man could ever have a just Power over the Life of another, by Right of property in Land or Possessions; since it would always be a sin, in any man of estate, to let his brother perish for want of affording him relief out of his plenty. [...] and a man can no more justly make use of another's necessity to force him to become his vassal (TG I §42)

In other words, Locke imposes a moral duty of charity. Individuals are obliged not to exploit their weaker brothers and sisters but to provide them with everything necessary to survive.

#### 2.2. OVERTURNING MOST LIMITATIONS

Interestingly, as the argument further progresses, three of the four restrictions are transcended. The first proviso Locke does not seem to take serious at all. (1) As Macpherson (1978) points out in his critical analysis, Locke apparently believes that also "the turfs my servant has cut" (TG II §28, emphasis added) can become his (Locke's) property. This suggests that despite Locke's claim that people must not appropriate the fruits of other people's labor, he does not seem to be willing to walk his talk. (2) The spoilage restriction ceases with the introduction of money. Locke notes that while plums may easily rot in a week, nuts can last good for a year and shells, diamonds and gold last forever. Therefore a laborer "might heap up as much of these durable things as he pleased" (TG II §46). (3) Finally, the third restriction concerning sufficiency ceases because, according to Locke, a person that appropriates land by laboring on it does not lessen the common stock of humankind but actually increases the amount of goods available to all. Locke argues that private land is used in a vastly more efficient way than land held in common, at one point stating a productivity ratio of one to near a hundred (TG II §37). Therefore, a person can appropriate more than her share, if the additional goods derived from this expanded property outweigh the fruits from otherwise unproductive land, which Locke likely believes to be the case.<sup>1</sup> In other words, Locke claims that due to productivity gains based on property rights even the poorest people in society were better off compared to a world of natural state. (4) At the end only the social-humanistic proviso remains, obliging property holders not to exert their wealth against other people's liberties and to provide basic charity to those that would otherwise die.

<sup>&</sup>lt;sup>1</sup> American settlers frequently used this justification when they took away 'unproductively used' land from the native indigenous population.

#### 2.3. CRITIQUE

# 2.3.1. THE CASE AGAINST UNLIMITED PROPERTY RIGHTS IN RESOURCES

Locke claims unlimited property rights not only in the fruits of one's labor but also in resources, which he believes to be crucial for laborers to secure the benefits of their work. This argument is vulnerable given the fact that temporary property rights would be equally sufficient to protect the production process. Take the example of a fisher who sets out to mix her labor with the sea. To successfully catch a fish she depends on the exclusive dominion over the used fishing ground. Otherwise, competing fishers could interfere with her task, effectively depriving her of the fruits of her labor. Therefore, there is a prima facie reason that granting her an exclusive right over the resource is justified. However, we may ask, why should she be entitled to continue her exclusive right over the fishing ground after she pulled in her net and returned to the shore? There is no good reason why other fishers, swimmers etc. should not be allowed to use the very same resource at different times, if their actions do not harm each other's tasks. Therefore, it seems plausible that the resource must fall back to the common domain, once it is not necessary anymore for production.

#### 2.3.2. NOT ENOUGH FOR ALL

Another problem with Locke's argumentation concerns the sufficiency proviso. According to his theory, no acquisition is permissible if there is a lack of enough or as good for others. Only if everyone's needs are met, people may justly acquire a larger share. Given limited resources and excessive individual claims, clearly this condition is not met in the real world. There may have been sufficient resources during the time of Locke's publication but this certainly does not accord with today's world.<sup>2</sup> To meet Locke's proviso the extent of appropriation would have to be reduced to a level that really allows everyone to acquire an equal share. Above all it is doubtful that certain groups of individuals (e.g. sweat shop workers) in countries

<sup>&</sup>lt;sup>2</sup> It was certainly true for the fifty million mostly European migrants that settled the American continent around the time when Locke formulated his theory. Even if we imagine that the settlers granted Native Americans large parts of the territories, there would have been still more than enough unpopulated land that could be justly appropriated in line with Locke's thought.

with generally rich resources but highly unequal wealth distributions are really better off than in a natural state.

#### 2.3.3. COMMON ALTERNATIVE

Finally, Locke can be criticized on the basis that his theory omits other possibilities to regulate resources. It might be more conducive to both society and each member of society to refrain from privatization and keep certain resources in the common domain. Locke claims that individuals of the natural state agreed on their free will to bind themselves to a social contract that forms the basis for civil society. If this is true, why should individuals not be able to also agree on their free will to manage resources in common? Societies form common armies to defend their territories and they create institutions like police forces and courts to advance living conditions and justice. Is there a reason why people could not join forces to for example also build a common fleet to make better use of the sea and prevent overfishing? Locke himself seems to be uncertain whether all resources should be privately owned. While he generally dismisses restrictions in appropriating resources he does believe "the water running in the fountain" to be in the common domain (TG II §29). It is difficult to see, where Locke draws the line between private and common property.

#### 3. APPLYING LABOR APPROPRIATION THEORY TO NON-MATERIAL GOODS

Given a natural right to the produce of ones own labor, supporters of Lockean intellectual property rights argue that no difference should be made regarding its material or non-material form. Moore (2004) rightly points out that also intangible goods are fruits of labor. Who would doubt that knowledge production takes up substantial energy and considerable amount of financial resources? If we accept Locke's idea that each person has a property in her own including the labor of her body, and if we further accept that intellectual goods are the result of (intellectual) labor – just like potatoes are the result of (mostly) physical labor – then a person must also be entitled to appropriate the result of mental work. Even more so this must be true as the intellectual laborer takes absolutely nothing from the commons but leaves the resources in place, for that others can equally make use of them to create their own private goods. If so, then how could anyone doubt that "intellectual property is indeed [...] the most basic form of property be2011]

cause a man uses nothing to produce it other than his mind" (Bainbridge 2006: 17)?

#### **3.1 CRITIQUE OF STRONG PROPERTY RIGHTS IN IDEAS**

Despite this rather intuitive argument one may respond that intellectual goods are substantially different from material goods, making it difficult to expand Locke's natural rights justification to ideas. Indeed, even supporters of strong intellectual property rights generally agree that intellectual goods cannot be owned in the full liberal sense, as this would seriously harm major principles of an open and liberal society. A strong intellectual property regime would allow creators of intellectual goods to exert full control over the use of their creations, even after they share them with others. A scientist for example could decide, who should and who should not be allowed to access her findings, an author could demand that her books be read only in a specific location and no copies to be sold at second hand markets, and a politician could prevent selected journalists from publishing critical articles about her ideas. Apparently, such system of strong intellectual property rights would strongly interfere with other civil liberties, most prominently free speech, which Locke himself found extremely important. Zemer has been pointed out that Locke was "aware of the dilemmas and tensions inherent in any regime securing rights in authorial commodities", particularly regarding its social and economic impact on the community (2005: 898). In a 1694 letter entitled Liberty of the Press, which criticizes the Licensing Act of 1662, he explicitly calls for limited authors' rights to ensure the successful creation of complex ideas (see Locke 1997).<sup>3</sup> It would be absurd to ignore these facts and try to turn Locke's property theory against his own believes.

#### **3.2. IS IP NECESSARY FOR LIFE?**

Locke's most convincing argument in favor of property rights is self-preservation (TG II §25). It is doubtful that a lack of property rights in intellectual goods would equally lead to an extinction of men. Unlike water and food, intellectual goods are not immediately necessary to survive. Even if they were, this would have to apply equally to all people. On the other hand, if we assume that access to certain ideas was immediately necessary to sur-

<sup>&</sup>lt;sup>3</sup> The law titled "Act for preventing abuses in printing seditious, treasonable and unlicensed books and pamphlets, and for regulating of printing and printing-presses" entered force on June 10, 1662. For further information see Astbury (1978).

vive, we must ask, how could it be justified that such lifesaving intellectual good be assigned to a single owner? Imagine, humankind experiencing a serious plague, be it HIV or cancer, and a remedy were available for cure. Would it be acceptable to assign this knowledge to a single individual or company, given that the owner of this knowledge could rightfully decide not to share it with the world but to provide it only to a limited number of (e.g. wealthy) people, even if the very same knowledge could be used to cure everybody at no additional cost?<sup>4</sup> As noted above, Locke believed that it was immoral to let others die (TG II §42) and that one must give way to "those who are in danger to perish without it" (TG II §183). Again it would be doubtful that individuals deliberately signed a social contract, which states that property rights trump human lives. Therefore, strong property rights in lifesaving intellectual goods are not morally justified on Lockean grounds, putting into question the right of patent holders to restrict the production and dissemination of lifesaving generic drugs. But what about other intellectual resources? Do Lockean arguments support appropriation of non-lifesaving intellectual goods?

#### 3.3. IS IP NECESSARY FOR PRODUCTION?

Apart from the argument of self-preservation, Locke claims that appropriation of land is justified because it is a necessary precondition for production. This seems intuitively correct when there is a resource rich enough to satisfy the needs of everyone. In a world of plentiful water it is plausible to reason that someone gets to own a pitcher of water by carrying it away from the river. First, because water is a necessity for living, and if everyone needed the consent of everyone else to appropriate even a negligible share, humanity would die out of thirst; second, because the river remains in the common domain, which leaves everyone else the chance to fetch as much water as they please themselves. All this does not apply to non-rival intel-

<sup>&</sup>lt;sup>4</sup> In 2003 the Patent Office in Chennai (formerly Madras), India granted provisional exclusive marketing rights (EMR) for the commercialization of the cancer drug "Imatinib Mesylate" (Glivec®) to Swiss pharmaceutical company Novartis. As a result the production of generic equivalents in India (at the price of one-tenth of Glivec®) had to be stopped and thousands of patients lost access to an affordable drug that delays the advancement of leukemia. After heavy protests from cancer patients and human rights groups Chennai Patent Office finally denied protection. The decision was later confirmed by a Chennai High Court ruling. Novartis claimed that Indian Patent law violated WTO patent guidelines but finally dropped its plan to appeal the decision, due to growing international pressure. For more information on the case see http://2009.publiceye.ch/cm\_data/Novartis\_e.pdf. For a discussion on the interdependence of intellectual property rights and international trade negotiations see Drahos (2004).

lectual goods. Unlike material resources, intellectual goods can be used by an infinite number of persons simultaneously without being used up. Shiffrin (2001) and many others point out that the use of intellectual goods does not depend on the exclusive right of disposal over the resource (see Romer 1990). An intellectual good is not an immaterial bucket of water that has to be fenced off against others. It rather resembles a resource itself, similar to a lake or an ocean of intellectual goods, which provides humankind with the intangible resources for further production. Restricting access to these resources likely contradicts Locke's proviso that "[t]he labourer does not let what he has appropriated go to waste" (TG II §37). Imagine a person or a company that enjoys exclusive rights to control an intellectual good, be it a new scientific finding, a piece of source code or a recipe. Intellectual property rights enable the owner to prevent others from using the idea as well. This leaves everyone else but the owner worse off and diminishes the full potential of the intellectual resource for value creation, particularly when the owner limits the production or dissemination of tangible goods based her protected idea. Take the example of a pharmaceutical company that can force other companies to shut down their independent production of similar generic drugs, even though plurality in the market would stir further research and help produce better medication in the future. Similarly, a carmaker has no economic interest in supporting technologies that potentially rival its existing but less competitive technologies. These limitations associated with monopolies diminish the potential use of intellectual resources, a problem that may be of greater concern than in the case of tangible goods (Benkler 2000).

Locke seems to be aware of the problem when he writes that individuals shall not rightfully own land in case they do not productively use it. Indeed, productivity seems to be one of Locke's main arguments why people should own land in the first place. Accordingly, an individual must lose her exclusive right towards unused immaterial goods. Whether Locke's productivity argument also applies to ideas depends on the effect on production. If private appropriation of an intellectual good leads to an increase of its practical value for the community it is likely justified. If it reduces the practical value then it likely infringes Locke's waste proviso and lacks justification. The literature is divided on this issue, some authors arguing that waste rarely occurs (see e.g. Hughes 1988), while others claim that waste always occurs (see e.g. Hettinger 1989). We may add that this question can only be answered empirically case by case.

# 3.4. INTELLECTUAL RESOURCES, A LOCKEAN PRIVATE GOOD?

Another aspect of intellectual property concerns the conditions of its appropriation. Locke believes that by mixing one's physical labor with a resource, one acquires a natural right not only to the crops produced but also to the land itself. Assuming Locke is right and the act of picking an apple is sufficient to take possession of it, it is still the case that the apple tree must be in my possession or in the public domain. If I pick an apple from my neighbor's tree I cannot claim it, let alone the entire tree, no matter how much effort I put into it. In the case of intellectual goods it is very similar. One could argue that the act of absorbing knowledge in the sense of a repetitive task of memorization and analytical thinking is enough to claim an idea. However, this is only the case if the original resource the idea derived from is in the common domain. This leads to a major theoretical problem. Given that all ideas are the result of human thought, and further given Locke's claim that property rights do not expire, there are no intellectual resources that can be appropriated.<sup>5</sup> How could anyone appropriate intellectual goods if they are already owned by their creators? A way out could be to depart from Locke's thought - as laid down in the Second Treatise of Government and delimit property rights to a certain period of time, after which they are released into the public domain, for that intellectual laborers can freely benefit from past ideas after the legal protection expires.<sup>6</sup> The idea is prominently applied in most intellectual property laws today.

<sup>&</sup>lt;sup>5</sup> Locke believes that property rights should last forever, effectively extending beyond the proprietor's death. According to his thought property can be passed on to children and grand children or to any other beneficiary any time.

<sup>&</sup>lt;sup>6</sup> Locke briefly addresses intellectual property when he opposes the Licensing Act of 1662. Again in the letter Freedom of the Press, he does not draw on natural property rights in ideas when he notes that "nobody should have any peculiar right in any book which has been in print fifty years, but any one as well as another might have the liberty to print it, for by such titles as these, which lie dormant, and hinder others, many good books come quite to be lost. [... N]or can there be any reason in nature why I might not print [classic books...], if I thought fit. This liberty, to any one, of printing them, is certainly the way to have them the cheaper and the better." This suggests that Locke proposed a limited term to copyright of 50 years. (see Locke 1997)

#### **3.5. INTELLECTUAL PRODUCTION EX NIHILO?**

Proponents of Lockean intellectual property rights hold that it is not the appropriation of external intellectual goods they try to justify but self-produced ideas, possibly without input from others. This view of solipsistic intellectual production is based on the assumption that ideas can be produced independently of external influences, solely using one's own mind. However, the idea that ideas could be produced ex nihilo out of thin air is vulnerable. Studying the process of intellectual production we find that an intellectual good is generally not the product of a single genius but a highly cooperative task. Isaac Newton famously acknowledged the debt to his precursors, when writing to his (short and hunchbacked) rival Robert Hooke: "If I have seen further it is by standing on ye shoulders of Giants" (see Westfall 1981). The production of ideas is a multifaceted creative cultural process ranging across space and time. Knowledge is passed on from generation to generation and continuously develops over time. Modern innovation theory shows that ideas tend to be generated in the course of interaction in creative milieu (see e.g. Camagni 1991). Innovations are generally embedded in a social context (Polanyi 1977). While there is no need to diminish the share of each individual laborer, it still holds that intellectual production would be impossible or at least greatly hampered, if it were not supported by other. However then, if any intellectual idea is "an outcome of joint efforts of many individuals from different generations [...] then how much justified is it to grant an exclusive right over its uses only to its latest contributor in complete disregard to the legitimate rights of the earlier contributors?" (Singh 2002: 70) It may be difficult to measure the precise value of each addition to pre-existing ideas. Nonetheless, a person that makes a small modification to help produce a great value should not receive more credit for her labor than the last person needed to lift a car should receive credit for hers (Hettinger 1989). The effort of the last contributor does not equal the value of the entire product, for which she has a natural right only to appropriate her individual share.

#### 4. CONCLUSION: LIMITED PROPERTY RIGHTS IN IDEAS

The investigation shows that it is rather difficult to extend Locke's labor appropriation theory to non-material goods. (1) Clearly Locke's theory does not justify strong property rights in ideas, since unlimited exclusive owner-

ship in ideas would seriously restrict other civil liberties such as free speech, which even strong supporters of natural property rights are unwilling to accept. However, even when we apply a weaker notion of property rights, these would have to be limited in many ways. (2) Locke believes private ownership to be a precondition for efficient production. While this is already contentious for material goods, it is implausible for the intellectual sphere, since exclusive ownership is not necessary to make productive use of an idea. As a result intellectual laborers may only appropriate the fruits of their labor but refrain from appropriating the resource itself. The latter could only be exclusively owned if it was necessary for production, which is not the case in the intellectual sphere. (3) Given that intellectual production is a social endeavor and creation ex nihilo is implausible, individual authors have a natural right to appropriate only the personal share they added but not the value of the entire intellectual produce. (4) People or institutions must not deprive others of the fruits of their labor. This finding seems to be particularly controversial, given the prevalent practice of companies to seize the ideas of their employees. (5) Appropriation of ideas must not hinder others from appropriating their own share. (6) The appropriation of intellectual resources must leave everyone else better off compared to a society that adopts weaker property rights or where intellectual resources remain in the common domain. It is not possible to decide a priori whether strong, weak or no intellectual property rights lead to optimal results. Such decisions can only be made case by case on the basis of empirical research. Without doubt there are good reasons to protect certain intellectual goods, while there may also be good or even better reasons to leave certain types of intellectual produce in the public domain.

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